Promising Models for Preparing a Diverse, High-Quality Early Childhood Workforce

Madelyn Gardner, Hanna Melnick, Beth Meloy, and Jessica Barajas

LEARNING
POLICY
INSTITUTE

Promising Models for Preparing a Diverse, High-Quality Early Childhood Workforce

Madelyn Gardner, Hanna Melnick, Beth Meloy, and Jessica Barajas

Acknowledgments

The authors thank the students, instructors, and staff who participated in the study for generously sharing their perspectives and insights (see Appendix A for list of study participants) and our LPI colleagues Desiree Carver-Thomas, Linda Darling-Hammond, Swati Guin, Laura Heslop, Tara Kini, Michelle Koffa, Naomi Ondrasek, Abby Schachner, and Marjorie Wechsler for their support and contributions to the research. In addition, we thank Erin Chase and Aaron Reeves for their editing and design contributions to this project and the LPI communications team for its invaluable support in developing and disseminating this report. Without their generosity of time and spirit, this work would not have been possible.

External Reviewers

This report benefited from the insights and expertise of two external reviewers: Janet Fish, Professor Emerita, California State University, Northridge; and Luisiana Meléndez, Associate Clinical Professor, Erikson Institute. We thank them for the care and attention they gave the report.

The appropriate citation for this report is Gardner, M., Melnick, H., Meloy, B., & Barajas, J. (2019). *Promising models for preparing a diverse, high-quality early childhood workforce.* Palo Alto, CA: Learning Policy Institute.

This report can be found online at https://learningpolicyinstitute.org/product/preparing-diverse-high-quality-early-childhood-workforce.

Cover photo credit: Jaqueline Eligio, EDvance.

Table of Contents

List of Figures and Tables

Executive Summary

Decades of research have established that the first years of a child's life provide a foundation for long-term health and well-being, and that early childhood education (ECE) for children birth to age 5 can have a positive effect on children's development and school readiness. In order for ECE programs to appropriately support this development, they need educators who are prepared to create engaging, inclusive, and developmentally grounded learning environments and who can effectively reach and teach diverse learners. Although most ECE programs with a track record of success call for educators to possess specialized training in early childhood and a bachelor's degree, requirements for early educators in many states are much less ambitious, and access to high-quality preparation programs is limited. As a consequence, relatively few early educators participate in in-depth formal preparation (i.e., preservice education) before they start working in the field. Instead, they may return to institutions of higher education at various points throughout their careers to learn and increase their qualifications or credentials.

A number of states are considering policy proposals to update credential or degree requirements for early educators. Practitioners, policy experts, and researchers have expressed concern, however, that well-intentioned policies to raise educator qualifications without sufficient supports may have negative consequences for the adequacy; stability; and racial, ethnic, cultural, and linguistic diversity of the ECE workforce and may result in a shortage of educators.

Early educators enrolled in higher education often encounter challenges paying for school and balancing school, work, and family commitments. Higher education processes and systems are complex and difficult for educators to efficiently navigate. In many states, educator qualifications vary by ECE program and are not based on a coherent career ladder, creating barriers for educators seeking to advance. College students of color and students from low-income households are disproportionately likely to encounter these challenges. Furthermore, many of the programs in which educators enroll do not focus specifically on preparing students for teaching, and many do not require supervised student teaching despite broad acceptance of clinical practice as an element of high-quality teacher preparation.

This report offers practitioners and policymakers an opportunity to learn from promising programs that recruit and prepare diverse cohorts of educators to teach in programs serving children birth to age 5 in California—a state that is actively considering investments to develop its ECE workforce. It provides case studies of three distinct approaches to early educator preparation that offer innovative, affordable pathways to preparation for diverse candidates: the Family Child Care Apprenticeship program; the Education/Child Development Program at Skyline College, a traditional community college; and EDvance, a pathway preparation program at San Francisco State University that supports students earning a B.A. in ECE. The report identifies shared features of these approaches and, building on insights from policies enacted at scale in New Jersey that supported similar initiatives, outlines recommendations for policies to better support the ECE workforce and ultimately strengthen early learning systems.

Family Child Care Apprenticeships: Supporting Providers' Advancement

The Early Educator Apprenticeships are innovative pilot projects aimed at increasing the qualifications of early educators through coursework paired with on-the-job training and support. The program was launched by the Service Employees International Union in partnership with ECE

employers, child care resource and referral agencies, and institutions of higher education. It offers apprenticeships for educators in three distinct settings: family child care, Head Start, and child care centers. The Family Child Care On-the-Job Training Program (FCC Apprenticeship), the focus of this case study, is designed for licensed family child care providers—small-business owners who care for children in their homes—and is implemented at four sites across California.

The FCC Apprenticeship helps apprentices develop as ECE professionals and acquire California Child Development Permits through accessible college coursework. Apprentices enroll in college courses that are conveniently offered during evening hours at community sites, in partnership with local community colleges. Child development courses support educators' skill development, and the program identifies and supports required general education courses that are accessible and relevant for educators.

Because family child care providers work independently, the program offers coaching from staff who visit apprentices' homes to provide feedback and guidance on their program and pedagogy and offer resources. Site coordinators help apprentices choose classes and access other support as needed. Apprentices are grouped into cohorts of 25 peers who act as an additional network of support while taking college courses.

The FCC Apprenticeship also supports and incentivizes participation by providing apprentices with a monthly wage enhancement that ranges from $100 to $500 per month, depending on their length of tenure in the program. The financial support is particularly salient for family child care providers, whose earnings are very low. The program additionally provides stipends for tuition, books, a laptop, and fees, making college coursework free for apprentices. The layering of multiple supports into a coherent approach makes the FCC Apprenticeship a powerful learning experience for apprentices, and early data about the program are promising. In the FCC program's 2-year existence, 95 apprentices have earned new permits.

Skyline College: A Community College Connecting Theory to Practice

Skyline College's Education/Child Development Program is an example of a traditional community college department creating a supportive, hands-on learning community with an explicit focus on preparing early educators for classroom teaching in a variety of settings, including child care centers and preschool programs. It serves a range of students, from high school students to current educators, as they work toward an associate degree or Child Development Permit.

Skyline ECE courses, which are similar in content to those at other California community colleges, are responsive to the specific needs of Skyline ECE students. The program's guided pathway offers a prescribed set of general education and ECE courses that helps students progress efficiently toward California Child Development Permits and degrees, and the college offers a general education math course specifically designed for early educators. Further, faculty use engaging teaching strategies tied to practice. Coursework is continuously modified to meet students' needs, and frequent collaboration among faculty and staff encourages alignment of coursework and field experiences.

Skyline's on-campus Child Development Laboratory Center, or lab school, is an important resource for providing students high-quality mentoring and teaching practice early in their academic careers. Many Skyline ECE students have some experience there through course observations, internships, or student teaching. A recently developed Teacher Track Learning Community allows some students

to gain early student teaching experience and earn a Child Development Associate Teacher Permit in their first year of community college. These opportunities for clinical practice are notable given that fewer than 40% of ECE programs in California require supervised student teaching.

To help students complete their studies successfully, Skyline's faculty and staff cultivate caring relationships with students and provide a variety of supports to promote student success. ECE-specific academic and career advising helps students choose the appropriate classes to meet their goals and connects them to campus resources, and courses are offered at a low cost. While the college, like community colleges in general, struggles with meeting institutional goals to raise graduation rates, alumni speak extremely highly of their preparation and readiness for teaching.

EDvance at San Francisco State University: Building a Pathway to a B.A. in ECE

EDvance is an early childhood teacher preparation program housed within the Marian Wright Edelman Institute for the Study of Children, Youth, and Families at San Francisco State University. The program supports early educators in earning a B.A. and focuses its recruitment on groups that have been historically underrepresented in higher education, including Black and Latino/a students.

EDvance offers two thoughtfully constructed pathways for students. The lower division pathway is designed to support aspiring educators during their first 2 years of college; the upper division pathway, Promoting Achievement Through Higher Education (PATH), is for continuing San Francisco State students as well as students who transfer from community colleges. To participate in PATH, a student must work at least part time as an early educator. By the end of the program, lower division students are eligible for a California Child Development Teacher Permit and upper division students earn their B.A. In both pathways, courses are cohort-based, are strategically chosen and scheduled, and incorporate a focus on social justice and equity.

EDvance supports all enrolled students in gaining hands-on experience in early childhood classrooms. For lower division students, an early practicum program offers a supervised clinical experience in which students work one full day per week alongside a mentor teacher in subsidized programs in San Francisco. Upper division PATH students work at least 25 hours per week in an early childhood setting and use videos of their work with children to reflect on their practice and get tailored feedback from faculty and peer mentors.

Across both pathways, EDvance offers extensive student supports, including a cohort model that builds strong relationships among students and staff; specialized academic advising and educational planning; and financial aid, which allows many students to attain a degree without incurring debt. These supports are offered by a team of dedicated staff and faculty and are supported by strong local partnerships and philanthropy. By offering intensive support services and a clearly articulated pathway, EDvance has graduated more than 90% of its PATH students in just 2 years.

Common Features of Promising Preparation Models

The early educator preparation models described in this report target different segments of the early childhood workforce and employ a range of mechanisms to support participants in achieving professional milestones, suggesting that there is no one approach to early educator preparation. Yet the models share the following common features:

- **Local early educator pipelines and pathways.** The programs have adopted highly localized recruitment strategies to target educators who reflect the diversity of local communities. The three programs have developed clear pathways aligned with recognized credentials and degrees to prepare students as effective ECE professionals.

- **Relationship-building to promote persistence and success.** Each program prioritizes relationship-building among program staff, faculty, and students to create safe, inclusive, and supportive learning communities. They also create cohorts of students who take coursework and advance through their preparation together. The programs encourage the use of interactive and collaborative pedagogical approaches in courses to engage students, build rapport, and deepen student learning.

- **Opportunities for clinical practice in feedback-rich environments.** All of the models provide opportunities to participate in clinical practice with support from instructors, mentors, and peers and emphasize self-reflection. Coursework and clinical experiences incorporate knowledge of tools and frameworks that are used in day-to-day practice in California, preparing students to work in ECE settings upon completion of the program.

- **Multifaceted student supports that promote college persistence and success.** Supports include individualized academic and career advising from specialized staff; courses offered on evenings or weekends in convenient locations; dedicated tutoring; classes that are intentionally sequenced and coursework that is scaffolded by instructors in response to individual students' needs; and financial supports that reduce or eliminate higher education costs for students.

- **Well-supported and diverse staffs of instructors, advisors, and coaches.** Programs intentionally recruit and utilize faculty and staff who have experience in ECE classrooms and who reflect the racial, ethnic, cultural, and linguistic diversity of the field. They support continual professional learning opportunities and collaboration among instructors and coaches to help them deliver strong, coherent programs of study.

- **Community partnerships and funding to strengthen preparation.** The program staff cooperate with a variety of stakeholders, including colleges and universities, community organizations, ECE providers, and local agencies. These partnerships provide resources—financial supports, student teaching opportunities, classroom space, and others—that they leverage to build a comprehensive system of support for students.

The features shared by these programs may be developed locally by dedicated staff who understand their local context and may also be supported at the state level, as New Jersey's example shows.

New Jersey's Investments in P-3 Credentialing: Preparing an ECE Workforce at Scale

In the late 1990s, the New Jersey Supreme Court mandated in *Abbott v. Burke*, the state's watershed school finance case, that the state create a high-quality, universal preschool program for 3- and 4-year-olds in 31 of the state's poorest school districts, which serve roughly 20% of enrolled students in the state—the so-called "Abbott districts." One of the program's requirements was that all preschool teachers in Abbott districts hold a B.A. and a preschool to 3rd grade (P-3) credential. The requirement applied to educators in Head Start and private programs receiving state funding as well as in public school districts. The state's policies fostered a significant and rapid shift in the

supply of credentialed educators: While in 1999–2000 only 38% of preschool teachers in Abbott districts met credential requirements, by 2006 nearly all (97%) of the 2,900 met this requirement. Many of these teachers came from the existing ECE workforce.

To meet the new mandate and to build a robust pipeline of future educators, New Jersey expanded its investments in higher education and ongoing professional learning. To begin, it created multiple pathways to a P-3 credential, including traditional 4-year B.A. programs; postbaccalaureate programs; and the Alternate Route program, which allowed students with a B.A. to earn a credential while working in state preschool programs. State-funded scholarships and stipends enabled most early educators to go back to school. Pay parity with k–12 teachers—mandated by the court for all teachers with P-3 certification, including educators in Head Start and private preschool centers— was a critical incentive to attract and retain educators who otherwise might leave for better-paying k–12 positions.

The state additionally expanded the size and capacity of higher education programs through two grant programs administered through the New Jersey Commission on Higher Education. The grants, totaling $13 million across p–12 education programs, allowed institutions of higher education to develop their credentialing programs and hire more ECE faculty. The state Department of Education and institutions of higher education also made supports available to students already working in the field, such as holding courses at convenient locations and times as well as online, and providing academic tutoring and advising.

Finally, state support enabled school districts to enhance early educator quality at the school level. Extensive, ongoing professional learning opportunities, overseen by an early childhood supervisor and a team of master teachers in each district, extended to teachers as they pursued a degree as well as after degree completion.

Implications for Policy

As New Jersey's example shows, states can play an important role in ensuring that educator preparation is of high quality and that early educators have access to the supports they need to complete their higher education programs successfully. Specific steps that states can take include the following:

1. **Build the capacity of higher education programs and ECE faculty to prepare a diverse workforce.** Each of the programs described in this report has relied on outside funding to develop their faculty and staff and continuously improve their programs. States should consider providing institutions of higher education with funds for capacity building, as was done in New Jersey. Funding could be used for hiring and training well-qualified, diverse faculty with expertise in ECE and developing high-quality content that meets the needs of diverse learners. Funds could also be used to support flexible scheduling and the provision of courses in alternative locations to make coursework accessible to more students.

2. **Support high-quality clinical practice.** At the core of the programs described here are intensive student teaching experiences under the guidance of a mentor. States can support the development of promising models for clinical practice, such as apprenticeships, lab schools, and paid practicum experiences, by providing funding and technical assistance.

3. **Develop clear pathways for students to move from 2- to 4-year colleges.** Many ECE students complete their initial college coursework at community colleges. States can incentivize collaboration between 2- and 4-year institutions by providing funding to develop clear pathways that articulate courses and align course content in a way that coherently builds students' knowledge and skills.

4. **Fund academic supports for ECE students, including specialized advising.** To help students complete rigorous coursework on time, especially students from groups historically underrepresented in higher education, states can provide funding for specialized ECE advising and academic tutoring.

5. **Offer financial assistance to educators earning an early childhood permit, degree, or credential.** Increasing financial support for early educators' higher education, from tuition, to books, to student fees, is essential, particularly given the low earnings of most early childhood teachers.

6. **Set clear, high expectations for early childhood educators.** Minimum preparation requirements in many states are inconsistent across types of ECE programs, and these requirements are typically insufficient for preparing high-quality early educators. The development of an early childhood–specific teaching credential aligned to preparation standards, such as the P-3 credential that New Jersey created, could significantly advance both the coherence of preservice preparation and the professionalization of the field. A formal accreditation process for early childhood programs can further help ensure that the courses students take comprise a coherent plan of study.

In addition to supporting educators as they increase their qualifications, states must have policies in place to retain teachers once they are in the field. Most importantly, programs must **compensate early educators adequately**. In a field in which educators are often paid one third the wages of their k–12 counterparts, compensation increases must accompany increases in qualification requirements or taxpayers will be filling a leaky bucket, as trained educators leave for higher-paying jobs. Higher compensation was an important part of New Jersey's success in raising the qualifications of its workforce. States must also **provide ongoing professional development** to deepen educators' knowledge and skills in the classroom. Finally, states should **collect better data on the ECE workforce**, including information about early educators' higher education paths, their permit or degree completion, the barriers they encounter, and their ensuing wages. With this information, states can better understand where they are and where they need to go to build a diverse and skilled early educator workforce.

Introduction

Nearly every state in the United States has made public investments to expand the number of children from birth to age 5 who have access to early childhood education (ECE), responding to the overwhelming evidence that children's early years are a crucial time for their development.[1] For ECE programs to appropriately support this development, they need educators who are prepared to create engaging, inclusive, and developmentally grounded learning environments and who can effectively reach and teach racially, ethnically, culturally, and linguistically diverse children.

Yet minimum qualifications for educators of children birth to age 5 are inconsistent across ECE programs and are typically low in comparison to k–12 settings.[2] It is common for 4-year-olds attending preschool in the same city or school district to have teachers with different levels of education and preparation, ranging from a high school diploma to a B.A. and early childhood teaching credential. Unlike k–12 teachers, many early educators do not participate in formal preservice preparation—defined for the purposes of this report as the attainment of new degrees or credentials that qualify an individual to teach. Instead, they pursue higher education coursework after already entering the field. They may return to institutions of higher education at various points throughout their careers to learn and increase their qualifications or credentials.

A number of states are considering policy proposals to update credential or degree requirements for early educators.[3] Such proposals acknowledge the broad range of expertise required to be an effective early educator, as well as the evidence that many successful ECE programs require educators to possess specialized training in early childhood and a B.A.[4]

Practitioners, policy experts, and researchers have expressed concern, however, that well-intentioned policies to raise educator qualifications may have negative consequences for the adequacy, stability, and diversity of the ECE workforce if they are implemented without supports for current and future educators to meet new standards.[5] There is also concern that raising standards may result in a shortage of educators. College students, including early educators seeking college credits or degrees, often encounter challenges paying for school; balancing school, work, and family commitments; and efficiently navigating higher education processes and systems.[6]

> Practitioners, policy experts, and researchers have expressed concern that well-intentioned policies to raise educator qualifications may have negative consequences for the adequacy, stability, and diversity of the ECE workforce if they are implemented without supports.

Research on college access and completion suggests that students of color are disproportionately impacted by many of these obstacles.[7] This finding is particularly salient for ECE because the workforce is racially, ethnically, culturally, and linguistically diverse, notably more so than the current k–12 teacher workforce.[8] The field's diversity is a strength, one to be cultivated and sustained as ECE systems grow and evolve. Evidence from k–12 schools indicates that teacher diversity is beneficial for all students, especially for students of color.[9] Further, early educators who reflect the ethnic, cultural, and linguistic backgrounds of the families they serve may be better equipped to develop strong relationships with children and parents.[10]

Taken together, this evidence suggests a need for states, especially those considering raising educator qualification standards, to consider new strategies to expand access to high-quality early educator preparation experiences and support student success in these programs. Preparation is a key element in attracting, cultivating, and maintaining an effective, diverse, and stable early educator workforce. High-quality preparation cannot alone accomplish these aims, but expanding access to such experiences has the potential to enhance educators' knowledge and skills and increase educator retention.[11]

This Report: Learning From Educator Preparation Programs

This report offers practitioners and policymakers an opportunity to learn from early educator preparation programs seeking to recruit and prepare racially, ethnically, culturally, and linguistically diverse educators of children birth to age 5 in California—a state that is actively considering investments to further develop its ECE workforce.[12] It identifies shared features of these promising approaches and, building on insights from policies enacted in New Jersey, outlines recommendations for policies to better support the development of the ECE workforce and ultimately strengthen early learning systems. Though the report highlights examples from two states—California and New Jersey—the findings and implications are relevant for policymakers and practitioners across the country who are grappling with questions about building and maintaining effective, inclusive, and diverse systems of early educator preparation and support.

The primary focus of the report is in-depth case studies of three distinct early educator preparation models that offer innovative, affordable pathways for diverse candidates who seek to teach in programs serving children from birth through age 5. The preparation models highlighted in this report are shown in Table 1 and described below:

- The **Family Child Care Apprenticeship** provides a job-embedded pathway to state permit attainment among licensed, home-based child care providers. It is implemented by the Service Employees International Union Educator Training Center in collaboration with a variety of partners in four California communities, primarily in the Los Angeles area.
- **Skyline College's Education/Child Development Program** provides a supportive, hands-on learning community within the confines of a traditional community college. The college, located in the San Francisco Bay Area, provides well-mentored clinical experience for students earning their associate degree in an on-site lab school and has built a cohort-based learning community for aspiring educators.
- **EDvance at San Francisco State University** is a university-based initiative offering two pathways—one tailored to future educators and the other designed to meet the needs of current early educators seeking further education—that combine rigorous coursework and practical experience to attain a bachelor's degree.

Table 1
Case Study Sites Reflect a Variety of Approaches to Educator Preparation

Program	Family Child Care Apprenticeship	Skyline College Education/ Child Development Program	EDvance at San Francisco State University
Lead Institution(s)	• Service Employees International Union Educator Training Center	• Skyline College	• EDvance, Marian Wright Edelman Institute, San Francisco State University
Participants	• Current educators	• Current educators • Future educators	• Current educators • Future educators
Degrees or Certifications Offered	• California Child Development Permits	• Associate degree in Early Childhood Education	• Bachelor's degree in Child and Adolescent Development
Location	• Los Angeles area • Alameda County	• San Mateo County	• San Francisco
Key Features	• No-cost college coursework • Cohort-based learning • Job-embedded coaching • Monthly wage enhancements	• Sequenced course pathways • Lab school practicum and mentorship	• Sequenced course pathways • Cohort-based learning • Mentored early practicum experience • Financial supports

Note: Skyline and EDvance students following the recommended course sequence are eligible to earn California Child Development Permits and work in ECE settings while earning a degree. FCC apprentices working toward Child Development Permits earn community college credits that can be applied to a college degree.

Though each model is unique, all were selected for this study using the following criteria:

- **A focus on preparing diverse early educators.** The majority of California's early educators are women of color, and about half primarily speak a language other than English.[13] Each program intentionally strives to recruit and prepare a pool of early educators reflecting this diversity.

- **Research-based design features.** Each model is designed to reflect features that research demonstrates are associated with high-quality educator preparation, including a focus on foundational knowledge in child development and applications of that knowledge to teaching;[14] opportunities for sustained, supported clinical experience;[15] and the provision of supports to promote academic success and reduce financial burdens.[16]

- **A variety of approaches and geographic regions.** The three sites were intentionally selected to reflect a range of preparation approaches, including models serving both current and future early educators and programs operating in different regions of California.

We also examine **New Jersey's** investments in its early educator workforce beginning in the late 1990s when the state rapidly expanded preschool access in its poorest school districts. The policies and programs that New Jersey created provide a basis to understand the systems and structures that may be needed to offer preparation experiences, such as those provided by the case study programs, at scale.

The report highlights a selection of models from which policymakers and practitioners can learn. They represent just a few of the ECE workforce preparation initiatives in California and nationally that are working to develop effective programs to prepare a diverse early childhood workforce.

The case studies draw on multiple sources of data, including interviews with program stakeholders (e.g., faculty, academic advisors, coaches, students, alumni, community partners), observations of coursework and other program components, observations of program participants in their current jobs or clinical placements, and an analysis of data and evaluations on program effectiveness. (See Appendix A for a list of study participants.) Together, these data sources informed an in-depth, iterative analysis of program design, implementation challenges, and implications for state policy. Appendix B offers additional information about the methodology used in this report.

The report first provides a brief overview of the current early educator preparation landscape in the United States, with an emphasis on California, describing the variability and barriers encountered by students studying ECE to contextualize the efforts undertaken by the case study sites. It then offers in-depth descriptions of three models that are designed to reduce barriers to higher education and prepare a racially, ethnically, culturally, and linguistically diverse group of early educators to teach in California. Following a discussion of takeaways about the shared features of those models, the report draws on New Jersey's experience rapidly expanding its supply of credentialed preschool teachers to illustrate how state policies and investments can support early educators' participation in preparation experiences at a broad scale. The report concludes with considerations for state policy to strengthen early educator preparation and support.

Background and Context: Early Educator Preparation

In most states, requirements for the preparation of educators of children birth to age 5 vary greatly across child care and preschool settings and are substantially different from requirements for k–12 teachers who work in public schools. Early childhood degree programs prepare educators to meet a range of requirements for careers working with young children, and generally operate separately from higher education programs that prepare k–12 teachers. Current and aspiring early educators often face financial and academic challenges in accessing higher education programs. This section provides a brief overview of these dynamics to contextualize the programs and policies described in the later sections of this report.

A Range of Educator Qualification Requirements

Evidence from k–12 settings indicates that teachers who participate in comprehensive preparation and induction experiences are better prepared when they enter the classroom and are more likely to remain in the profession.[17] However, relatively few early educators participate in preservice preparation (i.e., in-depth formal training before working in the field), in part because those experiences are not required or supported by states.[18]

> Evidence from k–12 settings indicates that teachers who participate in comprehensive preparation and induction experiences are better prepared when they enter the classroom and are more likely to remain in the profession.

In California, as in many states, educational requirements for the educators of children birth through age 5 vary widely by program[19] (see Table 2). The majority of early educators in the state—including those who teach in licensed child care centers or preschools—are required to hold a California Child Development Permit.[20] There are four Child Development Permit levels for teachers (and two for administrators), each with its own set of requirements for coursework and field experience.[21] The permits are stackable—meaning that requirements fulfilled for a lower level count toward the requirements for a higher level—and allow educators to take on gradually increasing levels of responsibility.

Educators in Head Start must have an associate or bachelor's degree with a specialization in ECE.[22] Educators who meet Head Start standards have typically met the minimum requirements for a California Child Development Teacher Permit, which allows them to teach in programs that combine state preschool and Head Start funding.[23]

Although they are not the focus of this report, transitional kindergarten and special education preschool teachers, both of whom work in school districts, must hold a California teaching credential.[24] To earn a teaching credential, candidates must hold a B.A. and typically complete an additional 1-year postbaccalaureate credential program. These educators typically receive training from schools of education, and their programs usually focus on teaching grades k–8.

Table 2
Coursework and Field Experience Required for Licensure in California

Program	License Type	Required Coursework	Required Experience
Licensed child care centers and preschools	Child Development Assistant Teacher Permit	• 6 units ECE	• None
	Child Development Associate Teacher Permit	• 12 units ECE	• 150 hours (50 days)
	Child Development Teacher Permit	• 24 units ECE • 16 units general education	• 525 hours (175 days)
		or • A.A. in ECE	• 3-unit practicum
	Child Development Master Teacher Permit	• 24 units ECE • 16 units general education • Adult supervision credits	• 1,050 hours (350 days)
		or • B.A. with 12 units ECE	• 3-unit practicum
Head Start	A.A. or B.A. in ECE	• A.A. or B.A. • 24 units ECE	• None
Transitional kindergarten and special education preschool	Multiple Subjects Teaching credential (Transitional Kindergarten)	• B.A. • 24 units ECE • Credential program	• 600 hours clinical experience • Induction program in first 2 years teaching
	Early Childhood Special Education Teaching credential	• B.A. • Credential program	• 600 hours clinical experience • Induction program in first 2 years teaching

Notes: An associate degree (A.A.) typically requires 60 semester units to complete, and a bachelor's degree (B.A.) requires 120 units. Head Start requires that teachers hold at least an A.A. in early childhood education (ECE) and that 50% of all teachers nationwide hold a B.A. To receive a teaching credential, an approved credential program may be completed as part of a baccalaureate or through a two- to three-semester postbaccalaureate program. For transitional kindergarten, local education agencies are responsible for verifying that teachers have 24 units of ECE or equivalent experience. Family child care providers and unlicensed providers do not need to hold a permit or credential.

Sources: California Commission on Teacher Credentialing. (n.d.). Credential requirements. https://www.ctc.ca.gov/credentials/req-credentials (accessed 09/30/19).

Some early educators meet more than the minimum requirements for their program, but the incentive to do so depends on individual educators and employers, and wage increases for educators with higher degrees are often small.[25] Despite the fact that a degree is not needed for most California ECE programs, 2012 data indicate that about 30% of the center-based workforce hold an

associate degree, and an additional 34% hold a bachelor's degree or higher.[26] Preschool teachers who hold a degree earn, on average, $17,000 more annually than those who do not. However, as teachers increase their degree, the wage penalty for working in early childhood increases compared to other professions, especially for infant and toddler teachers, who are disproportionately women of color.[27]

Variation in Preparation Programs for Early Educators

Since early educators enter the field with a range of education and experiences and pursue credits, permits, or degrees at various points throughout their careers, there is no "typical" path to a permit or degree. High school students may go straight to college to earn a permit, degree, license, or credential in ECE; however, many early educators return to school while working in the field to gain knowledge and advance their careers. Still others have a degree in a field other than ECE and go back to school to specialize. (See Figure 1.) Because early educators take numerous pathways to and through the field, it is crucial that states seeking to strengthen their ECE workforce attend to the needs of both current educators seeking continued learning and career advancement and the pipeline of future educators who will enter the field.

Figure 1
There Is No Traditional Early Educator Preparation Pathway
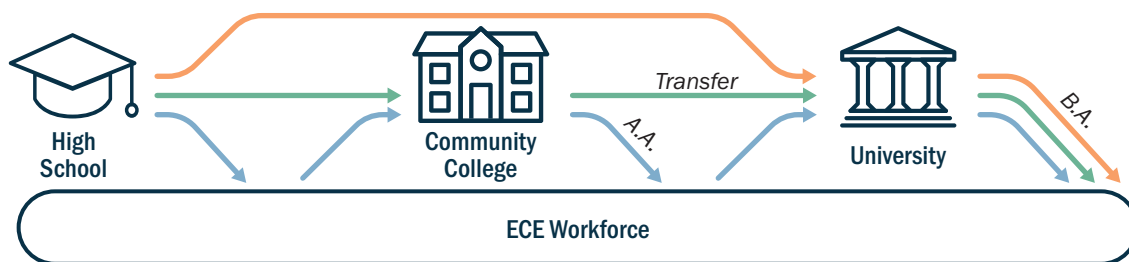
In California, as in many states, early educator preparation occurs at both 2- and 4-year colleges:

- **Two-year colleges:** California's community colleges are an important resource for many early educators. Community colleges are available across the state, have low tuition relative to other institutions of higher education, and offer coursework needed to fulfill requirements for California Child Development Permits, which are necessary to teach in some, but not all, of the state's largest ECE programs. In 2013–14, 103 California community colleges offered at least one associate-level early childhood degree program.[28]

- **Four-year colleges and universities:** There are relatively few California programs at the bachelor's, master's, and doctoral levels that focus specifically on preparing early educators for teaching or ECE program leadership. In 2013–14, 42 public and private colleges offered 50 bachelor's degree options, 29 master's degree options, and 1 doctoral program in ECE.[29]

The nature of the early childhood degree programs that California colleges offer varies substantially. Survey data show fewer than half of existing early childhood degree programs in California focus specifically on preparing teachers, while the others adopt a broader focus on preparing students for a variety of careers working with children that may include teaching along with social work, psychiatry, and advocacy. Further, although community college programs are more likely than 4-year programs to focus on teaching practice, fewer than 40% of early childhood degree

programs require supervised student teaching despite broad acceptance of clinical practice as an element of high-quality teacher preparation.[30] Though data are inconsistently available, studies of other states' early childhood higher education programs suggest similar challenges.[31]

These factors have led to a national push for more streamlined and often higher preparation requirements for early educators, as exemplified by recent efforts such as the National Research Council and Institute of Medicine's *Transforming the Workforce for Children Birth Through Age 8* report and the National Association for the Education of Young Children's Power to the Profession working group.[32] Each has called for policy solutions to build capacity and expand access to higher education programs in order to strengthen state systems for preparing early educators.

California is currently rethinking its expectations, requirements, and supports for early educators as well.[33] The California Commission on Teacher Credentialing recently adopted new ECE Teacher Performance Expectations that outline what beginning early educators should know and be able to do, and are aligned with the expectations for k–12 teachers in the state.[34] The Commission has also adopted revised, voluntary preparation program guidelines, the California Standards for Teaching Preparation, that inform what programs should teach.[35] The performance expectations are intended to inform the design of early educator preparation programs and will soon be piloted by institutions of higher education. Although they have not yet been adopted on a widespread basis, the development of the performance expectations demonstrates interest in updating preparation programs to better reflect the skills, knowledge, and competencies educators need to effectively support the development and learning of young children.

Barriers to College Enrollment and Degree Completion

Research has demonstrated that many college students, including early educators enrolled in school, encounter barriers to completing coursework or degrees.[36] College students of color and students from low-income households are disproportionately likely to encounter these challenges.[37] Common barriers include:

- **Financial burdens.** College costs have risen dramatically in recent years. Students and families have largely borne this increase, and many students work and take out loans to attend school.[38] For current ECE teachers seeking to return to school to learn more and advance in the field, low wages often make higher education costs prohibitively expensive.[39]

> For current ECE teachers seeking to return to school, low wages often make higher education costs prohibitively expensive.

- **Protracted degree completion.** Community colleges across the nation struggle to graduate students in a timely manner. In California, only 13% of entering community college students earn an associate degree in 2 years.[40] National data indicate that average on-time completion rates for 4-year degree programs are lower among students of color than for White students, with research suggesting that financial burdens are a key factor in the disparity.[41] Other factors, such as family responsibilities and lack of academic preparedness, also present barriers.[42]

- **General education requirements.** For many students, including those studying ECE, the requirement that students take general education coursework in math and English can create barriers to degree completion.[43] Students are often required to take remedial coursework before taking the general education courses, and those who enroll in remedial courses are less likely than other students to graduate. Those who do graduate take longer to earn degrees.[44] California community college data suggest students identifying as Latino/a or African American are 10 percentage points more likely to enroll in remedial courses than their White peers.[45]
- **Lack of articulation.** When students attend multiple institutions in their pursuit of credentials, credits earned at one institution may not transfer to another. Transfer students may also be required to take courses that were not available at their previous institution to satisfy degree requirements.[46]

The state of California has begun to address some of these challenges. Most notably, stakeholders in California have undertaken efforts to promote articulation of coursework in ECE degree programs and alignment of the knowledge and skills addressed in course content, including the creation of an associate degree for transfer that guarantees the degree-holder's acceptance to a California State University with junior standing.[47] Recent legislation additionally now prevents community colleges from requiring non-credit-bearing remedial coursework, though many students still struggle to pass general education courses.[48] Further, California's Blue Ribbon Commission on Early Childhood Education has called for the development of a competency-based permitting and credentialing system to account for the expertise seasoned educators may already have.[49] It is unclear, however, if this idea will move forward.

Individual institutions of higher education have also begun to address barriers by offering a variety of supports to students studying ECE, from scholarships and access to evening courses to intensive advising. The case studies that follow offer examples of programs striving to embed these and other features to make their programs more accessible and supportive of the students they serve, illustrating the promise and challenges in expanding college access while strengthening the preparation early educators receive.

CHAPTER 1: Family Child Care Apprenticeships: Supporting Providers' Advancement

Madelyn Gardner and Beth Meloy

> The registered apprenticeships establish a pipeline of qualified workers and a pathway to self-sufficiency for the low-income, female workers that predominantly make up the ECE workforce.[50]

The Early Educator Apprenticeships are innovative pilot projects that build a pipeline of skilled early educators in California through a series of apprenticeships aimed at different segments of the ECE workforce, from Head Start teachers to family child care providers. The apprenticeships are sponsored by the Early Educator Training Center of the Service Employees International Union and are run in partnership with institutions of higher education and local ECE agencies or employers. They combine on-the-job training and related instruction with compensation increases to support professional growth, as do apprenticeships in other industries such as health care and manufacturing.[51]

> The Early Educator Apprenticeships combine on-the-job training and related instruction with compensation increases to support professional growth, as do apprenticeships in other industries such as health care and manufacturing.

This case study focuses on the Family Child Care On-the-Job Training Program (FCC Apprenticeship), an innovative apprenticeship model specifically designed for current licensed family child care providers, small-business owners who are licensed to care for young children in their homes. The FCC Apprenticeship helps providers develop as ECE professionals and acquire state-recognized Child Development Permits by providing convenient and accessible college coursework, individualized supports for learning and growth, and incremental wage enhancements.

This case study describes the FCC Apprenticeship's approach in depth, focusing on how it supports current home-based child care providers in earning state-recognized permits, enhances their knowledge of child development and effective practice, and supplements their wages. California's home-based providers reflect the state's racial, ethnic, linguistic, and cultural diversity and are an important source of care for young children from infancy through school-age. The initiative provides a novel example of how to begin building a highly supportive, job-embedded on-ramp for professional advancement among family child care providers, tailored to the contexts in which they work. Further, the apprenticeships are an example of labor and ECE stakeholders organizing to offer provider preparation in partnership with institutions of higher education, distinguishing it from the many university-led educator preparation programs that exist.

This case study begins with an overview of the Early Educator Apprenticeships in general and the FCC Apprenticeship in particular. It then describes how the FCC Apprenticeship is designed to support early educators in accomplishing the goals set out by the program. The case study also examines how the model has addressed challenges that have arisen during the development and

implementation of the program. The case study concludes with next steps for the initiative and key takeaways for policymakers and practitioners seeking to enhance the preparation and development of early educators through job-embedded pathways.

Program Overview and Context

In 2015, the Service Employees International Union—a labor union that represents workers in a variety of industries, including child care[52]—began developing an apprenticeship to address a shortage of qualified ECE workers in California.[53] That effort has grown into a pilot initiative known as the Early Educator Apprenticeships, a set of three registered apprenticeships serving early educators. The FCC Apprenticeship is one of the three apprenticeship pathways and provides opportunities for professional growth tailor-made for home-based providers.

Apprenticeships offer an innovative, well-structured path to growth and advancement in ECE

Registered ECE apprenticeships are uncommon. Data on how many ECE apprenticeships exist are difficult to locate, but one recent study estimated that the model exists in at least eight states.[54] The Early Educator Apprenticeships offer three apprenticeship pathways tailored to different segments of the early educator workforce: The FCC program serves licensed family child care providers; the Early Educator Apprenticeship is designed for center-based child care workers; and the Head Start Apprenticeship is for current Head Start employees or unemployed parents of Head Start children (see Figure 2). As of June 2019, more than 275 educators have enrolled in one of these pathways, including 131 in the FCC program.[55]

The apprenticeships combine higher education coursework, on-the-job mentoring, and wage increases in a clearly defined and supportive pathway that helps early educators achieve a set of specified professional goals. Each apprenticeship pathway is composed of three "tiers" associated with different professional goals (see Figure 2). These tiers create a career ladder for apprentices.

Figure 2
The Early Educator Apprenticeships Offer Pathways Tailored to Different Segments of the ECE Workforce

Tier 3: Teacher permit	Tier 3: Teacher permit	Tier 3: Bachelor's degree & Master Teacher permit
Tier 2: Associate Teacher permit	Tier 2: Associate Teacher permit	Tier 2: Associate degree & Teacher permit
Tier 1: Assistant permit	Tier 1: Assistant permit	Tier 1: Associate Teacher permit
Family Child Care On-the-Job Training Program — For licensed, home-based providers	**Early Educator Apprenticeship** — For center-based child care workers	**Head Start Apprenticeship** — For Head Start employees and unemployed Head Start parents

Note: The colored boxes signify the permits or degrees educators can pursue in each pathway, depending on their educational attainment. The Head Start pathway does not include the Assistant permit (yellow box) because it is not sufficient for employment as a Head Start teacher.

The FCC and Early Educator Apprenticeship pathways both support educators in earning progressively more advanced California Child Development Permits. These permits are issued by the California Commission on Teacher Credentialing[56] and are required of many educators working in state-subsidized child care, particularly center-based programs. There are currently six levels of Child Development Permits (four for teachers, two for administrators), each with its own requirements for coursework and work experience. Some amount of ECE coursework is required to earn each permit. At the system's higher levels—for lead teachers, master teachers, and site supervisors—general education coursework spanning a range of academic disciplines is also necessary.

Licensed family child care providers are not required to hold a Child Development Permit to provide care in California; in fact, the state has no educational requirement for these providers beyond the health and safety training necessary to become licensed. However, earning permits provides a structure for professional recognition of apprentices' education and growth and expands the number of settings in which a licensed provider is eligible to work.

The first two tiers of the Head Start Apprenticeship are likewise aligned with California Child Development Permits. However, the second tier also includes an associate degree, and the third tier culminates in a bachelor's degree in early childhood studies, which fulfills the current degree target for lead teachers in Head Start programs.[57] The tiers of each pathway are stackable, meaning that coursework and fieldwork completed in earlier tiers help satisfy requirements for later tiers.[58] Program staff place apprentices in the appropriate tier based on their previous education and professional experience. Some apprentices begin at Tier One, while others may enter at Tier Two or Three.

An apprenticeship model is appropriate in ECE because many early childhood educators enter the field and have significant hands-on experience before they seek permits, certificates, or degrees. The Early Educator Apprenticeships are designed to harness the strengths and experiences of the current ECE workforce to expand the supply of qualified early educators in California. The program does so by further developing educators already in the field or, in the parlance of workforce development, addressing a "skills gap" through on-the-job training.[59] The apprenticeships also promote professional and economic advancement among current early educators. The Early Educator Apprenticeships literature conveys these complementary goals succinctly: "The registered apprenticeships establish a pipeline of qualified workers and a pathway to self-sufficiency for the low-income, female workers that predominantly make up the ECE workforce."[60] Though the focus is on teacher preparation, the pathways are also intended to open new professional opportunities in ECE and, if an individual desires, to act as springboards to other ECE careers, such as early childhood program site leaders and program administrators, early childhood special education teachers, social workers, and occupational therapists.[61]

> The Early Educator Apprenticeships are designed to harness the strengths and experiences of the current ECE workforce to expand the supply of qualified early educators in California.

Across industries, apprenticeships typically are run collaboratively by partners such as employers and institutions of higher education.[62] The Early Educator Apprenticeships operate as a partnership among several entities: a labor union; its independent consultant, Randi Wolfe from Tikkun Consulting Inc.; institutions of higher education; ECE employers; and resource and referral agencies (regional agencies that connect families to child care and support early educators). Each partner plays an important role in implementing the apprenticeships, from securing space and instructors for courses to recruiting apprentices, providing coaches, and funding wage increases. Wolfe coordinates the initiative in partnership with Service Employees International Union staff.[63] In the FCC program, resource and referral agencies—Bananas Inc., Child Care Resource Center, and the Mexican American Opportunity Foundation—fulfill many of the responsibilities undertaken by employers in other apprenticeships.

Table 3
Apprenticeship Pathways Are Implemented by a Network of Partners

Partners and Typical Roles	Family Child Care Apprenticeship (On-the-Job Training Program)	Early Educator Apprenticeship	Head Start Apprenticeship
Network coordinator *(independent consultant)* • Manages grants • Develops partnerships • Coordinates partners • Supports program staff	Tikkun Consulting Inc.		
Labor union • Recruits apprentices • Develops partnerships	Service Employees International Union		
Colleges • Select and schedule courses in consultation with network coordinator • Provide course instructors and curriculum • Troubleshoot enrollment issues	• Los Angeles Trade Technical College • Berkeley City College	• Los Angeles Trade Technical College	• Los Angeles Trade Technical College • Berkeley City College • Brandman University
Resource and referral agencies/employers • Recruit and enroll apprentices • Employ site managers and coaches • Provide space for college courses • Fund pay increases (FCC program only)	• Bananas Inc. • Child Care Resource Center • Mexican American Opportunity Foundation	• Mexican American Opportunity Foundation	• YMCA of the East Bay

Note: Listed roles are illustrative, not comprehensive. The Family Child Care On-the-Job Training Program is implemented at multiple sites; each site has only one college and agency partner. The Head Start Apprenticeship is implemented at only one site, and that site has multiple college partners.

To date, funding to support the development and implementation of the Early Educator Apprenticeships has come from state and federal sources earmarked for workforce development. The apprenticeships have been supported with more than $4 million in grant funds,[64] and of this, more than $1.2 million has gone to the FCC program.[65] Two major sources of funds are the California Apprenticeship Initiative and the Workforce Accelerator Fund. The California Apprenticeship Initiative is a state-funded grant program operated by the Chancellor's Office of

the California Community Colleges that supports the development of new apprenticeships.[66] The Workforce Accelerator Fund is an initiative of the California Workforce Development Board that is funded by federal Workforce Innovation and Opportunity Act dollars.[67] It supports innovative projects to close education or training gaps for groups with barriers to employment and education, such as immigrants and individuals with low incomes.[68]

The Early Educator Apprenticeship pathways are governed by regulations set by workforce development agencies, rather than education agencies. Though apprentices earn permits from the California Commission on Teacher Credentialing, the pathways themselves are registered with California's Division of Apprenticeship Standards.[69] Registration is important because it signals that a pathway fulfills state or federal standards. For example, apprenticeships pay at least minimum wage, guarantee wage increases as professional goals are accomplished, and culminate in an industry-recognized certification or credential.

Per state regulations, the FCC program is technically an on-the-job training program, rather than an apprenticeship. To be recognized as an apprentice, participants must meet a number of criteria, including having an employer, being covered by workers' compensation, and working under an experienced instructor (also referred to as a journeyman in the lexicon of workforce development). The nature of a family child care provider's work is at odds with these requirements. Though the program provides job-embedded coaching to address individual learning needs on-site, family child care providers are self-employed and thus do not have an employer and are not eligible for workers' compensation.

However, the program is state-registered through the California Division of Apprenticeship Standards as an On-the-Job Training Program, and participants receive a state-approved certification upon completion of the program. Because the model is otherwise largely indistinguishable from other apprenticeship models, we refer to participants as apprentices and the program as the FCC Apprenticeship throughout this report.[70]

The Family Child Care Apprenticeship supports professional growth and advancement for a key segment of the ECE workforce

The Early Educator Apprenticeships serve different types of ECE workers, and the FCC program was intentionally created to support the professional growth and advancement of home-based child care providers. Family child care providers are an important segment of the ECE workforce. Nationally, about half of all workers paid to provide ECE do so in home-based settings, either licensed or unlicensed.[71] This is also true in California.[72] These home-based providers are a particularly important source of care for infants and toddlers, and for families seeking flexible or off-hours care.[73] Further, the racial, ethnic, cultural, and linguistic diversity for which the ECE workforce is often recognized is concentrated among home-based providers For example, 54% of the home-based listed workforce in California identified as Hispanic in 2012, compared to 36% of the center-based workforce.[74] Sixty-four percent of family child care providers speak to children in a language other than English, compared to 41% of center-based child care staff.[75]

Yet providing care in a home setting can be isolating—family child care providers often work alone—and professional supports are often limited or difficult to access, creating barriers to professional learning.[76] Research suggests that home-based providers tend to participate in quality improvement initiatives at lower rates than center-based providers, perhaps because professional development is not designed with the needs of family child care providers in mind or because staff and instructors delivering professional development or higher education coursework lack experience with home-based providers.[77]

> Providing care in a home setting can be isolating—family child care providers often work alone— and professional supports are often limited or difficult to access.

The FCC Apprenticeship provides professional support and growth for family child care providers seeking California Child Development Permits. Although family child care providers do not need a permit to provide care, there are personal and professional benefits to pursuing them, explained Rochelle Crawford, Program Manager for ECE Professional Development at the Child Care Resource Center:

> The teacher permits are really the primary root of the work that we're doing because [earning them] is going to not only enhance the quality of [apprentices'] programs and build their confidence, but also [allow] them to be marketable.

The California Child Development Permit Matrix provides an industry-recognized structure to guide the professional development of early educators, including family child care providers. Further, family child care providers are eligible to participate in the state quality rating and improvement system, Quality Counts California, and providers who opt to participate can earn points for holding state permits or college degrees.[78]

The FCC Apprenticeship combines no-cost college coursework, individualized supports, and wage enhancements in a highly supportive approach (see Figure 3).[79] College classes are conveniently offered during evening hours at geographically accessible community sites. All apprentices receive academic advising from program staff and ongoing visits from an expert coach to support their development and the development of their programs. Cohorts of about 25 apprentices take college courses together, creating a network for peer-to-peer learning. Apprentices also receive a monthly wage enhancement that ranges from $100 to $500 per month, depending on their length of tenure in the program. These program elements, which are described in greater depth later in this case study, create an accessible, relevant, and empowering approach to supporting the growth and advancement of family child care providers.

To participate in the program, family child care providers must have been licensed for at least 1 year and earn at least minimum wage by caring for children.[80] Earning minimum wage is required of all apprenticeships, regardless of industry, and in this case also ensures that all FCC program apprentices are actively serving children. Family child care providers apply for the apprenticeship through their local resource and referral agency.

Figure 3
The FCC Apprenticeship Offers a Suite of Services and Supports
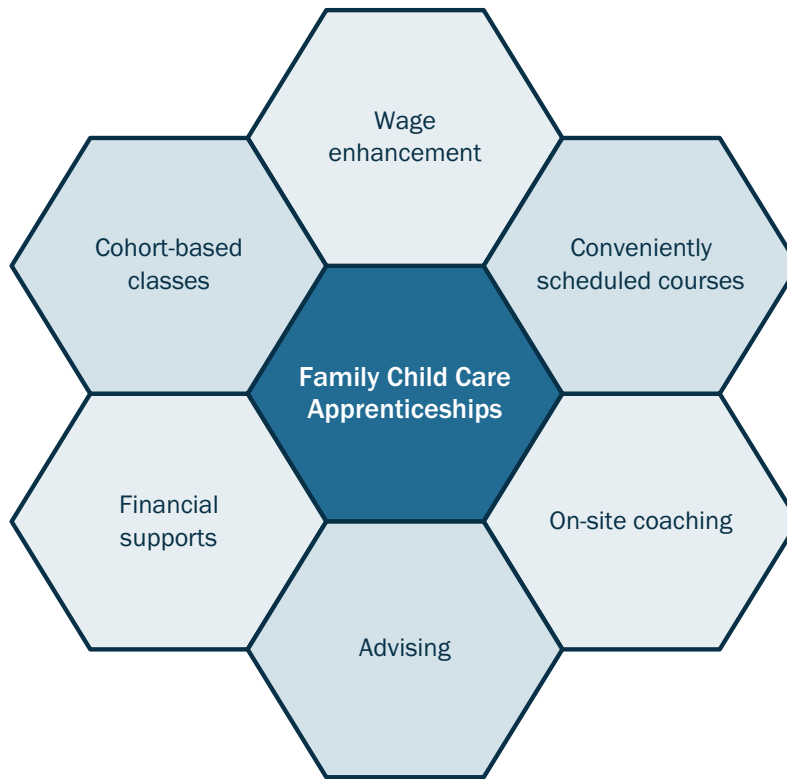
As of 2019, the FCC program has been implemented at four sites. Three of the sites are located in Southern California and serve providers across southeast Los Angeles, San Fernando Valley, and Antelope Valley. The fourth site serves providers in Alameda County in the San Francisco Bay Area. Los Angeles, San Fernando Valley, and Alameda County are in fairly dense urban areas. Antelope Valley, situated on the far northwest end of Los Angeles County, is less densely populated.[81]

Early data about the program are promising. In the FCC program's first 2 years of existence, 97 apprentices earned new permits.[82] Many of the apprentices care for mixed age groups, including infants and toddlers, suggesting that the approach has promise to help address California's shortage of high-quality care for children under age 3.[83] Further, between 2017 and 2019, more than 110 FCC apprentices earned a total of more than $350,000 in monthly wage enhancements from their participation in the program.[84] Among apprentices who received any stipend, the average amount was $3,079 over 2 years. The 17 apprentices who participated consistently throughout the program's first 2 years earned $6,850 apiece.[85]

Importantly, the data also suggest that the FCC Apprenticeship is succeeding in recruiting and serving educators of color and those who speak languages other than English. Nearly 80% of FCC apprentices identify as Hispanic (of any race) and about 20% of apprentices identify their race as non-Hispanic Black or African American. Half of the FCC apprentices speak Spanish as their primary language.[86] The program has thus far served a greater proportion of educators of color than are represented in California's family child care workforce overall; in 2012, about three quarters

of the home-based workforce identified as non-White and/or Hispanic (about half of home-based providers identified as Hispanic).[87] These data suggest that the FCC Apprenticeship is a strategy for cultivating and sustaining the rich diversity of California's early educator workforce through higher education and opportunities for growth.

Having realized tangible results in the first 2 years of existence suggests that the model holds promise to support early educators at a broader scale. ECE apprenticeships are uncommon, and a family child care provider apprenticeship was essentially unheard of in California when the FCC Apprenticeship program began. Randi Wolfe, President of Tikkun Consulting and Training Grants Coordinator for the Early Educator Apprenticeships, explained:

> We broke all the rules with this apprenticeship. They're small-business owners. They don't have a boss. They don't have an on-site journeyman. You could legitimately say, "You can't. These people can't be apprentices." On paper, they're not. They're in this on-the-job training program. But in effect, we talk about them as apprentices.

In a short time, the FCC program has "gone from nonexistent to being something," she noted. The following sections describe this supportive and innovative model in greater detail.

Earning Permits Through Accessible College Coursework

One of the FCC program's core components is the provision of college coursework. In addition to equipping educators with knowledge and skills relevant to working with young children, completing college courses is a requirement to earn the Child Development Permits that comprise the apprenticeship pathway. An Assistant permit requires 6 units (2 courses) of child development or ECE coursework, while an Associate Teacher permit requires 12 units (4 courses) that cover specific ECE topics. A Teacher permit requires 24 units of ECE as well as 16 units of general education coursework across several subject areas.[88]

Apprentices bring a range of educational backgrounds to the program, ranging from some secondary school experience and no postsecondary education at all to completion of a 4-year or graduate degree (see Figure 4). When apprentices have a college or graduate degree, it has typically been earned abroad or in a subject other than child development. Regardless, all apprentices need additional coursework to earn one or more of the permits in the FCC Apprenticeship pathway.

To earn the necessary college credits, all FCC apprentices are enrolled at no cost to themselves in courses at either Los Angeles Trade Technical College (for all Southern California sites) or Berkeley City College (for the Alameda County site). Typically, apprentices participate in one or two courses per semester.

The coursework offered through the FCC Apprenticeship is similar to courses offered at community colleges across the state of California. What is notable is how the program structures and delivers coursework to be convenient and supportive of apprentices' learning needs and efforts to earn Child Development Permits. The first 2 years of the FCC Apprenticeship have also highlighted the importance of providing academic supports for apprentices in general education courses and securing instructors that are a good fit for the program.

Figure 4
Apprentices Have a Range of Educational Backgrounds

Pie chart segments:
- 6% — B.A./B.S. degree or higher
- 6% — A.A./A.S. degree
- 47% — High school diploma
- 17% — GED
- 24% — Did not complete high school
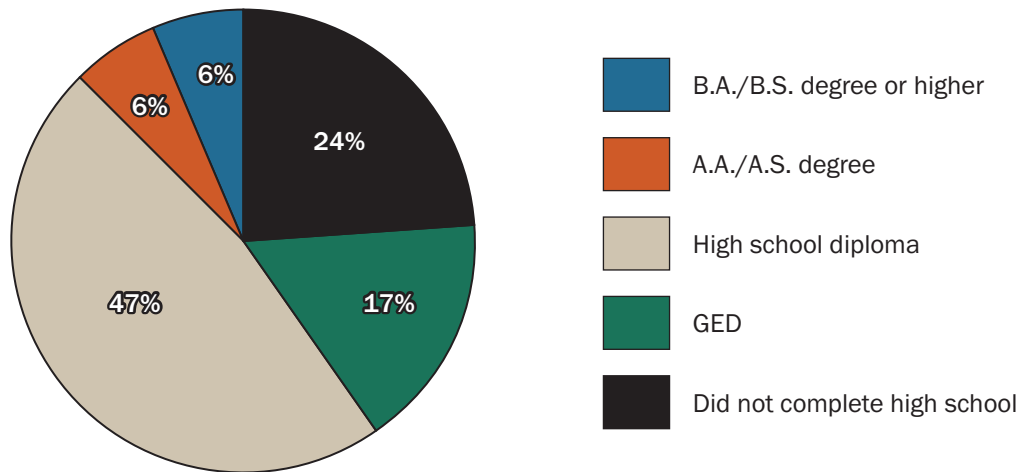
Data source: Unpublished data from SEIU Educator Training Center (2019, May 7).

Coursework is selected and scheduled to accommodate apprentices' needs

The FCC Apprenticeship intentionally selects and schedules courses to provide apprentices with convenient opportunities to earn college credits that fulfill Child Development Permit requirements. Each site offers two to three courses each semester and over time aims to provide the full range of general education and child development credits needed to earn Assistant, Associate Teacher, and Teacher permits.

Because a variety of courses can fulfill state requirements, especially for general education, the network coordinator and program managers collaborate with the college partners each semester to determine which specific courses will be offered. In choosing courses, the partners consider whether a course will meet state permit requirements; how many apprentices need a particular course to achieve their target permit; whether there is a prerequisite for the course; and, where applicable, whether past experiences offering the course have been successful for apprentices.

The program's goal is to offer courses that help the greatest number of apprentices make progress toward Child Development Permits. Every course that is offered fulfills a permit requirement, and the program typically offers courses that do not require prerequisites in order to maximize the number of apprentices who are able to enroll. Avoiding courses that require prerequisites is especially important for general education courses because apprentices are unlikely to have previously earned credits to satisfy them.

Selecting courses each semester allows partners to consistently offer classes that apprentices need, but also creates unpredictability about when particular courses will be offered. As a result, apprentices regularly take courses that fulfill requirements for permits beyond their immediate target. For example, apprentices earning Assistant and Associate Teacher permits do not yet need general education credits, but they often enroll in general education courses because the credits will later count toward their Teacher permit. In a few isolated cases, apprentices only a few credits short of earning a new level of permit have independently enrolled at a community college to earn

the necessary credits, rather than wait for the program to offer the relevant course. Apprentices pursuing outside coursework have continued access to advising, coaching, and other supports, but paid their own tuition.

Courses are also scheduled at times and locations convenient for apprentices. Because FCC apprentices run their own small businesses, leaving during the day to attend classes is not feasible. Instead, program staff work with the two colleges to offer special course sections on weekday evenings, expressly for apprentices. For many apprentices, this means courses take place after their home child care center is closed for the day, though providers offering after-hours care must still secure coverage for the time they spend in evening college classes.

> Because FCC apprentices run their own small businesses, leaving during the day to attend classes is not feasible. Instead, program staff work with colleges to offer special course sections on weekday evenings, expressly for apprentices.

Moreover, rather than requiring apprentices to commute to a college campus, which may be an unfamiliar or uncomfortable environment located some distance from home, courses are taught at the offices of partnering resource and referral agencies. These sites are often familiar to apprentices, who may have previously sought professional development or technical assistance there. Rochelle Crawford, an ECE Professional Development Program Manager, reported that many of the apprentices at the sites she oversees in the San Fernando Valley and Antelope Valley feel at home in the Child Care Resource Center offices:

> They have been coming here for years, taking training…. They feel comfortable here. They know how to navigate through this office. The only thing that has changed is just who's presenting the information, but the conference rooms are the same, the location is the same, and the participants are the same.

For apprentices who live and work farther from the college providing classes, holding sessions at community sites also saves them the time and hassle of commuting.

However, it can be difficult to secure instructors to teach courses off-campus and off-hours. For example, at one point, Los Angeles Trade Technical College struggled to find an instructor for a Spanish language course in the San Fernando Valley. Apprentices and staff were uncertain whether the course would happen. As explained by Alma Villarreal, Program Supervisor in ECE Professional Development at the Child Care Resource Center:

> That was a challenge because they were looking for instructors, … and at the same time the apprentices had to put a hold to see if we were going to offer it, or if they needed to go elsewhere, or if they were just going to have to wait and see.

In the end, an instructor was secured, and the Spanish language course proceeded, providing apprentices with general education units.

In some semesters, Antelope Valley has been unable to offer general education courses because no instructor was available to teach. Antelope Valley is located farther from the campus of its college partner—Los Angeles Trade Technical College—than are the other three FCC Apprenticeship sites, and program staff have been working to develop relationships with instructors at nearby Antelope Valley College to identify instructors to teach in the program. For example, program staff connected with a child development professor from Antelope Valley College, who was hired by Los Angeles Trade Technical College to teach several courses for the program.

Child development courses support educator knowledge and skill development

Apprenticeships require that apprentices receive related instruction to help them grow as professionals. Many of the courses offered by the FCC Apprenticeship focus on core ECE knowledge and skills, such as human growth and development; child, family, and community relationships; and curriculum development. These courses provide exposure to concepts and tools that are important to understand and apply in working with young children and their families.

The coursework offered at the four FCC Apprenticeship sites has varied somewhat, but examples from the San Fernando Valley site illustrate the type of learning apprentices can expect. In the summer of 2018, FCC apprentices there took Child Development 7: Introduction to Curriculum in Early Childhood Education. The course focused on applying developmentally appropriate pedagogical strategies in ECE settings and offered opportunities to practice selecting and incorporating instructional materials into an ECE curriculum. For one project, apprentices worked in small groups to prepare lesson plans on concepts from science, math, and art before presenting them to the class. Peggy Velasco, the course instructor, saw this as an important opportunity for apprentices to demonstrate their learning about how to deliver lessons that accomplish particular objectives for young children.

For another course assignment, apprentices selected three children's books that could be incorporated into the curriculum at their child care home. Velasco required that the books span different subject areas and that at least one focus on honoring and celebrating human differences. Apprentices then created a plan for reading the book with children, identifying advanced vocabulary to introduce, and creating related open-ended questions to ask children in order to promote critical thinking. Velasco explained that she emphasizes open-ended questions because she "want[s] to get [apprentices] to have a social conversation with children."

The next semester, apprentices in the San Fernando Valley had the option to enroll in Child Development 30: Infant/Toddler Studies, which focuses on understanding and supporting the development of infants and toddlers. Velasco also taught this course and explained that understanding the importance of children's attachment to their caregivers in the early years is a key concept for apprentices to learn:

> I focus a lot on making that connection to children. Sure, you can talk about colors, but that's really not an important thing. They're going to be learning that later on in life, when they're in preschool and begin kindergarten, but they're going to get the most out of it if they reach that sort of attachment.

Velasco's course emphasizes a relationship-based approach and requires apprentices to develop a personal philosophy of caregiving for infants and toddlers using that framework. In the course, apprentices also practice observing the developing skills of young children in a licensed care setting and planning learning activities appropriate for young children.

Apprentices, including those with extensive ECE experience, report that courses offered through the program have changed their perspective and approach to working with the children in their care. For example, one apprentice from Antelope Valley reported that her experience in the curriculum course has helped her evolve in her own teaching:

> Apprentices, including those with extensive ECE experience, report that courses offered through the program have changed their perspective and approach to working with the children in their care.

> [I am] able to think outside the box when it comes to teaching a theme, not always having to use what's in my envelope for the day as far as supplies or crafts and really being able to set up the stage for us to do open-ended questions and for [the children] to do problem-solving. [The children are] able to see what their strengths are and work together.

Likewise, a course on child observation allowed her to connect individual children to the resources they need for healthy learning and development based on her observations:

> Through what I've learned in the past courses, I've had children who I have observed, assessed, and done referrals for, that have been labeled as problem children, [but] who are now in therapy for ADHD, therapy for emotional support, who are getting the resources that they need. Had I not been in this class and learned those tools, they would be in school as a problem child.

Another apprentice from Antelope Valley noted that an observation and assessment course had introduced her to the Desired Results Developmental Profile, an observational child-level assessment and planning tool in wide use in California. Whereas she previously used an assessment "strictly based on ABCs, 123s," she is now "focusing on the whole child" by using the Desired Results Developmental Profile, which includes documenting social, emotional, and physical development, as well as children's development of foundational competencies in language, emerging literacy, science, and mathematics.

Susan Garcia, the coach for the Antelope Valley cohort, agreed that assessment has been an area of tangible change among the apprentices with whom she works. She noted that some of the apprentices had been in their "role for well over 10 years and [had] never done an observation or assessment. That is something new to them." Yet with the support of the program, "they've fully embraced it." Garcia mentioned one apprentice in particular who had previously been required to conduct assessments for some children in her program but is now excited about completing assessments for all the children in her care. "She's really expanded her thinking," Garcia said. These reflections suggest that college courses provide opportunities for apprentices to build upon their prior knowledge and extend their expertise in ECE.

A Glimpse Inside Child Development 10: An Off-Campus Course for Apprentices

Twelve early educators are assembled in a classroom that would belong on most any college campus: Six neat rows of tables are lined up facing a projector at the front of the room, where an instructor is preparing to begin a session of Child Development 10: Health, Safety, and Nutrition for the Young Child. The course, too, would be familiar to most any student studying ECE in California—it is one of eight initial courses that nearly every community college with a Child Development program offers, thanks to a far-reaching effort to align coursework across campuses.

The course is being offered by Los Angeles Trade Technical College, but this instructor and her students are not on the community college's campus. They are at the Child Care Resource Center's Chatsworth, California, offices in the San Fernando Valley. The students are FCC apprentices in the San Fernando Valley, and they are here on a Wednesday evening to learn on their way to earning a Child Development Permit.

While they settle in, the apprentices chat with each other, mostly in Spanish. Many apprentices have come prepared with snacks because dinner can be hard to squeeze in during the short window between end-of-day child pickups and the start of evening classes. The instructor joins the conversations—she also speaks Spanish—as she hands out an unlikely assortment of objects that will be used throughout tonight's class: small, plastic models of human brains; miscellaneous rattles and noisemakers; and toy magnifying glasses.

To kick off the lesson, the instructor also hands out a bilingual child intake form, the getting-to-know-you paperwork that ECE providers often request from children's families. This one, like many such forms, is wide-ranging, spanning topics such as a child's sleep schedule, dietary preferences and needs, parental concerns about health and development, and how children get along with others.

The instructor asks that the apprentices take 10 minutes to role-play a conversation with a family to elicit the information requested. The apprentices pair off, and a buzz of conversation in both English and Spanish fills the air. The instructor circulates, listening in on the role-play dyads and answering questions, often in Spanish, whenever a hand is raised.

She calls the group back together to discuss their experience. One of the "parents" shared that the conversation showed that the provider was interested in knowing her child. Another student noted that she uses an intake form in her child care home and that she sometimes worries that families seem to not want to share information about bedtimes, perhaps for fear of judgment. Her classmates chime in, offering their suggestions for how to communicate that the information helps the providers best care for children. The instructor underscores the point, noting that apprentices "are running a business and are very busy" but that taking time to go over the information in the form offers an opportunity to begin building relationships with families who are new to their care. Several apprentices note that they will consider adopting or extending their intake forms as a way to learn about children's needs.

After this warm-up, the class turns to the main topic for the evening: children's sensory development and understanding atypical sensory development in young children. This professor has taught several courses for the FCC Apprenticeship program and begins by harkening back to their prior learning about the vestibular system in a past semester. She cues up a short video on sensory integration, which the students attentively watch.

Following the video, she checks for understanding with a few quick questions: "What do you do to promote the development of children's vestibular systems?" "What is an activity that comes to mind to do with children to prevent issues with proprioception (sense of their own bodies' position and movement)?" Apprentices respond to each question, popcorn style: "Ride bicycles." "Take children on walks." "Cooking activities." The instructor nods with each answer, gently correcting responses that are less related to these senses and offering a few more suggestions for consideration. She notes, "You didn't know, but you're doing [preventive] therapy every day by exposing children to activities like making a cake, pretending to be horses, going up and down the slide."

The class progresses over the rest of the evening in a similar fashion, with the instructor offering insights from her slides between questions posed to the apprentices about children's development and what it means while caring for children. The questions appear to not only be a strategy for engaging students in the class, but also to act as formative assessment: At several points the instructor responds to students by asking the class to pair up and discuss a question or concept, with their textbook for reference, before debriefing as a large group. The manipulatives handed out at the beginning of class are taken up in various activities; for instance, the brains come out to make concrete the location of key centers for cognitive development.

Much of the way the course is structured is no different than if apprentices were to attend on the Los Angeles Trade Technical College campus. However, it is clear that the instructor has taken care to relate the subject matter to the day-to-day responsibilities of the apprentices and to leverage the expertise that they bring to the classroom.

Apprentice experiences in general education demonstrate the importance of academic supports

For many apprentices, the FCC Apprenticeship is their first experience with college-level general education courses, courses from a range of disciplines satisfying distribution requirements that educators must meet to earn Child Development Permits at the Teacher level and beyond. Noted Alma Villarreal, the Program Supervisor for San Fernando Valley:

> There was a majority of our group that hadn't taken any general education [courses]. They might've taken several child development courses, but general education is one where we saw that for whatever reason they weren't taking them at their college.

Research has documented that general education courses can pose challenges for many college students, including early educators, many of whom have limited background in general education subjects, especially mathematics.[89] Randi Wolfe noted that this pattern emerged among the FCC apprentices:

> Once they started taking … the general education courses, then we suddenly started having problems with people not passing the courses or having to really do much more training of the instructors for them to understand who we are and what these folks are up against and how to … to contextualize the content without lowering their expectations of the students. All those complexities.

For Wolfe, one lesson learned is that more intensive academic supports could be a valuable addition to future iterations of the program. Several apprentices also expressed a desire for academic tutoring support, including an apprentice from San Fernando Valley, who said:

> I do wish that they [had] a little bit of tutoring. Because I know there're a couple of subjects I've never taken in my life, and I think if there were some kind of weekend [tutoring], I'd be the first one going.

Apprentices in the Head Start Early Education Apprenticeship pathway, which serves Head Start educators earning their bachelor's degree, already have weekly tutoring to support them in understanding key concepts and skills and completing their homework. Resources for this type of ongoing tutoring are not currently available in the FCC Apprenticeship, but Wolfe hopes to incorporate that element in the future, particularly for general education subjects. As she said, "From the beginning, you have to put tutoring into the program as a very important component of the academic support." Several other program staff similarly identified tutoring as a support that would enhance the FCC Apprenticeship model. These supports may be especially important for apprentices who are learning English.

Coursework for the program is conducted primarily in English, though some instructors speak Spanish. For example, at the San Fernando Valley site, nearly all FCC apprentices speak Spanish, and their core child development instructor is bilingual in Spanish and English. During one course session, we observed the instructor engaging with apprentices in both languages, encouraging apprentices to bring their bilingual skills into the classroom (see "A Glimpse Inside Child Development 10: An Off-Campus Course for Apprentices"). The program also recently offered a Spanish language course for general education credit, which used Spanish as the primary language in the classroom. Several bilingual apprentices pointed to their success in these classes to illustrate how opportunities to complete some assignments in Spanish, to have more bilingual instructors, or to access translators or tutors could better support their learning in the future.

Staff also noted that technology can be an area of challenge for some apprentices. Rochelle Crawford noted that "many of [the apprentices] didn't even have an email account" before beginning the program. The program mitigates this barrier by providing all apprentices with a laptop computer, but additional orientations to tools such as email, course websites, and online portals to access academic records could further support student success.

Intentional recruitment and orientation can help identify good-fit instructors

Because college courses are a core feature of the FCC Apprenticeship, finding instructors who are a good fit for the program is essential. All the instructors for the apprenticeship are affiliated with one of the program's college partners: Los Angeles Trade Technical College or Berkeley City College. The courses taught through the program are the same as those taught on the colleges' home campuses, and, just like any other college course, the instructors have latitude in determining content, learning activities, and pedagogy. That flexibility can result in significantly different experiences for students depending on the instructors' approaches.

> Because college courses are a core feature of the FCC Apprenticeship, finding instructors who are a good fit for the program is essential.

It is perhaps self-evident that course instructors' specific knowledge and skill matters for apprentices' learning, but this was illustrated vividly with two sites' divergent experiences with geology courses that fulfilled a general education requirement in science. Staff at one site reported that the course was challenging for many apprentices. The course introduced a significant number of new concepts and terms in a subject area that was unfamiliar and seemingly unrelated to family child care providers' interests and expertise. Several apprentices who speak Spanish as their primary language noted that learning new, discipline-specific terminology was particularly challenging. Staff reported that some apprentices struggled to pass the course, despite thriving in other subjects.

The same geology course was offered at another FCC site by a different instructor, and the response was strikingly different, noted Guadalupe Arias, a Professional Development Supervisor at the Child Care Resource Center. Before the course started, Arias had a conversation with the professor about the providers in her class and discussed key early childhood practices. During the course, Arias reported, the instructor made the content more practical for apprentices' jobs by "align[ing geology] with the child development practice piece to make sure that the students were successful." For example, at one point in the semester, the instructor provided apprentices with credit for developing geology-related activities for a local family engagement event: Apprentices developed a hands-on learning activity exploring different types of rocks and sand for families attending the event. Arias credited these adaptations with the success of the course:

> I met with one of the providers who had taken a geology class, and she showed me pictures and said, "Look what I did in my [ECE] classroom with rocks because of what I'm learning in geology."… She wanted to continue to study in the field…. They were … very nervous when it came to that class…. It's a lot of vocabulary. The lab: It was just a lot of content. But at the end of the class they loved it. They were like, "Oh my gosh, we're so happy we had this class." A lot of them applied what they learned in class into their [child care home] environment. They made it part of their block area or part of their outdoor area, [their] science activities. So they really loved that.

Whether due to disposition, orientation to the context and experiences of FCC apprentices, or both, the instructor was able to effectively incorporate apprentices' work into their learning about geology, creating a successful learning experience.

Other instructors have similarly tailored their approaches to the program context. For example, Arias recounted how a health class professor adapted his course content to more closely align with the backgrounds and skills of apprentices. He "aligned [the course] with self-care, … making sure that they care for themselves because they do have a lot of stress that builds up working in this field. And he beautifully aligned [the course] to that piece of their program." Another instructor welcomed the use of both English and Spanish in the classroom during her child development courses, drawing on the apprentices' language skills to build their content knowledge.

As these positive examples illustrate, an important component of fit is whether a faculty member shares or is receptive to learning about and leveraging the experiences, knowledge, and skills that educators bring to the classroom, such as their background working with young children or their fluency in Spanish or other language. This responsiveness need not erode rigor, but rather can adapt to the strengths of family child care providers.

In contrast, another instructor who taught in the program adopted classroom expectations that one staff member characterized as "punitive," creating strict rules against food during class and a policy that three late arrivals would result in a failing grade, among others. The apprentices felt strongly that the resulting environment was not conducive to their learning and wrote a collective letter to program managers expressing their grievances. A dean from the community college providing the course investigated the situation and ultimately assigned a new instructor, who proved to be a better fit. To FCC Apprenticeship program staff, these types of experiences suggest that some instructors do not understand the context of FCC apprentice students. Said Rochelle Crawford:

> Sometimes the instructors may not realize the population that they're working with, that these are family child care providers. They don't always get to leave work on time because they're dependent upon a family to pick their children up.… And English may not be their first language.

Apprentices themselves noted how important it is for instructors to understand their audience. For example, one apprentice expressed her desire for all instructors who teach through the program to be helped to understand the apprentices' lives outside of class:

> I think having the instructors for whatever class it is, whether it's child development or general education, having them be aware that we are all family child care providers who are coming in with possibly snot and throw up, dirty scrubs, and possibly not hav[ing] had dinner yet. Just having the instructor know that this is the dynamic that they're walking into would probably make a difference.… It is quite challenging to be a caregiver, to be a teacher, to be a cook, to be a nurse, and still show up and be attentive.

The program has begun to more consistently offer an onboarding process, similar to the process Arias described for the successful geology instructor. To orient new instructors, program staff meet with the instructor to share important information about ECE, child development, and family child care. This onboarding process is a feature that Randi Wolfe, the Training Grants Coordinator for the Early Educator Apprenticeships, would like to make permanent:

> To orient new instructors, program staff meet with the instructor to share important information about ECE, child development, and family child care.

> We never had a problem with any child development instructors knowing exactly who they were talking to, what they were going to talk about, how they were going to teach, and all of that. But … we really had to explain it [to general education instructors] in two cases.… We really talk[ed] them through who this group is, what their lives are like, why they come to class late if a parent doesn't show up and pick up that baby.… [In the future] I would put in some kind of an onboarding or orientation process for college instructors who aren't used to working with this population.

Coursework is an integral aspect of the FCC Apprenticeship, and finding and orienting instructors to support relevant classroom learning that leverages apprentices' strengths and experiences is an important element of the work that staff do to support the program.

Customizing Support Through Coaching, Advising, and Peer Cohorts

True apprenticeships offer on-the-job training under a skilled instructor to help apprentices gain practical and theoretical knowledge of their field.[90] Because family child care providers do not have a supervisor on-site, the program offers multifaceted and individualized supports that help apprentices develop, learn, and apply essential knowledge and skills. Experienced program staff operate as coaches and advisors, providing feedback, guidance, and resources to promote the apprentice's success in coursework and practice. Further, apprentices are grouped into cohorts of 25 apprentices that act as a network of peer support.

Coaching extends classroom learning with a focus on practice

The FCC Apprenticeship provides on-site support for apprentices in the form of ongoing coaching. By engaging in monthly visits to apprentices' family child care homes, the program's experienced coaches provide individualized guidance to improve apprentices' practice and act as a trusted point of contact for other concerns, making them a crucial and interrelated part of the program's web of supports for learning and growth.

The coaching that is offered through the apprenticeship program focuses on supporting teacher–child interactions and relationships. Coaches anchor their observations in concepts from the Classroom Assessment Scoring System, a widely used instrument for assessing quality in early childhood classrooms. That assessment captures different dimensions of teaching quality, including positive classroom climate (emotional support), time and behavior management that supports learning (classroom organization), and activities and teacher feedback that support children's development (instructional support).[91]

The Classroom Assessment Scoring System is particularly relevant to ECE providers in California because Quality Counts California, the state's quality rating and improvement system, awards points for administering and scoring highly on the assessment.[92] Though voluntary, participation gives ECE providers access to incentives and supports specific to the quality rating and improvement system, such as funding for new materials or expanded professional development opportunities. High ratings may also attract and impress families seeking care for their children. For apprentices who are unfamiliar with the tool, incorporating concepts from the assessment into coaching provides a scaffolded introduction to the framework. For all apprentices, coaching organized around the assessment domains could pave the way for participation in or advancement through the quality rating and improvement system, with possible benefits for their practice and their business.

Administering the full Classroom Assessment Scoring System instrument with fidelity is somewhat onerous, requiring a significant investment of time from providers and assessors alike. Instead, coaches use a straightforward form that is organized around the three core domains. Program staff developed the form specifically for use in the program. Rather than serving as a valid and reliable assessment tool, the form provides a general framework for coaches to target their observations, identify areas in which an apprentice may need support, and introduce apprentices to the concepts and language used in the full assessment. Coaches' observations typically last about an hour and are followed by a debrief and consultation between the coach and the provider.

Following the observation, the coach and apprentice debrief, discussing what the coach saw; reflecting on those observations; and identifying new strategies, tools, and approaches that might help address any areas for growth. These conversations are grounded in the observed strengths and needs of individuals. For example, a program coach reported that she worked with one apprentice on dialogic reading as a strategy for read-alouds, practicing strategies to actively involve children in the telling of stories. She has supported others on practicing new classroom management techniques and on using open-ended questions to prompt conversation with children. One apprentice who has been working on open-ended questions reflected on how helpful she has found her coach's support:

> One of the things that she has helped me with a lot is opening the questions at all times with the kids. Have them talk and talk and talk, so they can learn their ABCs and their vocabulary.... Why? ... [She] reminds me.... Kids don't sit and listen. They learn through play.

Because it is common for family child care providers to be the only adult on-site caring for children, coaches and apprentices often have these reflective conversations via phone outside of a provider's operating hours.

Providing this sort of tailored guidance requires a high level of expertise. Coaches must possess a deep knowledge of early childhood development and age-appropriate pedagogical strategies, competency working with adult learners, and skill in building the high level of trust required to forge a strong coaching relationship. The FCC Apprenticeship program has employed coaches with significant experience in the field and in the communities they serve, and each of the program's coaches is bilingual in English and Spanish. Susan Garcia, a coach for the Antelope Valley cohort, has nearly 2 decades of experience providing professional development and resource and referral services in the region. One apprentice that she coaches noted that even her children have grown comfortable with Garcia; when she arrives for an observation, "they bring the chair to [her] ... and then they do their thing." The apprentice commented, "It's just been wonderful."

Coaches visit each apprentice monthly in a cycle of observation, feedback, and reflection. Initially, the model called for twice-monthly coaching visits, but site managers and coaches found that scheduling multiple visits was difficult given other constraints on the apprentices' time: caring for children, often longer hours than a traditional workday; completing coursework; running a small business; and balancing their personal, professional, and family responsibilities. Further, some apprentices also receive coaching support through participation in other quality improvement initiatives, such as Quality Counts California and the Family Child Care Home Education Network, a quality improvement effort targeting family child care providers.[93] Staff know which apprentices are involved in other efforts and coordinate with their counterparts to ensure that coaching visits are not duplicative of other forms of program growth and improvement support.

> Coaches visit each apprentice monthly in a cycle of observation, feedback, and reflection.

Garcia sees coaching as complementary to apprentices' experiences in the college classroom: "I'm out there doing observations and supporting them.... But ultimately, I think it all works together because ... they're getting it on all the different ends.... Everything is working together."

Apprentices also noted the ways in which coaching builds on the experiences they are having in the classroom. One apprentice described how her coach is able to offer individualized feedback that is difficult to achieve in a classroom setting:

> They're coming out and they're seeing how we facilitate or interact with the kids. They give us suggestions. They give you the feedback. In the classroom, the teacher does their very best to take 20 different situations and try to give feedback. When we have that one-on-one, that coach, it's very helpful.

Another apprentice from the San Fernando Valley noted that her coach had once visited during finals week and immediately noticed her high levels of stress from coursework demands. The apprentice wanted to avoid having her stress impact the children in her care, so they worked together on strategies to manage it. The apprentice explained that her coach's support "really made [her] feel like, 'Don't give up.'" She continued, "Her coming in and having conversation and observing … meant a lot." As apprentices learn about topics such as child development and curriculum in their coursework, coaches work in parallel to support apprentices in strengthening the learning environments they provide in their homes.

Advising and case management facilitate responsiveness to apprentice needs

Apprenticeship program staff such as site managers and coaches fill many roles. One of these roles is to provide personalized advising and case management that allows the program to nimbly respond to the needs of individual apprentices.

This high-touch, individualized advising begins before apprentices officially enter the program. Each applicant provides information about past experiences in school and in ECE, including what, if any, Child Development Permit they hold. After admittance, program staff conduct a detailed transcript analysis for each apprentice, identifying courses needed to meet the professional benchmarks identified by the program. Staff use the results of this analysis for individual advising and to inform which courses will be offered each semester.

Throughout the apprenticeship, the program staff remain the apprentices' point of contact for general support and troubleshooting. For example, they liaise with partner colleges to enroll apprentices in courses; get approval for apprentices to enroll in courses requiring a prerequisite; and resolve outstanding holds that prevent apprentices from accessing their transcripts, such as unpaid fines from the bursar's office. They also provide ad hoc technical assistance, such as supporting apprentices in completing Child Development Permit applications or accessing college transcripts. Apprentices spoke highly of the accessibility and helpfulness of program staff. One apprentice in the San Fernando Valley said, "When I need something, I ask them. They always help us. I'm really happy with them."

The program's coaches, who also develop strong relationships with apprentices, act as a trusted point of contact for a broad array of technical assistance needs. Garcia described the type of diverse support she provides in this role:

> I had [an apprentice] yesterday, she had called me about time sheets. Even though it's not me [who can help], I'm going to try to find a way that I could help.… We're kind of, I would say, a jack of all trades with them. They know they could contact us with anything that they need.

In another example, one of the program instructors in the San Fernando Valley noticed that an apprentice was falling behind on coursework and shared her concern with program staff. The apprentice's coach went to her home that week and provided one-on-one support to help find time and space to complete and submit the assignment. The instructor was "very impressed" by this intensive level of support being offered to apprentices. Coaching and advising founded on strong relationships between apprentices and program staff help create an environment that is highly responsive to the needs of individual apprentices.

Cohort-based classes build a community of peers

The FCC Apprenticeship program was intentionally created as a cohort-based experience to create strong relationships and a network of peer support among apprentices. Cohorts are a common feature of many effective educator preparation and professional development approaches,[94] but the formation of peer networks is perhaps particularly important for family child care providers, whose work can be isolating[95] and, in some cases, competitive. Family child care providers are small-business owners whose livelihood depends on the success of their child care home.

Rochelle Crawford, Program Manager for ECE Professional Development at the Child Care Resource Center, identified the cohort structure as crucial for the apprentices:

> The cohorts are essential to the success of this program…. Without the cohort, they probably wouldn't participate as much…. They've been working closely with each other…. They're all among a network of individuals. There's safety in the cohort piece. Safety and trust and the additional support for one another.

Alma Villarreal, Crawford's colleague at the Child Care Resource Center and the Program Supervisor for San Fernando Valley, agreed with Crawford and noted that apprentices in the San Fernando Valley engage in this type of social learning and support: "They've built that relationship with one another in that peer-to-peer [way]" and feel "comfortable to reach out to each other for any support when it comes to any of their college courses." Apprentices there have even organized site visits to each other's homes to share and network together. Crawford has observed that in Antelope Valley, "the providers are becoming closer, [and the program] is connecting them in a way that they didn't connect before." Many apprentices call each other friends and invite each other to their homes outside of classes.

Villarreal believes that the cohort is especially supportive because the apprentices have a shared experience as family child care providers:

> They know the challenges they have, whether it's their hours [or] just trying to support a family…. They know each other's challenges, their strengths, and they can relate with one another because [running a] family child care home is very isolating. This is an opportunity for them to connect with their peers [and share] their accomplishments and their challenges and their successes.

These shared experiences help cohorts of apprentices become communities of learners and colleagues and provide additional sources of support as apprentices advance through the tiers of the FCC Apprenticeship pathway.

Increasing Compensation and Financial Support

The FCC Apprenticeship is directly engaged in boosting apprentices' compensation and creating new opportunities for well-paying careers. This issue is particularly salient for the field of ECE, in which salaries are typically low. The FCC Apprenticeship also incorporates financial supports to make college coursework free for apprentices, a support that research suggests may be particularly important to facilitate participation in professional development among family child care providers.[96]

In a typical apprenticeship, an apprentice's employer agrees to provide raises at set points in the training as a recognition of the apprentice's growth and advancement in the field. Because family child care providers are self-employed, such a strategy is not feasible. Yet FCC Apprenticeship program administrators were dedicated to finding an alternative tailored to home-based providers. The program's solution is to offer a monthly cash bonus for apprentices, paid by the program.

This wage enhancement begins after an apprentice's 4th month participating in the FCC pathway. The stipend begins at $100 per month. After 4 more months, the stipend increases to $200 per month. From that point on, the stipend increases by $50 every 4 months, up to a maximum of $500 per month. Apprentices continue receiving stipends until they graduate from the program or until program funding ends. Apprentices who began the program in the summer of 2017 earned $450 per month in wage enhancements by the summer of 2019. In California, the median annual wage for a child care provider is $24,150, or just over $2,000 per month, which underscores the significance of the wage increase.[97]

Apprentices noted that "the stipend has been helpful as an incentive" for participation, in part because it provides a source of funds to pay for a substitute to care for children when they have courses or need to complete homework. At the same time, apprentices emphasized that the stipend alone was not motivating their participation in the program. For instance, one apprentice in Antelope Valley said, "I think even if we didn't have [the stipend], I think we'd all have … the drive that we have to come and be here and get educated. [The stipend] just adds to it."

> Apprentices noted that "the stipend has been helpful as an incentive" for participation, in part because it provides a source of funds to pay for a substitute to care for children when they have courses or need to complete homework.

One challenge is that this strategy for boosting compensation for family child care providers is not sustainable. Unlike in other Early Educator Apprenticeships in which wage increases are funded by employers and persist after apprentices complete the program, the monthly stipend is grant-funded and available only to active participants in the program. Unless a provider is willing to raise rates to increase his or her income, which would make child care less affordable for families, another source of funding is needed to make this compensation boost durable.

Program staff also connect apprentices with other opportunities to earn additional compensation for their work. For example, many apprentices are eligible to receive a bonus through a California program known as AB 212, through which counties distribute locally determined incentives to encourage retention of early educators.[98] One use of AB 212 funds in Los Angeles County, where

many FCC apprentices reside, is to provide a small bonus for early educators who complete relevant college coursework. Program staff seek to ensure that apprentices are aware of the opportunity and submit the required documentation, such as transcripts, in order to benefit from the program.

Finally, the FCC Apprenticeship incorporates financial supports to mitigate barriers to college enrollment. Other than the cost of their time and transportation to class, apprentices pay nothing for their college enrollment and coursework. The cost of tuition, books, a laptop, and Child Development Permit application fees are covered. These costs can be substantial. For example, tuition for the 12 units of coursework required to earn an Assistant permit would be more than $550 at a California community college.[99] The application fee for an initial California Child Development Permit is $100, plus the cost of a background check.[100]

Family child care providers are small-business owners and often operate on slim financial margins; some estimates suggest margins as low as 1%.[101] Many apprentices noted that the program's financial supports made participation in the program possible. For example, one apprentice in Antelope Valley said, "What made me go ahead and take the course is that there was an opportunity to get an education at no cost to us. It was nothing but 'let me figure out my time so that I can do this.' That's not going to come to you very often."

Tying It All Together: An Accessible and Empowering Approach to Preparation

The apprenticeship provides educators with a suite of opportunities and supports that include:

- courses offered at times and places that are convenient for apprentices and, ideally, taught by instructors who leverage apprentices' interests, experiences, and language skills to contextualize and deepen learning;
- advising and on-site coaching that is highly individualized and provided by experienced bilingual ECE professionals; and
- direct financial supports that make college coursework affordable and that reward professional advancement with cash bonuses.

The combination of these program features creates an accessible and empowering approach tailor-made for FCC providers. Several apprentices and staff noted that the layering of multiple supports into a coherent approach was part of what makes the FCC Apprenticeship a powerful learning experience. For example, in speaking about what she had gained from the program, one apprentice noted that many of the program's features—from thoughtful scheduling to financial supports—facilitated her learning:

> I love the fact that they educate us so that we can have a broader view of what to give the children. They work with our schedule. They let us be a provider. Being a provider, you have so many hats you wear. They address all the different hats and make it easier for us to educate ourselves—make it easier financially, as well as physically, to bring that newness and that greatness to our children. And they make it a little bit more personal.

Staff and apprentices alike described synergy among the program elements. Financial supports facilitate participation in coursework and incentivize persistence in the program. Both coaching and coursework provoke reflection on practice and offer strategies that apprentices can try in their work with children.

The confluence of these elements may be helping apprentices feel well-supported and successful in their learning. Individuals involved in the program, from apprentices to staff to partners, noted that one important but unexpected outcome of the program is an expanded sense of empowerment and confidence among apprentices. Guadalupe Arias, a Professional Development Supervisor at the Child Care Resource Center, has heard apprentices share comments that reflect a recognition of their own role as educators, such as "I had no idea what I was already doing and how it is connected to the education piece of my field." Susan Garcia, an FCC Apprenticeship coach, described how one apprentice experienced a newfound feeling of success in the program:

> She told me she had gone to the college and she felt lost there. She passed the class, but it was hard for her. This program has helped her. She's with her peers. The instructor really understands where they're coming from. She's gotten A's in classes.… She's so proud of herself.… The instructor told her that on one of the midterms, she'd never had somebody score as high as she did.… She was so proud of all her accomplishments.

The sentiment was most powerfully expressed by the apprentices themselves. For example, one apprentice described how participating in the program validated her practice as an educator, saying, "This program was definitely geared toward family day care providers who want to better themselves to be able to better serve the children, and have a better-quality program." Another stated that having new credentials "sets the bar for us to be able to expand the business, to gain business, and get respect from clients on what it is that you're doing every single day." Several apprentices mentioned that they plan to pursue additional education at the associate and bachelor's levels after finishing their apprenticeship. Apprentices' comments underscore the sense of pride and empowerment educators experience from the opportunity to learn and earn recognized credentials in a well-supported and responsive setting. Randi Wolfe, Training Grants Coordinator for the Early Educator Apprenticeships, reflected that this "enormous sense of empowerment and confidence" was an outcome that those who designed the program "didn't know would happen" with the development of the Early Educator Apprenticeships.

Applying Learning to Practice at a Family Child Care Home

It is a sunny, warm day in Los Angeles County, and 11 children are enjoying outdoor time at a family child care home. The provider, who took over this child care business from a family member 5 years ago, is an FCC apprentice.

On one side of the courtyard, an assistant engages with three young children on a blanket covered with an array of pillows and blocks in different fabrics and colors to explore as they crawl and toddle about. Nearby, the older children take turns completing an obstacle course that they helped create. In turn, each child runs off the starting point and wriggles through a flexible tunnel on the ground before hopscotching through a series of hula hoops. Finally, they walk carefully across a series of low balance beams before returning triumphantly to the starting point. The provider partnered

with the children to design the game, which helps them practice motor skills and self-control—each child has to wait for his or her turn to jump, balance, and run through the course. This activity is one of many she has planned to ensure that children "learn from the minute they enter the house" each day.

In between turns, one child asks the provider for water, and the provider warmly encourages him to help himself from a child-sized pitcher on the front step, creating an opportunity to practice his burgeoning independence and fine motor skills. Soon after, a toddler moves from the blanket to take a turn on the course, and the educator helps him cross the balance beam. Soon, an alarm goes off on the provider's watch, and she announces that there are 5 minutes left to play before lunchtime. She supports all the children in finishing their outdoor activities and cleaning up the play area before heading indoors to eat. The smooth transition suggests that the children are well accustomed to the program's daily routines.

The quality of the care at this family child care home reflects the provider's increasing early childhood expertise, and she credits her participation in the apprenticeship program with helping her to learn important concepts of child development and strengthen her interactions with children and their families. For example, she describes how a course in infant and toddler development changed her approach to engaging with the youngest children in her care. After learning about early cognitive development, she came to appreciate how talking to infants and toddlers supports their growth, and she is now more intentional about engaging in conversation with young children well before they learn to talk. The program has proven a valuable complement to her prior learning and experience.

Next Steps for the Family Child Care Apprenticeship

Though the FCC Apprenticeship and the other Early Educator Apprenticeships have demonstrated early signs of success, program organizers continue their efforts to grow and develop the approach.

Enhancing academic supports in general education

In building the FCC Apprenticeship model, apprentices, staff, and administrators have identified academic supports that could further enhance providers' learning in college courses. Specifically, given the range of educational experiences that apprentices bring to the program, program staff would like to add orientations for apprentices targeting college readiness skills and ongoing academic tutoring, especially in general education subjects, to future iterations of the program. These supports may be especially important for educators who do not have previous experience with postsecondary education or the discipline reflected in a given general education course, or who are developing their English language skills through participation in college courses.

Further, program administrators have come to appreciate that instructors' dispositions and adult learning expertise are important for apprentices' success in college courses. Successful instructors in the program leverage FCC apprentices' experience in family child care and exhibit a willingness to learn more about FCC providers and their learning needs. Yet some instructors have limited experience working with educators or have not been open to providing the flexibility that family child care providers feel is important to their success in courses, such as allowing apprentices to eat snacks in class or arrive a few minutes late. To help address these challenges, administrators
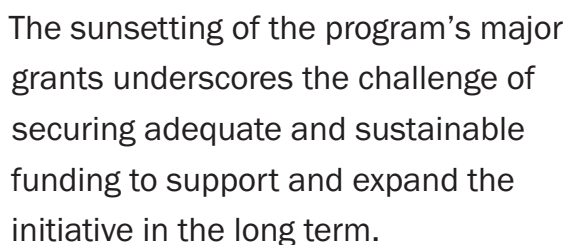
have begun to provide a more formal onboarding for new instructors as part of their orientation. Additionally, securing instructors to teach evening course sessions off campus can be challenging, so FCC Apprenticeship program staff have built relationships with faculty who are committed to teaching through the program.

Finally, apprentices noted that having more course instructors who are fluent in Spanish would facilitate their learning. To date, coaches and site managers have all been bilingual, but the same has not been true of all course instructors. Given the significant number of Spanish speakers in the program and in California's ECE workforce, recruiting bilingual staff and instructors will continue to be important as the program evolves.

Sustaining and expanding apprenticeship pathways

The Early Educator Apprenticeships have evolved significantly since their 2015 inception—expanding from serving center-based child care workers to serving licensed family child care providers and Head Start parents and teachers. The Early Educator Apprenticeships have been funded by several state-funded workforce development grants and an apprenticeship initiative grant program of the California Community Colleges Chancellor's Office. However, the last of the grants that provided substantial operating funds for the apprenticeship pilots sunsetted in June 2019, and new sources of funding will be needed to maintain the approach.

Program managers estimate that implementing the model with a full suite of supports costs approximately $22,000 per apprentice earning an Associate Teacher permit.[102] Program partners are actively working to find sufficient and sustainable funding sources to continue and grow the FCC Apprenticeship so that other educators can participate and achieve similar success. At the same time, the sunsetting of the program's major grants underscores the challenge of securing adequate and sustainable funding to support and expand the initiative in the long term.

> The sunsetting of the program's major grants underscores the challenge of securing adequate and sustainable funding to support and expand the initiative in the long term.

Some partners involved with the Early Educator Apprenticeships are working not only to sustain existing pathways but also to create new apprenticeship opportunities for additional pools of current or aspiring early educators. The ECE Youth Apprenticeship is one such effort. The apprenticeship represents a partnership between Castlemont High School in Oakland, YMCA of the East Bay, ECE Pathways to Success, Berkeley City College, and Kidango Inc. It enables high school students to receive dual credit for completing four college courses and 150 hours of on-the-job training in a child care center while still in high school. Youth apprentices receive coaching, tutoring, and stipends throughout the 14-month program. Program graduates earn a California Child Development Associate Teacher Permit, qualifying them for widely available teaching positions when they turn 18 or upon high school graduation.[103] The apprenticeship, which was recently awarded a competitive national grant from New America's Partnership to Advance Youth Apprenticeship, launched in summer 2019.

Sustaining wage enhancements

The FCC Apprenticeship has provided substantial, ongoing wage enhancements for apprentices. However, because family child care providers are self-employed, there is currently no mechanism in place to sustain increased wages after an apprentice completes the program. Without an external source of funds, provider raises would have to be funded through increased costs of child care for families, many of whom already struggle to afford quality care.[104]

Low compensation is a systemic challenge in the field of ECE, and broad-based change may be needed to make apprenticeship a viable pathway for a significant number of early educators. The wages of child care workers in California are in the 7th percentile for all workers.[105] Further, early educators with a 4-year degree earn, on average, only $5 per hour more than early educators without any degree in California.[106]

It was a challenge to get the workforce development world to accept the notion of an early educator apprenticeship because of early educators' low earning potential, reflected Randi Wolfe:

> Initially, we were in a position of being the new kid on the block, pushing for jobs that don't pay as well as solar panel installation or advanced manufacturing. We could talk about the social value of ECE, but that wasn't their interest [in workforce development]. But as we developed highly successful models and they began to understand the opportunity we were creating—particularly in terms of engaging women in apprenticeships—they have become increasingly receptive to supporting our efforts.

That the Early Educator Apprenticeships have flourished despite challenges is a sign of their promise, but their prospects will depend in part on improving compensation and working conditions for early educators. In addition to an overall increase in compensation, Wolfe noted that a system in which educators with "more professional qualifications … get paid better than the person who doesn't have those" is needed. Such a system is "just logical except in this world [of ECE]."

Conclusion and Key Takeaways

The FCC Apprenticeship is an innovative workforce development initiative to strengthen the field of ECE by developing pathways for advancement among licensed family child care providers. The program offers a multifaceted approach to on-the-job learning, combining college coursework, customized supports for learning and practice, and wage increases to help apprentices earn professionally recognized certifications. The approach is distinguished by a number of features, including the following:

- The FCC pathway is specifically tailored for licensed family child care providers, and the tiers are fully aligned and stackable, creating an on-ramp for professional advancement among California's racially, ethnically, culturally, and linguistically diverse early educators.
- Child development courses and on-site coaching provide opportunities to build knowledge and skills to apply in working with young children.

- Close relationships fostered through expert coaching, high-touch advising, and peer cohorts allow the program to respond to individual needs, promoting student success in coursework and laying a foundation for ongoing professional relationships among apprentices.

- Wage enhancements recognize apprentices' accomplishments as they advance, address the challenge of low compensation, and incentivize continued participation in the program. Providing the program at no cost to apprentices mitigates financial barriers to participation.

Despite being a pilot, the FCC Apprenticeship has served more than 100 educators in its first 2 years, primarily women of color and including a significant proportion of Spanish language speakers. Emerging data point to the model's promise for supporting providers in earning new permits, growing as educators, and developing new feelings of empowerment. Perhaps more than anything, these early signs of the program's potential underscore its relevance to conversations about cultivating a skilled, stable, and diverse early educator workforce.

The Early Educator Apprenticeships, including the FCC program, are still evolving, but the approach has already generated lessons about adopting a workforce development orientation to support professional advancement of early educators and the development of new partnerships to build capacity for high-quality ECE in California.

CHAPTER 2: Skyline College: A Community College Connecting Theory to Practice

Hanna Melnick and Jessica Barajas

Skyline College, one of California's 114 publicly funded community colleges, is located just south of San Francisco in San Bruno, in a blustery wooded grove overlooking the Pacific Ocean. The college's Education/Child Development (EDU/CD) Program is an example of a traditional academic department striving to create a supportive, hands-on learning community with an explicit focus on preparing early educators for classroom teaching. It serves a range of students, from high school students to current educators, as they work toward completing an associate degree or a California Child Development Permit.[107]

Skyline's EDU/CD Program is distinguished by a number of features that make it a compelling model for study. Faculty and staff work hand in hand to provide rich learning experiences that connect theory to practice in the college classrooms. Students extend their learning and gain practical skills working under the guidance of seasoned mentors in the campus Child Development Laboratory Center, or lab school, which includes a two-semester Teacher Track Learning Community internship that offers students classroom experience early in their college preparation. The EDU/CD Program also intentionally cultivates a caring, relationship-based learning community to support its students, and Skyline College as a whole offers a range of academic and financial supports to promote student success.

This case study begins with an overview of Skyline's EDU/CD program and the students it serves. It then details the program's coursework and how it is tailored to meet student needs, describes the clinical experiences provided through the lab school and the Teacher Track internship program, and gives an overview of the academic and financial supports provided to students to ensure they have the supports to become successful. The case study concludes with next steps for the college and key takeaways for policymakers and practitioners.

Program Overview and Context

Skyline's EDU/CD Program prepares students for careers working with children birth to age 8, with a particular focus on teaching infants, toddlers, and preschoolers. Skyline offers ECE courses that are similar to those offered across California's community colleges, but the EDU/CD Program developed relevant, efficient course pathways that lead students to a degree or a California Child Development Permit, which allows educators to work with children in state-licensed child care and preschool settings, including state preschool. These courses cover key concepts in ECE that build links to the day-to-day practice and responsibilities of educators.

> Skyline's EDU/CD Program prepares students for careers working with children birth to age 8, with a particular focus on teaching infants, toddlers, and preschoolers.

The program also emphasizes the provision of well-supervised clinical experiences that help students develop practical skills and apply the concepts they learn in coursework to ECE settings. Skyline's laboratory school, a small on-campus early learning center serving children of college students and other community members, offers ECE students hands-on teaching practice under the wing of expert teachers. Skyline has developed multiple avenues for students to work or intern at the lab school and extend their classroom learning. One recently developed initiative, the Teacher Track Learning Community, gives students opportunities for clinical experience early in their studies by interning at the lab school part time while taking foundational ECE coursework.

Skyline has also developed supports to help students with diverse educational and socioeconomic backgrounds succeed in college. Faculty and staff strive to support all their students and facilitate access to a range of academic and financial supports through individualized advising. (See Figure 5.)

Figure 5
Skyline Offers Students a Variety of Opportunities and Supports
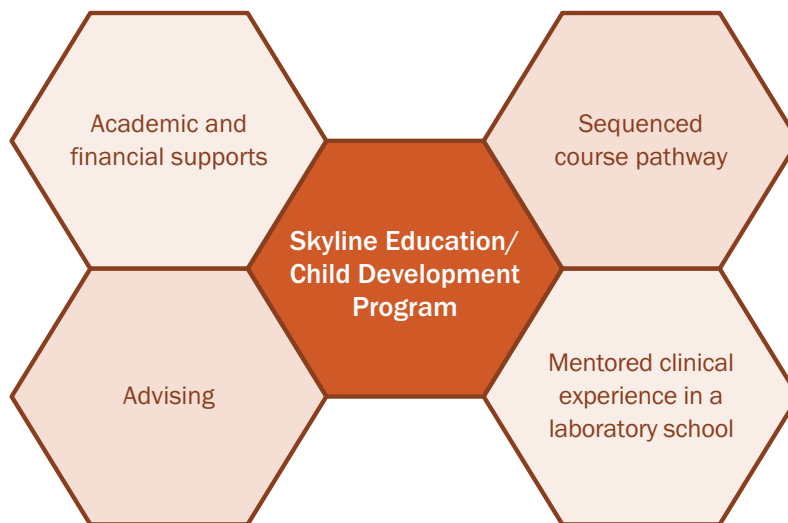
Skyline's EDU/CD Program serves demographically and academically diverse students.

In 2018–19, Skyline's EDU/CD Program enrolled 639 students, with just under 350 enrolled in a given semester. These students are ethnically, racially, and linguistically diverse and span a wide age range. (See Figures 6 and 7.) Most students (88%) are female.[108]

Skyline's EDU/CD students are mostly nontraditional students, meaning that they do not tend to enroll full time immediately after high school. In 2018–19, 30% were enrolled full-time taking at least 12 units per semester, while the remaining 70% were part time.[109] Full time students are more likely to access in-person courses during the day, whereas part-time students more frequently take online and hybrid courses, which tend to meet at night or on weekends.

Figure 6
Skyline's ECE Students Are Ethnically and Racially Diverse (2018–19)
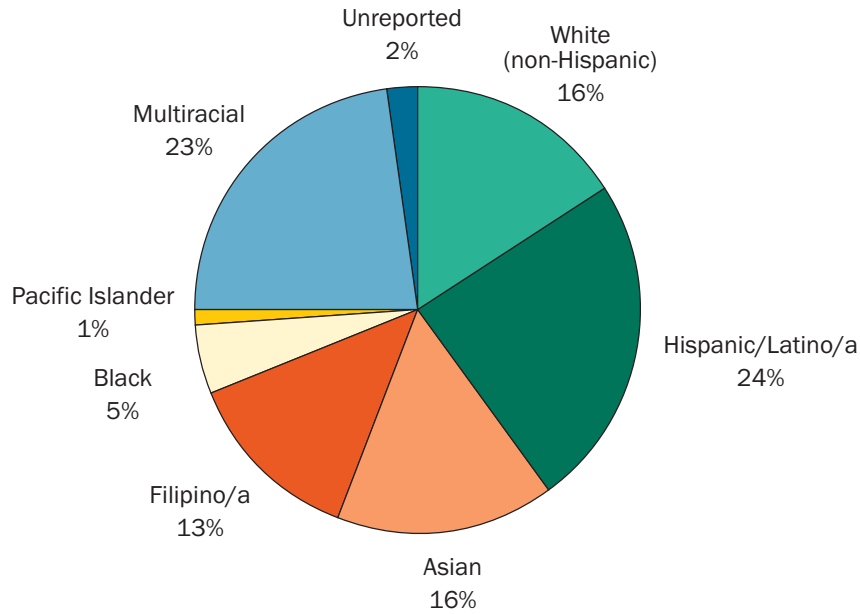
Source: Skyline College. (2019). *Skyline College student characteristics: Early childhood education/education courses.* San Bruno, CA: Skyline College Office of Planning, Research, and Institutional Effectiveness (PRIE). http://www.skylinecollege.edu/prie/assets/programdata/ece_edu_apr.pdf.

Figure 7
Skyline's ECE Students Span a Wide Age Range (2018–19)
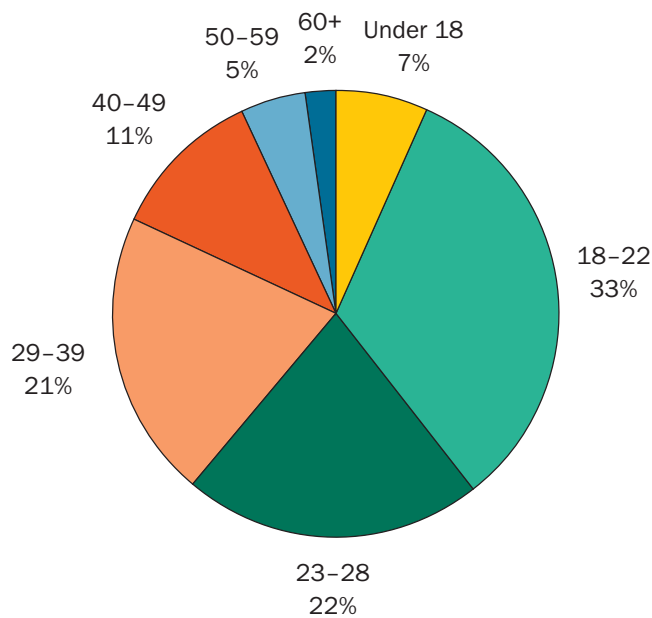
Source: Skyline College. (2019). *Skyline College student characteristics: Early childhood education/education courses.* San Bruno, CA: Skyline College Office of Planning, Research, and Institutional Effectiveness (PRIE). http://www.skylinecollege.edu/prie/assets/programdata/ece_edu_apr.pdf.

Some students enter Skyline's EDU/CD program through dual enrollment, in which high school students take community college courses and receive both high school and college credit. Skyline has developed a partnership with Ocean High School, through which the program sends instructors to teach college coursework at the high school, including three of the four core ECE courses currently required to earn an Associate Teacher permit. In 2018, 18 students enrolled in these courses. The college is developing an agreement with South San Francisco High School as well, which will expand high school students' access to dual enrollment coursework opportunities.[110]

Skyline's EDU/CD students also have varied academic goals. Most students (62%) aim to earn an associate degree or transfer to a 4-year college to earn a bachelor's degree. About a quarter of students (22%) say their primary goal is to earn a career certificate such as the Child Development Permit. Another 13% report that their coursework is exploratory.[111] Given this variation, staff must tailor coursework to meet a variety of needs, as described in the next section.[112]

Tailoring Coursework to Meet Future Educators' Needs

While Skyline offers ECE courses similar to those at other California community colleges, what stands out is that teaching is responsive to the needs of Skyline ECE students, particularly current and future early educators. The EDU/CD Program developed one of California's first guided pathways in ECE to help students progress efficiently toward Child Development Permits and degrees, and it offers a general education math course specifically designed for early educators. Further, faculty use engaging teaching strategies tied to practice: Coursework is continuously modified to meet students' needs, and frequent collaboration among faculty and staff encourages alignment of coursework and field experiences.

Skyline developed one of California's first ECE guided pathways

Skyline's ECE coursework focuses on the "basic eight," a core set of eight foundational classes (24 units) that are offered through most ECE and Child Development programs in the state (see Table 4). These courses were agreed upon through the work of the Curriculum Alignment Project, an initiative in which faculty worked statewide and over time to create a common core of early learning courses across California's community colleges that facilitates course articulation and alignment.[113]

Table 4
Skyline's Core ECE Courses

Core Courses
1. Early Childhood Education Principles*
2. Child Development*
3. Early Childhood Education Curriculum*
4. Child, Family & Community
5. Teaching in a Diverse Society
6. Health, Safety, and Nutrition for Young Children
7. Observation and Assessment
8. Practicum in Early Childhood Education

* Course recommended as a prerequisite for other ECE courses.

Sources: Skyline College. (n.d.). Courses offered. https://skylinecollege.edu/epicenter/courses.php (accessed 04/29/19); Child Development Training Consortium. (n.d.). Curriculum Alignment Project. https://www.childdevelopment.org/cs/cdtc/print/htdocs/services_cap.htm (accessed 11/20/19).

Skyline College was one of the first community colleges in California to develop a guided pathway in ECE, a prescribed set of ECE and general education courses that guarantees transfer to a B.A. program in a similar department at a public, 4-year university (typically a California State University) with junior standing. Students who earn a transfer degree need 60 units or fewer after transfer to graduate with a B.A.[114]

The pathway is designed to support students in achieving the following program learning outcomes, in which students are able to:

- analyze major developmental milestones and various theoretical frameworks that relate to early care and education to demonstrate an understanding of the importance of the early years as well as the many influences on development;
- identify best teaching and care practices and the components of early childhood settings, curriculum, and teaching strategies to increase child growth and competence; and
- assess the interrelationship of child, family, and community and how educational, political, and socioeconomic factors directly impact the lives of children and families.[115]

Courses are sequenced so that students can complete their degree in 2 years if courses are taken full time. Staff guide students toward taking four survey courses before any others: ECE Principles; Child, Family & Community; Child Development; and ECE Curriculum. However, they refrain from designating course prerequisites in order to maintain maximum flexibility for students, while trying to ensure that students stay on track to receive their associate degree for transfer. Skyline's guided pathway culminates in a practicum course, in which students complete 100 hours of student teaching under the guidance of a master teacher, in conjunction with a faculty-led seminar that meets seven times in the semester.

Collaboration with the math department supports ECE student success in general education

The Skyline EDU/CD Program has begun to partner with instructors in other departments to tailor core general education courses to meet the needs of ECE students. For many community college students, including those studying ECE, general education course requirements can be a barrier to the completion of a degree. Math, in particular, is a sticking point for many students.[116] "Many people come to college not feeling confident in particular about their math skills," said Kate Williams Browne, EDU/CD Program Coordinator.

The EDU/CD and math departments thus collaborated in 2016 to create a course, Mathematics for Elementary School Teachers, that is accessible and relevant to ECE students. The course addresses both college-level mathematics and how to teach math to children. The dual focus on learning mathematical concepts and teaching math to others "generally isn't the purview of a [college] math instructor," said Professor David Hasson, coordinator of the Math Department and the instructor for the course. "But I think it is really relevant to address [for ECE students]." The EDU/CD Program has worked with Professor Hasson to infuse the course with hands-on learning strategies and activities, such as the use of manipulatives, to make it more accessible to students who do not come with a strong background in math. Williams Browne noted that "math is fun and understandable when you can touch it." Manipulatives are a common learning tool in ECE classrooms and so are especially relevant to early educators learning math concepts.

Further, Hasson now addresses students' anxiety about math directly. "I do sort of social-emotional exploration within the first 2 weeks…. That sets the tone for diving into the painful social-emotional history and baggage around math that pretty much everyone in the classroom has," he explained.

The student completion rate for the Mathematics for Elementary School Teachers course is 90%, significantly higher than other math courses at Skyline, which have a 65% success rate among students who take those courses in person.[117] The EDU/CD Program is now pursuing similar partnerships with other departments. For example, faculty are currently working with a sociology professor to establish a general education sociology course on diversity tailored to educators.

> The student completion rate for the Mathematics for Elementary School Teachers course is 90%, significantly higher than other math courses at Skyline, which have a 65% success rate among students who take those courses in person.

Faculty use engaging teaching strategies that are tied to early education practice

Skyline alumni describe their ECE courses as engaging, relevant, and linked to practice. According to a second-year student, "With the [non-ECE] classes, it was just lecture, do the work, bring it in, we go home, come back. In ECE I get a different experience." ECE department faculty members have intentionally sought to create courses that actively engage students in learning. Instead of trying to have students memorize content, Williams Browne explained:

> What you're doing is you're opening the door to what else there is to know and you're helping them learn—to try to invite them into something that's really quite interesting and remarkable. I don't want you to just know what I know. I want you to see how really interesting it is…. So it's an invitation.

At Skyline, faculty employ a range of interactive and collaborative learning activities, such as small-group discussions, projects, and reflections, to support student learning. One Monday morning in Williams Browne's ECE Principles class, for example, students worked together in groups of five to discuss the personal characteristics and professional skills of a teacher, as well as teachers' in- and out-of-school responsibilities. Students all contributed by writing responses to their questions on a whiteboard but had time to discuss in groups. One group of students discussed their work in Mandarin before writing responses in English, working together to identify proper vocabulary. At the end of the class, when students shared their work, some were reluctant to participate; in response, students encouraged them to share. Collaboration allowed students to support one another in their learning in small groups and encourage participation by all.

To build connections to practice, Skyline faculty engage students in the analysis of model teaching, an effective professional learning practice.[118] Video observation and observation in the laboratory school are used as learning strategies in several courses, including Child Development, Observation and Assessment, and Curriculum. In Child Development, students document a case study of a child from a video, PBS's *Misunderstood Minds*. For the project, each student creates a developmental profile of a child and provides research on the child's identified learning disability. The video gives

students an opportunity to watch and rewatch children's behaviors, since instructors recognize that, especially in the beginning of their studies, students will not be attentive to all of the information that can be gleaned from a particular observation.

Some classes have been moved to an empty room in the laboratory school building to facilitate observation visits, giving faculty the opportunity to bring students into the lab and make real-time connections between theory and practice. The college currently has plans to build an observation window at the lab school, as well. Tina Watts, Director of the laboratory school, is excited to have the observation window to support students' practical learning:

> We can have those guided experiences and reflection in the moment by faculty who are watching and experiencing it, which I think will just add a whole other level of thoughtfulness and thinking about why things happen the way they do in the classroom, … what happened that was unpredictable, and we could not have planned it if we tried. [It will let us] think about what that means in terms of children's development and how you might address that as a teacher.

Finally, professors use assignments and assessments to reinforce ties between coursework and practice and provide students opportunities to demonstrate their developing knowledge and skills in authentic ways. In Observation and Assessment, for example, students assess the developmental progression of several children using the Desired Results Developmental Profile, the child observation tool used in many of California's state-funded programs. One alumna pointed out that this experience helped her when she went into the field: "It was a less overwhelming experience because we already [had been] introduced to that [tool]."

Students also create a digital portfolio in their first-year classes, which they then develop over time to document their growth as a professional. For example, students may include samples of anonymized child assessment data to demonstrate their ability to use assessment tools. The students complete and present their portfolio in their practicum course. According to an alumnus:

> I think one of the greatest projects [we] did was [to] create an online portfolio. I think that's the way the world's going, online…. I used all that material in my final project portfolio, and now I can take [it] to a job interview and say, "This is some of the work I've done. These are the children that I've observed. These are … the child's curriculum and the progression of a child over a semester."

Williams Browne explained that she and other faculty emphasize these types of assessments over tests. "Teachers don't take tests," she pointed out. "So why would I give [students] something that we don't do on a normal basis?" This commitment by Skyline's EDU/CD faculty to using engaging strategies to teach relevant concepts and tools helps ensure that courses are tailored to early educators' needs.

Faculty and staff collaborate to develop and sustain a cohesive curriculum

Skyline faculty and staff work together continuously to ensure that the EDU/CD curriculum is coherent and reflects the knowledge and skills educators need in the classroom. For example, faculty have worked together to identify key content areas to thread throughout all ECE courses. Two of their priorities are culturally responsive teaching and equity. According to Williams Browne,

"We try to connect with each other about the coursework that we teach so that we can weave that information and outlook into all of our courses—not just say, 'Oh, do you want to know about diversity? That's over here.'" This cohesive approach was noted by students, including one who said:

> Culture and working with families are intertwined everywhere…. It was talked about in every single class and it just didn't feel at all like a separate entity…. It felt like understanding diversity, understanding inclusive classrooms, it was just a part of being a teacher, not necessarily an extra thing.

Skyline faculty and staff have formed a community of practice to provide the time and space to build a shared vision across the program, align courses, and connect course content to the students' fieldwork. Staff meet at least monthly "to talk about what students are bringing up, what are some of the challenges they're seeing, what the discussions are looking like," said Watts. The faculty also share assignments and syllabi with each other through an online platform and give each other feedback on their assignments.

Currently, faculty are developing a shared grading rubric that can be used across courses to assess progress on the program's shared student learning outcomes. According to Professor Nicole Porter, "That way, regardless of the assignment, you [use] your rubric and we can all assess if students actually are at [a desired] level or if we need to work on something."

Faculty additionally have pursued opportunities to work intensively on topics together. Students, faculty, and lab school staff participated in a 3-year early math institute with Cerritos College and UCLA, through which they gathered for two summers in Southern California. As part of the project, they developed an early math curriculum, pieces of which faculty integrated into their coursework—including the Mathematics for Elementary School Teachers course—and piloted in lab school classes. Said Williams Browne:

> It allowed us to have shared experiences. Yes, it was early math, but more importantly it was collaboration around early learning. And we began to think about how we could put some of that material, not just in the curriculum class, but in the observation assessment class and in the [ECE] Principles [course]…. Probably the best thing about that was that we all worked together.

This open communication and collaboration among faculty and staff is appreciated by the students. When asked what other schools can learn from Skyline, one alumna appreciated

> … just the overall community approach to everything, feeling like everything was actually interconnected and that everybody was communicating with each other. You didn't get into one class and [find that the instructor] didn't have knowledge of what was happening in another class…. That was always really impressive to me. I found that all of the teachers and staff involved had a well-rounded knowledge of what was happening. And that was even the people in the [lab school] who were working and learning with us. It's like everyone knew everybody, and it just made it easier.

Skyline faculty and staff work together to develop a coherent set of courses tailored for early educators. Thoughtfully structured field experiences, described in the next section, are another component of their approach to helping students learn key concepts and gain practical skills.

Providing High-Quality Mentorship and Teaching Practice in the Lab School

Clinical experience is a key feature of ECE students' education at Skyline. Skyline's Child Development Laboratory Center, or lab school, is an important resource for providing students high-quality mentoring and teaching practice on campus. Though working at the lab school is not required and is limited to students who are on campus during the day, many Skyline ECE students have some experience there through course observations, internships, or student teaching.

> Skyline's Child Development Laboratory Center, or lab school, is an important resource for providing students high-quality mentoring and teaching practice on campus.

Lab schools are a great place to learn, because they are designed to focus on mentorship, explained Director Watts. "The relationships you build with professionals in your field are different than the relationships you build with somebody who mentors you [in your place of employment], different than someone who's a coworker. I think that's something special about lab schools." The lab school also allows students opportunities to practice what they are learning in their coursework under the guidance of experts. Said a former lab school intern:

> When you are in the classroom, you're like, okay, so I read this in my textbook. I wrote this big essay on it. But now I can understand why we're learning all of this because it really applies to each individual student…. You can only read so much on paper, but when you're actually in the classroom [you realize], "Now I have to actually implement everything that I'm learning."

This section describes the pathways through which students engage with the lab school; the way the school offers students individualized mentorship and opportunities to practice key competencies; and how faculty, staff, and the college administration work together to support students' clinical experiences.

Students gain hands-on experience at the lab school through several routes

There are multiple ways students can participate in field experience at the lab school. These entry points create learning opportunities for students at different points on the professional continuum—from interns with no prior ECE experience to paid employment for students with a California Child Development Associate Teacher Permit.

One way in which students can gain early experience in the lab school is through the Teacher Track Learning Community, a two-semester internship created in 2017. Only 8 to 10 students have the opportunity to participate each semester, due to the small size of the lab school.[119] Students must apply to participate; so far, the college has not had to turn away any applicants.

Teacher Track interns work in the lab school 2 half days per week, take two core ECE courses, and participate in a one-unit seminar that connects their coursework to their experience in the classroom. Through the program, students complete the 12 course units and 150 hours of

experience required to receive a Child Development Associate Teacher Permit during their first year at Skyline. They also receive a small stipend ($500) each semester, which staff recognize is important though not sufficient for meeting students' financial needs.[120]

The impetus for the program came from members of the EDU/CD Program's Community Advisory Committee, composed of local preschool and child care providers. The group told faculty that Skyline's ECE students needed to gain more experience before they entered the job market. "So, we started thinking what could we do? Could we do something that gave them more practical experience, hands-on experiences early on?" recounted Williams Browne. The Teacher Track program was created to provide early experience in an ECE classroom, lay a foundation for later coursework and teaching, and help students decide through firsthand experience whether teaching is for them.

Another way Skyline ECE students may participate in the lab school is through the capstone practicum course that is required for all students seeking an associate degree in ECE. The course includes 100 hours of supervised clinical experience, and students in the practicum course have priority for placement at the lab school. About half of the program's practicum students (about 20 students of 40) complete their student teaching there. The other students work at community-based sites. Some students who complete their clinical experience off campus are already employed in ECE settings and student-teach at their place of work. When students complete field experiences off-site, faculty try to place them with mentors who have participated in the California Early Childhood Mentor Program—a program that provides resources and supports to early educators and administrators who mentor others in the field—underscoring the program's commitment to mentored clinical practice for its students.[121]

A small number of students (about 10 per semester) are hired to work as part-time associate teachers in the lab school. These students must possess a California Child Development Associate Teacher Permit, so typically they have previous experience in ECE or have completed the Teacher Track internship.

Finally, students may conduct brief observations in the lab school during their classes, under faculty supervision or independently, for course assignments. Regardless of how students come to the lab school, they benefit from the opportunity to work in a supervised, high-quality ECE setting alongside skilled mentor teachers.

Simon: A Glimpse Into a Teacher Track Intern's Experience

Simon, a first-semester Teacher Track intern, had, in his words, a "rough high school experience." When he first arrived at Skyline, he found himself "kind of lost, bouncing from class to class." Then he took his first ECE class to see what a career in ECE was like. He found that he had an interest in working with children and decided to apply for the Teacher Track program.

As part of his internship, Simon spends 2 half-days a week in a preschool classroom, getting firsthand experience engaging with children. The room where he works is vibrant and spacious, with a curtain in a corner of the room that gives it a feeling of home. Family photos are on the wall at the children's eye level, alongside photographs of children from around the world. Today, Simon sits with four preschool children at a table, getting ready to play a game. "Do we have all the pieces?

I've never played this before, so you're going to show me how to play," he tells the children. Simon narrates in a strong, energetic tone what each child is doing as they engage in the game. Suddenly a conflict breaks out over the game, and he helps the children resolve it.

Simon explains that the internship has changed the way he interacts with children. "It actually did improve how I interact with children when I am at family events. [I'm] seeing and observing instead of just telling the child what to do," he says. The internship has convinced him he wants to pursue a career in ECE, starting with an associate degree for transfer to a 4-year college. It has also taught him that he wants to focus on preschool rather than infants and toddlers. "It's just something I love, ECE. I guess because I find myself being a kid as well," he says.

The lab school offers intensive, individualized mentoring

Whether students enter the lab school through the Teacher Track internship, as a student teacher in the capstone course, or as an associate teacher, the lab school staff provide intensive mentoring to ensure that all students are well supported in their learning. This mentoring is differentiated to address individual students' learning needs and based on the principles of reflective practice.

Each student's lab school experience begins with goal setting. Students work with their mentor to set individual goals for the semester that are tailored to their knowledge and experience. In their first semester at the lab school, for example, interns' goals often focus on getting to know their environment, becoming a part of a teaching team, being open to feedback, and interacting appropriately with children. In future semesters, students are held to higher expectations, including creating and leading instructional activities. Practicum students, who are nearing graduation, typically set more complex goals that dive deeply into practice and engagement with students. For example, one practicum student set a goal to learn to handle challenging behaviors in a way that was respectful of both her own culture and that of her students.

Throughout the semester, mentors provide on-the-spot feedback and modeling to help students learn and achieve their goals while working with children. "They're in the classroom working with [children]. So a lot of their reflection kind of happens on the floor," said mentor teacher Nataliya Gamburg. For example, one Wednesday morning in the preschool classroom, a Teacher Track intern found himself in a predicament: It was recess time, but his students wanted to continue playing their game indoors. He hesitated, and decided to let them stay inside. Seeing this, Gamburg approached him and modeled how to transition the children to outdoor play. "It's time to go outside," she said firmly. "What do you want to play outside?" Later, Gamburg debriefed the experience with the student, who recalled it as a learning moment: "What I learned today … [was] finding different ways to tell them that it's time to do this and that or give them options."

Managing challenging behaviors is an area in which many students need ongoing feedback, modeling, and opportunities to practice. As Gamburg explained:

> We work with 4- and 5-year-olds…. They need support all the time in conflict resolution. They fight, they hit, [they] argue…. And we have to teach them. One of the [students'] goals [is usually] challenging behaviors, but usually it's very hard. In this case, I model. You notice how I tell them, "Can you be very close to me and see what I'm doing?"

A current teacher intern shared how she was being prepared to handle and redirect negative behaviors and reinforce the positive ones. She explained:

> I'm also learning about … how to rephrase no's, like, "no, don't do that." Instead [I would say], "Oh, you should do this instead." Or if they're throwing the books, [instead of saying] "No, don't throw the books around," [I would say] "Let's clean up now."

Through this modeling and related feedback, students have multiple opportunities to develop an understanding of developmentally appropriate practice, which in turn shapes them as teachers.

In addition to the ongoing, informal mentoring that goes on in classrooms, students and mentor teachers meet throughout the semester, often weekly. These meetings provide a space to monitor students' progress toward their goals, debrief students' performance in the lab school classroom, and discuss any questions students may have. The mentor teachers may also assist students with course assignments related to their practicum.

Mentors strive to base their guidance on "reflective practice," the process of reflecting on one's actions to continuously learn. A practicum student, for example, described how her mentor engaged her in an open-ended discussion of the way she could have managed a potentially challenging behavior as part of her story time activity:

> The teacher would come observe us, and then we [would] discuss it after. She would ask, "What would you do if this happened?" … So that opened our minds on thinking, "Oh! What if it went different[ly]?" For example, when I was observed, … one of the kids wanted to hold the book. I said, "You want to hold it and open the page for me?" But I guess the kid wanted just to have the book by himself. So [my mentor] asked me, "What if he didn't cooperate with you? If he refused to open the book or give it back to you? What would you do?"

The mentor proceeded to walk the student through various scenarios and discuss how she might respond differently next time. With the support of lab school mentors, students learn both practical teaching skills and a process of reflective practice that they can carry into their careers.

Mimi: A Glimpse Into Student Teaching in the Lab School

Mimi is a former intern at the lab school, now in the process of becoming an associate teacher. Before coming to Skyline, Mimi was trying to transition out of the service industry, and she was not sure what career path she wanted to pursue. She is also a mom of a 3-year-old who is in the preschool class at the lab school. Having a child got Mimi interested in ECE, and after taking some courses, she found that she has a passion for it.

Mimi works in the toddler room 5 days a week. The toddler room walls are full of artwork; music plays in the background, giving it a familiar and warm ambiance. On a midweek afternoon, children move fluidly around the room, following their interests and interacting with their teachers. Two children play with a spinning toy and then shift to observe the new class fish. One boy brings a truck to one of the teachers, and the teacher breaks into song: "Fire truck, fire truck! I want to drive the fire truck!"

Mimi's voice can be heard from the other side of the room. "Who wants to get on the boat?" she asks, turning over a large wooden structure that now doubles as a boat, drawing the attention of children across the room. Four students come into the boat. Mimi starts to rock the boat, swaying it back and forth with "whooshing" noises. As the boat rocks, the children giggle. As a student starts to stand up, Mimi says, "Oh no, the waves!" and starts to tip the boat, encouraging the girl to sit down and remain inside the boat for safety. Mimi then simulates even bigger waves and a storm coming down on the boat with the children. The children are full of laughter.

Mimi shares that being a teacher intern has impacted the way she thinks about learning. "When I was in a classroom learning about [developmental milestones and domains], things started to click," she says. "For [a child] to be socially and emotionally competent, I have to not only be there for him and encourage these positive examples, but I have to talk to him too, which ties in with language." The lab school gives her an opportunity to practice supporting children's development daily.

The lab school offers opportunities to build important educator competencies

Field experiences at Skyline's lab school provide students with hands-on opportunities to practice important educator competencies in a highly supportive environment, from developing curriculum to building relationships with young children and their families and using culturally and linguistically relevant practices.

Director Tina Watts noted that all students have "at least one model of curriculum planning that they can fall back on before they go out into the workforce" after working in the lab school. Depending on students' levels of classroom experience, the curriculum they develop and implement includes activities that range from simple to complex and may be targeted to a few children or the whole group. For example, one student planned a simple ribbon dance activity for a small group of students as part of her first field experience in an early practicum observation. Another student recounted a more complex large-group curricular activity she created when she was further along in her fieldwork, in which a reading lesson was followed by an art activity that allowed children to create their own versions of the caterpillar they had just read about:

> The kids were interested in reading *The Very Hungry Caterpillar* book. So I prepared the activity with carton boxes, with pom-poms and pipe cleaners and eyes. The teacher who was there helped me. She gave me a tray that has dividers. And she said, "Maybe you want to use this." It was really engaging for the kids.

The activity capitalized on the children's interests while being responsive to their level of development (for example, their need for materials to be organized).

Lab school staff also support students in their ability to develop relationships with children and families. One alumna shared how her initial reticence to engage with children gave way to new feelings of efficacy with support from her mentor teachers: "They guided me, because I didn't have experience before…. [They] would just encourage me to play with the kids. And I started observing, and every day I gained more trust in myself." Through her three semesters in the lab school, this alumna's mentors gradually taught her techniques for working with larger groups of children. For example, she learned positive behavior management strategies that make it easier to guide the behavior of a group of students.

Further, a former Teacher Track intern said that staff "really encourage us not only to build that relationship with children, but to build that relationship with parents, too, so that parents know that we're truly there for their children." Students employed as associate teachers at the lab school are invited to participate in conferences and parent meetings if the family provides permission for them to do so, and interns have the opportunity to interact with parents during pickup and drop-off.

As they support interns and practicum students in learning how to develop curriculum and build relationships, lab school staff emphasize the importance of celebrating children's different cultures and languages. The lab school, said Watts, includes teachers, children, and families from a large variety of backgrounds, making a focus on diverse backgrounds particularly important. The lab school's resource room provides music, books, and other resources in multiple languages and from multiple cultures, and interns and practicum students are taught early in their careers to celebrate diversity. One intern, for example, explained that staff showed her how to incorporate the different languages spoken by children in the class into the curriculum. She said, "We used to ask the parents for songs, CDs, and items from their homes, so all cultures are included."

Teaching in a culturally responsive way is complex, however, and often requires that teacher candidates be introspective about their own biases and beliefs. The role culture plays in the classroom—as well as the differing cultures of the teachers and students—is a topic mentors specifically address with their mentees. Having learned to teach after immigrating to the United States herself, mentor teacher Gamburg said she understands the challenge of developing cultural understanding of families and children with backgrounds different from her own. One of Gamburg's practicum students, for instance, said her goal was to learn to handle challenging behaviors in a way that was respectful of both her own culture and that of her students. Gamburg said that part of the challenge for this student, who is also an immigrant, is to understand her students better and adjust her expectations and teaching style accordingly. She expanded:

> The role culture plays in the classroom—as well as the differing cultures of the teachers and students—is a topic mentors specifically address with mentees.

> We know that cultural roots are so deep, so how can I implement my culture, my philosophy, my beliefs—how can I handle behaviors and knowledge? Even [if] we tried to be on the same page, we [would] still have different approaches. As teachers, we can get [to] the same goal but [with] a different approach.

Having a supportive environment and multiple opportunities to practice and extend these core educator competencies, from cultural responsivity to relationship-building, is important for students' preparation for their future work as teachers, said Watts, explaining:

> We want teachers to have all the experience they possibly can with children in a controlled, high-quality setting where they have resources and people to ask questions [of] before they go out into community programs where maybe those resources aren't as readily available.

Faculty, staff, and mentor teachers work together to support students in their fieldwork

Faculty and lab school staff meet monthly to support mentors with their coaching of students, providing mentors with an opportunity to get and share advice about supporting their advisees. Mentors also help faculty understand what issues their students are working through in their fieldwork. Gamburg explained that these meetings are for collaborating and learning from each other's practice:

> We talk about students and how each mentor works with the students. I can get ideas from other teachers. We also have staff meetings here, and we talk about students. As a teacher, I try to learn too. Every month we have a meeting about interns. Sometimes we invite interns and we talk together.

These meetings help mentors learn to meet the diverse needs of adult learners. For example, a mentor recounted that meeting with her peers helped her support a student doing her field experience at the lab school who was having difficulty receiving feedback for an assignment because of a language barrier. As the mentor explained:

> The language was a huge barrier…. After talking with some mentors, I [asked] that every time she has an assignment, she send it to me, because as a second language [learner], I understand that sometimes people write better than [they] speak…. I could read [it], and I could say yes, she does understand.

As with Skyline's EDU/CD coursework, lab school experiences are strengthened by ongoing collaboration among faculty and staff.

The college has prioritized funding for the lab school to offer on-the-job training for students

Skyline has consistently provided funds to keep its lab school open, despite financial pressures, in order to support the kind of rich, supervised field experiences described in this section. Skyline's lab school, like most in California, is a state-contracted Title 5 center, which means it receives funding from the state for children from low-income families whose parents are working or enrolled in school. State funding is not enough to cover the cost of the center, however. One reason is that reimbursement rates simply do not cover the cost of staffing, especially in the infant and toddler room.[122] Another reason is that lab school staff have mentorship and planning responsibilities and must meet higher credential requirements than non-supervising teachers, which are not accounted for in state reimbursements.[123] Finally, master teacher salaries at lab schools are unusually high for ECE settings, as they are considered college employees and have union contracts.[124]

The college has provided the necessary infusion of funds to keep the lab school open. This has been a priority, according to former Skyline President Regina Stanback Stroud, because the lab school serves the academic mission of the college, in addition to supporting students:

> [The lab school] is more than just a child care center. It is [for] child development, and it is connected to an academic program. So [that's] part of the way in which we treat it. Nobody has to convince us [whether] we need math or not; nobody has to make a case for English. Nobody has to make a case for history. So they shouldn't have to make any kind of a different type of case for that lab component of their academic program.

The administration has taken steps to institutionalize the lab school's funding so that it does not need to fight for its budget each year. The building and maintenance, for example, are paid for with college funds. Program Coordinator Kate Williams Browne explained that several years ago the lab school was located in another, smaller building. When she realized that the building next door, formerly an elementary school, was being used to store maintenance equipment, she fought successfully to move the center to the larger building. The fight to support the school has been constant, she said, but is worth it for the benefit it brings to students, the children, and their families.

Supporting Students Academically and Financially

A common challenge for ECE students—and community college students in general—is a lack of financial and academic support and guidance to complete their educations.[125] Skyline's staff cultivate caring relationships with students and work to provide a variety of supports to promote student success, including specialized advising that helps students navigate a complex college landscape.

Skyline faculty cultivate a culture of care through strong, supportive relationships

Skyline's EDU/CD Program builds strong relationships with students that help promote their success in the program. Current and past Skyline students reflected about how supported they felt by the faculty and staff. According to one first-semester student, "You get this sense of feeling of family. They try to help you out any way possible. They're very flexible and try to find every possible way for you to better yourself in this field."

Skyline's faculty and staff create a culture of care in several ways. One is by taking time to build relationships in the classroom from the start. At the beginning of the semester, each instructor provides time for students to swap contact information with other students, which is helpful if, for example, they later need to ask someone for a reminder of a due date or for clarification on an assignment. The practice is helpful because it forces students to connect with one another, said a second-year student. One alumnus attributed his success at Skyline, from which he graduated with his associate degree before transferring to a 4-year college, to personal touches such as these. "Coming back [to school from the workforce], I didn't think I would be doing well at school," he said. He believes he was successful in part because "the teachers and professors were hands on."

Faculty are deliberate in sending the message that they are there to help. They can typically be found interacting with students one-on-one and in small groups during classes, sitting down with students during discussions to listen first. Professor Nicole Porter said she does not expect that students will always feel comfortable reaching out to a professor at first, so she takes the initiative to build peer relationships in class:

> If I'm not reaching a certain student, it may be an opportunity to have a conversation.… "Hey, tell me how you're doing." I tried to check in with students. That's something I did this semester: Groups will be working on something, and I will meet with small groups, and I'll meet individually with students, because I know even though I say, "Hey, I'm friendly and you can come talk to me," people still have a perception of what the professor or the instructor is, and they may or may not come talk to me when they need to.

A significant amount of small-group work facilitates the building of these relationships among peers and faculty alike. Faculty arrange their rooms to emphasize group work, rather than a lecture. The average class size is 32 students, and key courses such as the capstone practicum course are smaller. Several ECE students mentioned that the small classes were a deciding factor for them in choosing Skyline over other colleges.

Further, events that faculty organize to extend student learning double as opportunities to build relationships outside the classroom. In the past, faculty have arranged an annual special education conference, for example, or taken advantage of grants to bring students to an institute for early math instruction. Interns in the Teacher Track program participate in off-site team-building activities each semester, such as attending an early learning conference or visiting a local museum with their professors and lab school staff.

Many students mentioned that the culture of care at Skyline encouraged them to persist in their studies in the face of challenges and that the culture was different from that of other schools, either high schools or other colleges, where they had struggled. Said one alumna:

> I moved to ECE because I felt it was more approachable for me. I'm one of those students who needed help [and] additional support in the classroom, and I felt like the ECE teachers, because most of them have a background working with younger students, just had a different approach in working with adults as well.… [One professor] was really supportive when I was having challenges in the course or not understanding something, giving me resources and information. She really was great.

Another alumna was initially skeptical about Skyline because she had not met the professors or worked in child development and was not sure that college was for her. What convinced her was a faculty member's teaching style and willingness to help. She said:

> She went above and beyond as I progressed through my degree. The rest of [the faculty] that I met were just as helpful and knowledgeable. So yeah, it was initially the brochures and stuff and looking through those [that brought me to Skyline], but what solidified it for me was the faculty.

The culture is important to developing a community in which students can challenge themselves and learn.

Specialized advising helps students navigate a complex system

Skyline faculty and administrators realize their students face challenges in completing their degrees in a timely, cost-effective way. In 2006, Skyline and its sister college, Cañada in Redwood City, California, collaborated with First 5 San Mateo to fund a service coordinator who specializes in advising ECE students on their academic pathway. Jean-Marie Houston, former Early Learning Support Services Administrator at the San Mateo County Office of Education, explained:

> What we discovered was that the traditional guidance counselors at the colleges didn't understand the ECE world, and the ECE students needed some help in getting through the appropriate coursework in an efficient way that allows them to effectively move forward quickly to what their goals were.[126]

In 2013, Skyline made the coordinator position full time. Now, Skyline and Cañada each has its own counselor, supported by ongoing funding from the community colleges.

ECE advising supplements the academic counseling that students receive from official campus counselors, explained Skyline's EDU/CD Program Service Coordinator Kristina Brower. "The counselors help … place them where they should be in reading and English and math, but they don't understand necessarily early childhood education and which are the best course sequences to take," she added. Brower helps students identify the right courses within the early learning department after listening to students describe their individual circumstances and goals.

> ECE advising supplements the academic counseling that students receive from official campus counselors.

Often the advising begins with helping students figure out what they want to teach. Brower explained that many students are still trying to define their career path:

> A lot of times, students don't come in here [thinking], "I want to be a preschool teacher." … [Rather, they say], "You know, I want to work with children. I don't know how. I don't know if I want to be a teacher. I don't know if I'm going to be a social worker. I'm not really sure what I want to do."

After helping students sort through their goals, Brower helps them identify the right course of study, including what course load they can handle with their work and family commitments and their levels of academic readiness. She typically recommends the courses in Skyline's "guided pathway" to an associate degree for transfer. However, she recognizes the need for flexibility. If students are unable to take a course at a given time, she helps identify an alternative. In some cases she has worked with faculty to rearrange their class meeting times to accommodate students' needs. She also helps students with small challenges, such as online enrollment—a simple technical challenge that could otherwise prevent students from enrolling in courses.

Almost all students and alumni interviewed mentioned the importance of this one-on-one advising. One alumna described trying to navigate her coursework before and after finding the EDU/CD Program:

> When I first started at Skyline it seemed like, "Whoa, there's a lot to swallow. There's a lot of information that's being thrown at me." However, once I got linked into early childhood education, I had the break[through]. There was paperwork showing us, "This ECE class counts for this, this ECE [class] can plug into this general ed requirement here," and so forth. So, once I got into the department, then it started to make more sense and became clear.

Brower also helps students identify field placements in the lab school and elsewhere so they can work and gain experience as they take their courses. She encourages students who do not yet have experience to get into the classroom early. This experience can help students determine which age children they most like to teach and in which setting—and whether they want to teach at all. Each year, she said, at least one student determines that ECE is not the field for them.

Specialized ECE advising provides students with helpful guidance as they plan their program of study.

Staff connect students to academic, financial, and career resources

Like many community colleges in California, Skyline College has a range of resources available to students, particularly first-generation college students and those from low-income households. Students interviewed reported accessing many of these resources, including the tutoring center and the disability resource center; a zero-cost textbook program; financial aid for tuition; a food pantry located on campus; and SparkPoint, a hub for financial resources and counseling.

Staff in the EDU/CD Program realize that these resources are only useful if students know about them and feel comfortable using them, so they proactively introduce students to available supports. Instructors bring students to the library and career center and invite tutors from the academic support center to visit their classrooms. The ECE counselor, Brower, also connects students to many services, including helping students apply for tuition support grants available to early educators through San Mateo County.[127] One student noted how the program's commitment to connecting students with an array of services and resources created a supportive learning environment:

> Skyline's program proactively introduces students to available supports. Instructors bring students to the library and career center and invite tutors from the academic support center to visit their classrooms.

> I felt like every single person involved in the program had an open-door policy as far as seeking help and advice…. [Staff] were always extremely helpful and making sure that you knew what scholarships were available, bringing people into the classroom to tell you about them, letting you know what resources were available on campus. Especially since we find so much in our profession that so many people are working and going to school and trying to support themselves on the low salaries we often get paid. So [staff] were really, really active about making sure that we knew what resources were there for us financially. Making sure we knew what avenues and careers are out there and that we knew about job opportunities and different ways to extend our learning…. It was a really supportive environment.

To connect students to career opportunities, each semester the ECE department orchestrates a career fair on campus that students are encouraged to visit for course credit. In order to reach more students, the fair takes place during the day one semester and in the evening the other semester. Career resources are eye opening for some students, particularly students who are the first in their families to go to college.

By developing a culture of care through strong, supportive relationships with students, providing specialized advising, and proactively connecting students to academic, financial, and career resources, Skyline faculty and staff help set the foundation for student success, encouraging students to take advantage of rich coursework and clinical practice in the lab school.

Next Steps for Skyline

Skyline is an example of a traditional community college department that is working to provide high-quality coursework, as well as field experiences in its on-campus lab school. Students and alumni interviewed for this report expressed that their program prepared them well to apply

knowledge about early childhood development and learning. Faculty and staff were quick to point out, however, that they still have far to go. Two areas for further growth are finding ways to boost graduation and permit completion rates and, relatedly, supporting working students who take classes online or attend classes at night and on weekends.

Increasing degree completion and permit attainment

Despite the resources it provides, like most community colleges, Skyline has a low degree completion rate. In 2018–19, Skyline's EDU/CD Program awarded 47 degrees and 33 certificates, meaning that roughly 24% of students seeking an associate degree for transfer earned a degree.[128] One reason for the low graduation rates, explained former President Stanback Stroud, is that the college serves many students, not all of whom are aiming at earning a degree:

> The multiple mission is not just that people come here for a degree or certificate—people come here because they want better pay in their job [or] because they want to travel to Italy and learn Italian. They come for lots of different reasons. That's the whole notion of the California community college.

However, Stanback Stroud is quick to acknowledge that Skyline is still falling short:

> But even if I take all of those reasons out, and I look at just the students who want to get a degree and do a transfer, then that's a large number of our students. And of those students, across the nation, only about 20% are getting degrees in 3 years. So we … looked at what Skyline's [3-year graduation rates were], and they were abysmal. They were like 11%, and we said that we have to do something different.

The college has since invested in scholarships and other student supports to improve these rates.[129] The effect the supports will have on Skyline students generally and on ECE students in particular is not yet known.

One complicating factor in gauging the success of the EDU/CD Program is that students may realize, in the process of taking courses, that a degree is not needed to gain employment in most ECE settings, nor does it necessarily lead to higher pay. For that reason, a better metric of success might be the number of students who receive a California Child Development Teacher Permit and end up teaching in the classroom. Unfortunately, data on permit attainment are not available: Students apply directly to the California Commission on Teacher Credentialing to get their permits, and they do not need to notify Skyline.[130] Skyline, and community colleges in general, would benefit from a clearer way of tracking permit attainment to know which students are having success in reaching this milestone and in what areas the program needs to improve. They might also investigate whether participation in the lab school is related to student persistence and retention.

Supporting students who take courses online or on evenings or weekends

The focus of this case study is how Skyline supports students in its daytime, in-person courses and its lab school—a traditional route to entering the ECE profession. However, about one third of Skyline's students take courses exclusively at night and on weekends, in many cases taking online and hybrid courses and often holding down daytime jobs.[131]

These working students unfortunately do not have access to one of Skyline's greatest strengths: its lab school. Students who do not have an opportunity to work in the lab school may work with

community-based sites, and Skyline has built relationships with several through the California Early Childhood Mentor Program. However, this program is small, and faculty communicate with mentor teachers from community-based sites much less frequently than with lab school staff. Skyline is currently looking for ways to offer more employment opportunities in the lab school, such as through an apprenticeship program, and for ways to build in-depth partnerships with community-based ECE employers who can also provide high-quality mentorship to ECE students.

Another challenge in serving nontraditional students is ensuring that courses taught online or at nights and on weekends maintain the coherence of the daytime courses—especially when the adjunct instructors of these courses may have few opportunities to interact with full-time faculty. Since roughly two thirds of the faculty are adjunct instructors, as is typical at community colleges,[132] it can be hard for all faculty to have common times to meet. Given that online education is viewed by many as a potential solution to supporting working students as they complete their coursework,[133] the college must pay particular attention to students' learning experiences and persistence in online courses.

Conclusion and Key Takeaways

Skyline College provides an example of what community colleges can do to prepare a diverse cohort of early educators. Skyline's approach to early educator preparation is defined by a number of key features:

- Courses are coherent and taught in a way that is effective for diverse learners, with faculty using engaging teaching strategies that are tied to practice and scaffolded to meet students' individual needs.
- Students have multiple opportunities to gain high-quality clinical experience that prepares them to integrate what they have learned in their courses and apply it in ECE classrooms through the on-campus lab school. The lab school has a strong focus on mentorship, guiding students by providing multiple opportunities for practice, frequent feedback, and strong models from mentor teachers.
- The EDU/CD Program cultivates a supportive environment that includes advising and academic, financial, and career resources that enable students to navigate a complex higher education system.
- Faculty and staff collaborate continuously to improve the curriculum, student mentorship, and student supports.

Although the college continues to struggle with low graduation rates, alumni speak extremely highly of their preparation and readiness for teaching. According to one alumnus, who transferred to a 4-year college where he now studies early education, Skyline gave him the advantages he needed to be successful:

> I feel like I'm a step above all my other classmates. Just from group discussions and … comments from the professors I get back, [Skyline has] given me a really good foundation. I feel like if I wanted to stop and just teach preschool and go on to get my permit, I would be very comfortable with the knowledge I've received from Skyline and making sure that the children I'm teaching are getting the best care possible from the knowledge.

As other community colleges look to enhance their field-based experiences, tie their coursework to practice, and support students along the way, they can look to Skyline's offerings for insight.

CHAPTER 3: EDvance at San Francisco State University: Building Pathways to a Bachelor's Degree in ECE

Beth Meloy and Madelyn Gardner

> EDvance seeks to ensure that a sufficient number of qualified teachers is available to meet the needs of families in the San Francisco Bay Area, while maintaining the diversity of the early childhood workforce in the area.[134]

EDvance is an early childhood teacher preparation program housed within the Marian Wright Edelman Institute for the Study of Children, Youth, and Families at San Francisco State University (SFSU). The program recruits and supports early educators in earning a bachelor's degree in Child and Adolescent Development, with a concentration in Early Childhood, through two thoughtfully constructed pathways: one for undergraduates in their first 2 years of college and one for working educators completing the upper division coursework requirements of their degree.

The goals and content of each pathway are designed to align with the background and experiences of the students it serves: On the one hand, to offer aspiring educators practical experiences that prepare them for the realities of the classroom and, on the other, to help current educators earn a bachelor's degree. Both offer thoughtfully structured course sequences, opportunities to link classroom learning and early childhood practice, and a comprehensive set of academic and financial supports to help students earn a degree. Upon graduating, students are eligible for a California Child Development Master Teacher Permit.[135]

This case study describes EDvance's approach to early educator preparation, focusing on how it supports both lower division college students and current educators to create a pipeline of degreed educators in San Francisco. The program provides a useful example of a multipronged and community-oriented approach to supporting a diverse population of early educators in attaining bachelor's degrees.

The case study begins with a brief overview of EDvance's pathways for early educator preparation. It then describes how the pathways are designed to support early educators in completing a bachelor's degree and developing the knowledge and skills they need to independently engage in effective and reflective practice. It concludes with a discussion of next steps for EDvance and key takeaways about the program's approach to building a preparation pipeline for early educators to earn a 4-year college degree.

Program Overview and Context

EDvance's mission is to address a shortage of degreed early childhood educators in San Francisco while maintaining the field's current racial, ethnic, and linguistic diversity.[136] It does this by offering a dual-pathway preparation program with an intentional focus on recruiting and supporting students who have been historically underrepresented in higher education. The lower division pathway is designed to support aspiring

> EDvance's mission is to address a shortage of degreed early childhood educators in San Francisco while maintaining the field's current racial, ethnic, and linguistic diversity.

educators, particularly first-generation college students, in completing ECE courses and early practicum experiences during their first 2 years of college. The upper division pathway offers coursework and supports for continuing and transfer students who work at least part time as early educators during the final 2 years of their degree. Across both pathways, EDvance offers academic tutoring, individualized academic advising and educational planning, guaranteed enrollment in courses, and fiscal incentives and stipends to create the conditions for student success (see Figure 8). These supports are described in greater detail later in this report.

Figure 8
EDvance Provides Students a Network of Supports
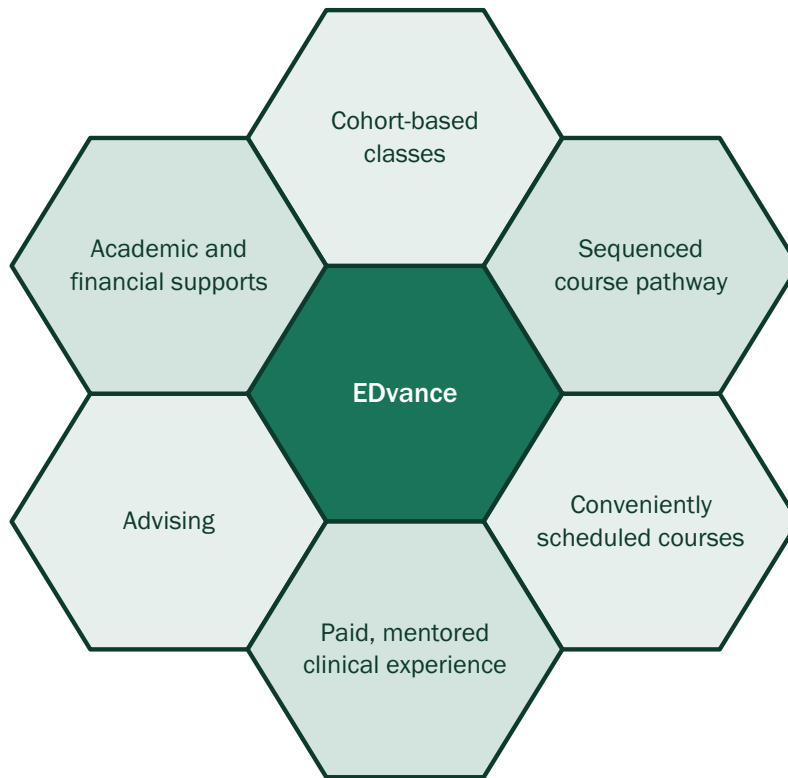
EDvance was established under the Marian Wright Edelman Institute for the Study of Children, Youth, and Families at SFSU in 2008. The Marian Wright Edelman Institute brings together faculty, community members, and students at SFSU to fulfill a three-pronged mission: to support campus and citywide efforts to improve the quality of ECE; to promote collaboration among faculty and build partnerships between SFSU, other higher educational institutions, and the community; and to foster research and scholarly work.[137] Because the Marian Wright Edelman Institute is not a traditional academic department, programs that operate under its umbrella have a high degree of flexibility.

EDvance is one of the Institute's core programs. It is supported by substantial external philanthropic funding from the Peter and Mimi Haas Foundation and also receives funding from the city and county of San Francisco, the San Francisco Foundation, and Jumpstart national (AmeriCorps).[138] This funding enables EDvance to provide a highly supported professional preparation experience. In part, the funding allows EDvance to maintain a dedicated staff of 12, including 7 program alumni, all of whom work full time as instructors, academic counselors, and support staff.

Across both the upper and lower division programs, many EDvance instructors are adjunct faculty who actively work as early childhood educators, administrators, or leaders in San Francisco. There are valid concerns about relying extensively on part-time professors to teach college courses.[139] Nonetheless, EDvance's reliance on adjunct faculty is intentional and brings important benefits to the EDvance model, ensuring many instructors possess recent and deep expertise in early education practice and have worked directly with San Francisco's children, families, and communities. As a result, EDvance instructors are prepared to teach students about the tools, strategies, and best practices being utilized in California ECE settings to advance quality, such as emerging state learning standards, child observation and assessment tools, and program quality metrics.

Lower division programs: Supporting historically underrepresented college students in exploring ECE careers

Data from SFSU highlight that although the university has high enrollment among students historically underrepresented in higher education, retention and completion rates remain low.[140] Between 2007 and 2011, the 6-year graduation rate averaged 50% among all first-time, full-time freshmen at SFSU. Among Black and Latino/a students, rates for first-time, full-time 6-year graduation were lower—46% and 40%, respectively.[141]

EDvance's lower division pathway is designed to promote college success and attract new early educators among historically underrepresented students, including first-generation students, students from low-income households, and students of color. The pathway consists of two complementary programs (see Figure 9):

- The Metro Academy Child and Adolescent Development program (Metro CAD), focused on supporting success in college coursework; and
- Jumpstart, a mentored early practicum experience focused on giving students hands-on ECE experience.

The Child and Adolescent Development Department and EDvance developed a partnership with the Metro College Success Program at SFSU to create Metro CAD.[142] The SFSU Metro College Success Program is a 2-year learning experience serving first-generation, low-income, and historically underrepresented students. Metro CAD enrolls a cohort of 35 students each year who together complete one general education and one thematic ECE course each semester and receive advising, tutoring, and other support services to promote their success.

Data collected by the program indicate that in recent years, three quarters of students in Metro CAD have identified as Hispanic or Latino/a (75%). The cohorts have also included students identifying as Asian (about 10%), Black or African American (about 5%), and White (about 5%), and students identifying with other racial or ethnic identities (about 5%).[143]

In addition, the lower division pathway includes Jumpstart, an early practicum experience that gives students hands-on experience before they commit to a major and career in ECE. Jumpstart is a national initiative that offers work-study jobs to students who work in ECE settings.

Figure 9
EDvance Lower Division Program Includes Two Main Components

EDvance			
Metro Academy in Child and Adolescent Development		**Jumpstart Early Practicum Experience**	
Serves:	• First-generation students • Students from low-income households • Students from historically underrepresented groups	**Serves:**	• Metro Academy students • Other interested students
Provides:	• Accessible tutoring • Financial and academic advising • Cohort-based classes	**Provides:**	• Federal work-study credit and wages • Hands-on experience in early care and education • Ongoing mentoring from experienced teachers and EDvance staff

EDvance is piloting a version of the program that places first- and second-year college students in well-supported field experiences for a full day each week. Students concurrently enroll in a yearlong course focused on developmentally appropriate practice and responsive child interactions. Jumpstart participants receive ongoing coaching from mentor teachers and additional support from a team of three workforce coordinators employed by EDvance.

EDvance currently places 64 students each year in ECE settings through Jumpstart. Staff estimate that about one quarter of Jumpstart students are also involved in Metro CAD. The program does not collect information about student demographic characteristics.

The lower division pathway prepares students, if they choose, to matriculate into the CAD major and EDvance's upper division pathway in their junior year. The lower division pathway helps EDvance recruit new early educators, while the Jumpstart experience also gives students the opportunity to decide early on whether ECE is a good fit for them. As Metro CAD instructor and EDvance Workforce Coordinator Alicia Torres explained:

> For us it is really important, especially thinking about the diversity of the ECE teaching workforce, [to create a] lower division program that allows us to really support first-time, full-time freshmen, who are different from students that are in the field, working.

Though EDvance staff encourage lower division students to recognize that the EDvance upper division pathway (referred to as PATH, Promoting Achievement Through Higher Education) and the CAD major are good options, they hold tempered expectations for Jumpstart as a recruitment mechanism. "[Our funders] thought Jumpstart was going to be a feeder right into PATH, but we might have 64 Jumpstart students [per year], and maybe 5 to 10 might come over to PATH," explained Lygia Stebbing, EDvance Director. Nonetheless, Linda Platas, Professor and Associate Chair of the CAD Department, reports that some of these students decide to major in child development and pursue a career working with young children, including students who go on to finish a Child Development degree outside of PATH, while others realize their interests lie elsewhere. The lower division programs create a supportive space for exploring that interest while developing foundational knowledge and skills in ECE.

Upper division program: Supporting current educators in earning a bachelor's degree

EDvance's upper division pathway, PATH, is designed for both community college transfer students and lower division students at SFSU to seamlessly complete a CAD degree in 2 years while employed in ECE programs throughout San Francisco. About half of PATH students transfer from community college after earning an associate degree, and students often have substantial prior experience in ECE.[144]

> EDvance's upper division pathway, PATH, is designed for both community college transfer students and lower division students at SFSU to seamlessly complete a degree in 2 years while employed in ECE programs throughout San Francisco.

Upon entering the program, students enroll as a cohort in hybrid courses that combine online and in-person instruction in a carefully sequenced pathway that fulfills all graduation requirements for a CAD major. EDvance provides a suite of academic and financial supports, such as tutoring, individualized advising, and stipends, to help educators succeed in coursework and earn their degree. EDvance employs a team of faculty, academic counselors, and other staff dedicated to providing these high-intensity support services for students, including a full-time academic counselor and a program coordinator overseeing fiscal incentives.

Students in PATH are required to work a minimum of 25 hours per week in an early childhood setting while attending school. Most students meet this requirement by working in subsidized preschool centers in San Francisco, gaining additional hands-on experience working with children in their communities and making them eligible to receive stipends offered by the city of San Francisco.

The PATH program typically enrolls a cohort of 35 students each year. Data from a recent cohort suggest the group of educators served by the program is diverse with regard to age and race and ethnicity. About half the students in the cohort were between the ages of 25 and 49, while 40% were between the ages of 18 and 24. About one in three students identified as Hispanic or Latino/a, one in five as Black or African American, and one in five as White. The cohort also

included educators identifying as Asian, two or more races, and other races. This diversity did not extend to gender identity; as is common in early education, a large majority of the students (94%) identified as women.[145]

PATH serves about one third of all early childhood concentration majors at SFSU and accounts for approximately half of early childhood concentration graduates each year. By comparison, the CAD Department at SFSU enrolled 350 students in 2018–19, with 203 students concentrating in early childhood in the spring semester of 2019.[146] Recruitment into the PATH program relies heavily on staff outreach to community colleges and subsidized ECE programs in the area and word of mouth from staff and alumni.

Students and alumni report that the program changes their perspective on their work and its importance. Students feel more confident in their role as professionals, more driven to pursue further education, and generally more successful. For example, one alumna of the program reported:

> I attribute a lot of the confidence and the success that I've had to EDvance, who provided the resources and the tools that we needed to be successful, not only in that program, but beyond. Not only professionally or educationally, but personally being able to feel your success.

This suggests that EDvance is succeeding in creating and supporting a pipeline of diverse and highly qualified early educators in subsidized child care centers across San Francisco. In the following sections, we describe EDvance's approach in greater detail.

Building a Sequenced and Coherent Course Pathway

EDvance has developed tightly sequenced and interdisciplinary course pathways that guide students to graduation while equipping them with the knowledge and skills they need to teach in early education classrooms. Faculty and staff affiliated with the program have collaborated to ensure that the course pathways are coherent and provide exposure to the skills and knowledge students need to be effective educators.

Course pathways are tailored for early educators

Though EDvance students are closely associated with the CAD Department, Associate Chair Platas explained that EDvance's explicit focus on educator preparation distinguishes the program from the department as a whole. The CAD Department strives to prepare students for a variety of careers involving children. The goal, Platas said, is to "try not to shut any doors" for their postgraduate plans. EDvance's programs are focused specifically on attracting and developing early educators with a bachelor's degree. The courses that EDvance students take reflect that goal.

The lower division pathway is offered in collaboration with the CAD Department and the Metro College Success Program. The course sequence combines courses in general education and child development (see Figure 10). Metro CAD courses are selected to enhance students' general academic skills in areas such as oral and written communication, while also providing exposure to the foundations of child development. Further, the lower division coursework is centered on exploring issues of educational equity. Social justice and equity are threaded through all courses in the CAD Department, which strives to graduate students who are culturally aware as well as

responsive to their students' needs. Courses in ethnic studies, critical writing, oral communication, and the history of social movements all adopt a social justice lens. Students in the Metro CAD program say the social justice focus benefits their learning and development. As one student said:

> The fact that the courses are focused around social justice problems [is so important]. For example, last semester I took a statistics class that was focused around social justice. It combined learning with real-world problems ... [and that was] really helpful for me to understand [the content] better.

Figure 10
EDvance Lower Division Pathway Requires Prescribed Courses for Students
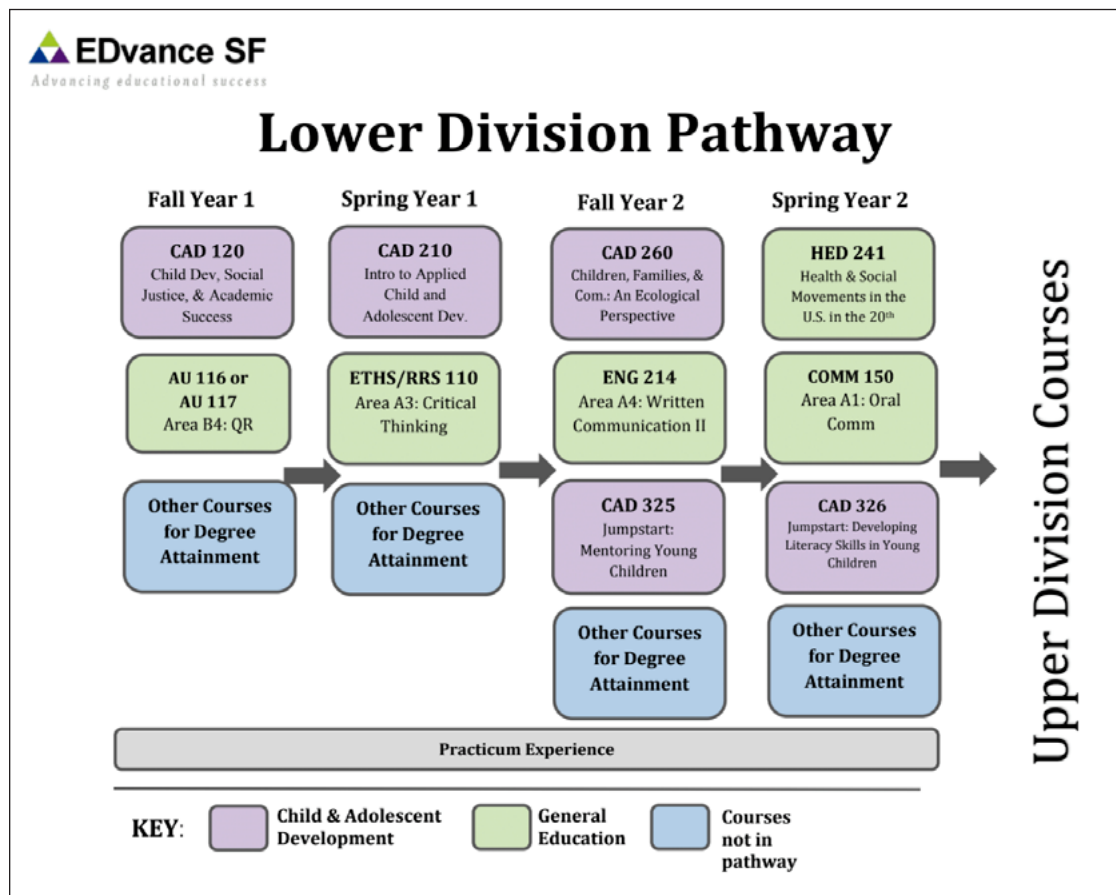
Source: EDvance program handout.

This thoughtfully selected set of courses gives students an opportunity to extensively explore a given topic from numerous perspectives and to prepare them for further study in the field. It also guides students through the coursework needed to earn a California Child Development Teacher Permit by the end of their sophomore year, allowing them to seek employment in ECE as they complete their degree if they choose.[147]

This lower division course pathway complements EDvance's upper division course pathway, a 2-year course sequence that satisfies graduation requirements and equips students with knowledge and skills of importance for early educators (see Figure 11). During their 2 years in the PATH program,

students take coursework focused on supporting children's development and learning, methods for curriculum and assessment, and program administration and leadership. Several courses focus specifically on understanding and supporting the diverse needs of children and families, including a seminar focused on meeting the needs of dual language learners and courses on creating inclusive learning environments for students with special needs.

Figure 11
EDvance Upper Division Pathway Requires Prescribed Courses for Students
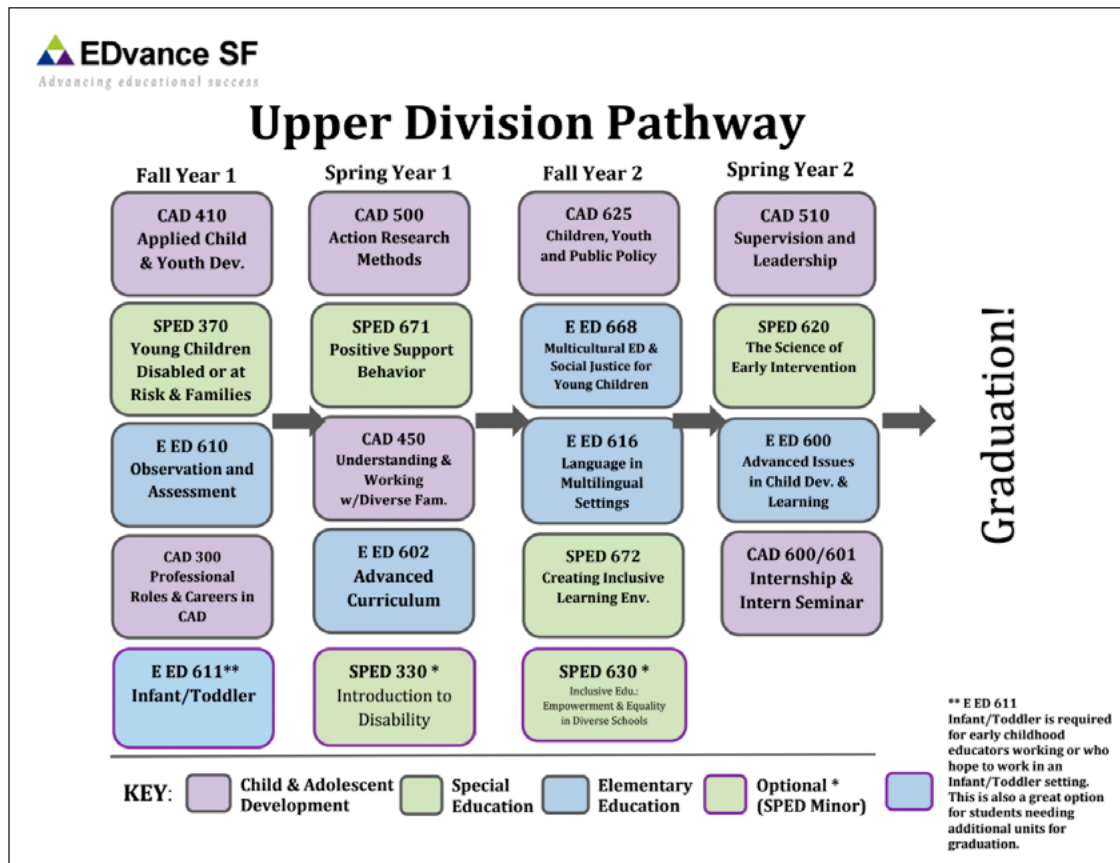
Source: EDvance program handout.

The pathway combines coursework from the CAD, Special Education, and Elementary Education departments and was developed in collaboration with faculty within those departments. This interdisciplinary pathway was carefully constructed to weave early childhood learning and practice throughout all PATH classes, including general education requirements. For example, Special Education 620, The Science of Early Intervention, fulfills a general education science requirement but is also directly applicable to working with young children. The course covers topics such as early neurological development, environmental risk factors, and effective early interventions.[148] Likewise, social justice is a prominent thread, especially in CAD 300, which explores current issues and trends in providing services for children, youth, and families and offers a historical overview of social services and public policies related to children, youth, and families in the United States. Finally, students who wish to minor in Special Education need only add two courses to the pathway to complete the minor's requirements.

Exploring the Why: Helping Educators Articulate Effective Practice

It's 7:00 on a Wednesday evening on the campus of San Francisco State University, and more than 30 educators huddle in groups around large tables. Some are eating their dinner or passing around a bag of chips. EDvance Director Lygia Stebbing stands at the front of the room and raises her hand to get her students' attention.

Today, she explains, they are beginning a long-term project as part of their internship and intern seminar. She tells the students that they will develop a "competency portfolio." Stebbing explains, "In each of the gray boxes on your handout, you'll find a description of the competencies you should have as an early educator." The competencies included in the assignment are adapted from National Association for the Education of Young Children standards and align with the Child Development Associate (CDA) guidelines, which she shared with the class via email earlier in the week. She explains to the students that they will need to write a description of how they meet each competency and upload documentation, which could be in the form of photos, PowerPoints, short videos, child studies, or other documents that demonstrate their application of the competency in their own classrooms.

She begins to walk students through the first category, "Child Development and Learning," to plan an approach to the assignment and the development of their portfolios. Together, the class brainstorms. First, they dissect the domains of child development listed in the first prompt. Stebbing asks students to call out the skills that children demonstrate in each of these areas. For physical development, they offer a chorus of fine and gross motor skills. When Stebbing asks for examples of cognitive development, the class hesitates. "You know this," she says. "Tell me about mathematics development, science. What about executive function skills?" The class livens up with murmurs between students, before several educators offer additional examples.

Next, Stebbing asks the class to think about what they do in their own classrooms to support children in developing these skills. Again, the class hesitates. "This isn't easy," she says. "I'm asking you to think about why you do the things you do. Start with social-emotional; we all love that, right? What do you do to support children's social and emotional development every day?" A few students chime in, describing their efforts to help children feel comfortable in the classroom. "Now tell me why that supports social-emotional development," Stebbing prompts. As they respond, it is clear they are starting to understand the task at hand.

Stebbing then asks the class to begin working on their portfolios individually—drafting one or two paragraphs to describe each domain of development and what they do with their children to develop that area. "If you're struggling with the writing, remember that we have writing support with us in the class today." She introduces a young woman who has been sitting quietly at the head of the class. "She's going to be circulating, so raise your hand if you want her help."

As in other areas across EDvance, Stebbing is setting students up for success in the program and in their work. She wants them to "understand the why behind their practice—and be able to articulate that" because it will help them succeed as educators and leaders long after they leave EDvance. EDvance strives not only to prepare educators who are equipped to implement effective teaching practices as they understand them now, but to develop a foundation for educators to critically evaluate and improve their practice in the years to come.

PATH students and alumni report feeling well prepared by the preparation this course pathway offers. Angela Aquilizan, an alumna and current Metro CAD Workforce Coordinator, noted that the combination of knowledgeable instructors and a focus on concepts that matter translated to changes in her practice with young children:

> I think the rigorous work, and the highly knowledgeable instructors and very dedicated instructors, really pushed me to be critical about my work, and really instilled the need for the importance of reflective practice—teacher action, inquiry, and early intervention, just to name a few, which made a difference in my classroom.

Course pathways are efficient and accessible

EDvance pathway programs provide students with a clear and accessible program of study that supports timely degree completion. In the lower division program, Metro CAD students are guaranteed placement in the courses that comprise the pathway, including general education courses that fill quickly, making them otherwise difficult to take. Those completing the course pathway are eligible to seamlessly transition into the upper division PATH program and the CAD major, if they choose, setting them up to graduate in a timely manner and pursue careers in ECE and related fields.

> EDvance pathway programs provide students with a clear and accessible program of study that supports timely degree completion.

The EDvance upper division program offers the same type of efficient course pathway. The PATH program was born in part from Program Director Stebbing's research. Stebbing studied the early learning workforce in San Francisco and found that many students idled in community college pathways for years without earning a degree. The challenge, she found, was that students often struggled to complete general education courses required for transfer to state colleges and universities. This general education core includes courses aimed at improving students' skills in oral communication, written communication, mathematical concepts and quantitative reasoning, and critical thinking and composition. For example, she noted that some "students [learning English] could get stuck in the English language pathway for 14 semesters or more if they struggled to pass" their courses.[149]

At the same time, many other early educators participated in hours of ECE-focused professional development without ever earning college credits toward a California Child Development Permit or degree. Metro CAD and Jumpstart—both of which predate the PATH program—were not designed to address these barriers facing current educators seeking a degree. The EDvance program was created to address these and other hurdles by providing a clear and efficient pathway to a bachelor's degree for early educators.

As in the lower division programs, PATH students are guaranteed enrollment in the courses that comprise the pathway, which helps students make steady progress toward their degree. To further support students in balancing their professional and academic responsibilities, PATH courses are offered as special sections that take place on evenings or weekends, when early educators are

usually available to attend. Typically, PATH students attend class one weeknight each week and two or three weekends per month. In between sessions, they engage in online activities, such as completing readings and assignments or engaging with peers in online forums.

Stebbing explained that they tried coursework that was only in-person or only online. They found that students were overwhelmed by spending every night and weekend on coursework in the in-person-only model, but they missed the personal contact of in-person classes when courses were solely online. Hybrid courses combine elements of both approaches, and students report that it works well. One student noted how important it is to be able to attend school full time while also working: "You can't afford to go part time. You really have to put your all into it, and this program is designed to make people succeed." An alumna of the program likewise highlighted that the night and weekend course schedule was critical. "PATH was able to … open [doors] for me, to be able to work and support my family at the same time, and go to school [at night and on] weekends."

A former student explained how influential PATH's clearly articulated course pathway was in supporting her success: "This program? Two years. You're in and out. And you have a clear path. You can see the light at the end of the tunnel, and that makes a difference." Recent graduation data collected by EDvance suggest the program is succeeding in getting students through this sequence efficiently. In four of PATH's last six cohorts, nearly all (at least 97%) PATH students graduated within 2 years. In the other two cohorts, 2-year graduation rates were between 80% and 90% and all but a few students graduated within 3 years.[150]

Staff continuously collaborate to strengthen teaching and learning

Both EDvance course pathways are supported by structures that facilitate instructor and staff collaboration to promote alignment among courses and otherwise strengthen teaching and learning in the program. All Metro Academies are designed from the ground up around a specific set of themes, and the lower division EDvance pathway is intentionally designed to focus on child development and educational equity. This coherence is strengthened by ongoing opportunities for faculty and staff to collaborate.

Metro Academy instructors participate in faculty learning communities that convene for at least 45 hours each year to take up issues relevant to Metro courses. Alicia Torres, a Metro CAD instructor, recounted that the meetings provide space for her to discuss with the other faculty whether and how topics she is teaching arise in other courses. When overlap is discovered, faculty have time to discuss how they might leverage that overlap to deepen students' learning, rather than unwittingly creating redundancy. The meetings have also provided space to analyze student attendance and engagement in Metro CAD courses and to evaluate grading practices to ensure they are consistent and equitable.

Unlike the lower division pathway, which was designed thematically, the PATH program's focus was largely on building a structure that worked for early educators—a course sequence offered at convenient times and with supports for student success. Over time, faculty and staff associated with EDvance have worked intensively to refine their approach and strengthen the learning experiences offered through the program, with a particular focus on ensuring coursework aligns with institutional and professional expectations for student learning.

In recent years, a working group of faculty and staff who work with EDvance has developed a "know, do, believe" matrix that outlines the competencies they would like students to develop during their time in the PATH program (see Appendix C). The matrix includes competencies related to theory, social justice, the ECE profession, research, communication, collaboration, and professionalism. It paints an image of the type of educator PATH seeks to graduate and provides a framework for evaluating and strengthening course offerings.

Faculty who teach in the PATH program meet at least monthly, and sometimes more frequently, to have conversations focused on student success and case management. They layer in more intensive planning meetings at the beginning and end of each semester to create additional space for reflection, analysis, and planning. These meetings often focus on how instruction can help students master core competencies, including those outlined in the PATH program "know, do, believe" matrix and those identified by the National Association for the Education of Young Children and the California Teaching Commission. Using these frameworks as a guide, EDvance staff have begun to backward-map what they would like educators to know and be able to do onto the student learning objectives and assignments of PATH courses. The exercise has helped staff identify gaps in the curriculum and strategies to address them.

> Faculty who teach in the PATH program meet at least monthly, and sometimes more frequently, to have conversations focused on student success and case management. They layer in more intensive planning meetings at the beginning and end of each semester.

For example, social justice and educational equity is an important theme in the "know, do, believe" matrix, but staff realized upper division students lacked a course in which to deeply explore the social and cultural contexts surrounding child development, particularly issues of implicit bias and racism. Discussions surrounding issues of equity are important for preparing early educators everywhere, but perhaps especially so in California, given the state's racial and ethnic diversity. In 2018, Multicultural Education and Social Justice for Young Children was added to the upper division course sequence to provide a dedicated space for exploring the influence of race, ethnicity, gender, and other dimensions of bias in early childhood settings, above and beyond what other courses provide.

The upper division pathway also includes a course focused on language instruction in multilingual settings. The course, offered through the Elementary Education Department, explores developmentally appropriate strategies to support children's language growth in multilingual early education settings. Course activities challenge students to reflect on their individual early experiences with languages and connect those experiences to their own teaching practice. They also provide students with an understanding of how children develop their first and second languages and how early childhood educators can enhance this development by adapting their curriculum, environment, and practices to support each child's home language and culture.

Similarly, EDvance faculty and staff see rigorous academic preparation as an important focus of early educator preparation. Though academic skills, such as research and writing, are critical competencies for current and aspiring educators to develop, faculty and staff found academic writing to be an area of frequent challenge for PATH students. The faculty and staff examined the upper division course sequence for opportunities to scaffold students' development as writers before they enroll in CAD 500, a research methods course that focuses intensively on academic research and writing. The instructor for CAD 410, Applied Child and Youth Development, built in a trip to the library and created an assignment that required students to identify and read scholarly journal articles to inform their writing. The PATH sequence now includes a writing-intensive course each semester, and EDvance strives to offer course-embedded writing support, provided by a graduate student tutor, for each of those classes.

These ongoing efforts of faculty and staff to build connections and coherence across EDvance courses have strengthened its pathways. EDvance staff are committed to continuing their efforts to refine their program and have identified a number of areas, such as behavior management, that they would like to tackle in the future.

Courses are designed to scaffold learning around key concepts and tools

The ongoing efforts of faculty and staff help ensure that the EDvance course pathways are well scaffolded to support students' learning. One helpful tool is the learning story, which is taught in several courses and serves an important practical purpose for EDvance students preparing to teach ECE in San Francisco (see Appendix D for an example). Learning stories provide an engaging method for ECE students to gather information about child development to inform observational assessments. EDvance students have found it especially helpful with the Desired Results Developmental Profile (DRDP), a requirement for all teachers working in California state-contracted centers. One EDvance student explained that learning stories "help you see how your children are growing and alleviates a burden off the teachers doing DRDP—writing all these observations—because you do it every day, you're seeing the kids every single day." Another said this was particularly important because they do not have "enough office hours to [meet their requirements], so the learning story gives [them a way] to address 20 different DRDP measures for one child in a respectful and intentional way [that can be shared with families]."

The stories bring families into the classroom because, after teachers have worked on them for several weeks or months, they share them with family members, who are then asked to respond in writing. The process can be powerful, as one EDvance student explained:

> [Learning stories] can really highlight exactly what we're doing in the classroom and then what the child is really doing. It's not just an anecdotal note: It's powerful; it's a really powerful tool. [It's] a way that you can connect the families and build relationships, and it's really authentic.

Students learn to use learning stories through ongoing practice across courses. In the upper division, faculty for several courses, including Observation and Assessment, Language and Literacy in Multilingual ECE Settings, and Internship Seminar, teach learning stories as an intuitive and effective structure for students' observations and reflections about their teaching. Students have several opportunities to complete and receive feedback on their learning stories.

Perhaps as a result of this intensive focus, EDvance students feel well prepared to conduct and use child assessments. Based on the success of the learning stories approach among upper division students, EDvance has also begun to incorporate it into the lower division Jumpstart class.

EDvance instructors also help students learn about and use cycles of inquiry to reflect on their own teaching practice throughout the PATH course sequence (see Appendix E). Faculty and instructors have long used inquiry-based approaches in their courses, but in recent years, the program has adopted a shared definition of inquiry, explained Stebbing, EDvance's Director: "Everybody was using the term 'inquiry' but … defining it differently. So we decided to develop a framework for an inquiry cycle to ensure we were all using a similar framework."

PATH students learn how to use this inquiry cycle to address the challenges they encounter in their roles as educators, give children more opportunities to express themselves and experiment with their environments, and capitalize on children's interests to keep them engaged in learning. The research inquiry cycle is built into many of PATH's courses, including the Capstone Inquiry Seminar, which culminates in a final inquiry project in which students develop a goal or question, tie it to the National Association for the Education of Young Children Professional Standards and Competencies for Early Childhood Educators, and conduct research that addresses a concrete need they have encountered in the field. As one student described her project:

> I did my inquiry project on [a particular child who was having challenging behaviors] and how I can help her self-regulate throughout the day.… I realized that this child was really fascinated by nature, [so I thought], "How can I implement nature to help her self-regulate? Gardening." … She planted a flower, and every morning she would say, "Can I go see my flower?" because she missed her mom, and her mom liked to garden. I found that out throughout the process and then I [thought], "Wow, just following the child's interests helps connect home to school." … We're with the kids the majority of the time, and having them bring a sense of home to the school is also inviting their culture into the classroom and saying … there is a place [for you] here.

Students expressed that their practice was fundamentally changed by viewing the children in their classrooms as active participants in learning and by thinking strategically to solve problems they encountered with individuals or groups of children. Likewise, inquiry projects teach students to constantly observe and reflect on their own practice. Said one student:

> One of the projects I did around inquiry was around my science area [because] my children didn't like my science area. So I observed, I did tally marks [to measure] how often they came, and what [changed] if I put a new toy [or] if I just put a toy on the bottom shelf.… Now I've moved to a different site and I'm getting the same problem, and I'm asking my teachers, "What is it about this science area that's not inviting?"

These various tools—from learning stories to inquiry projects—allow EDvance to leverage its tightly sequenced and scaffolded course pathways to ensure students develop knowledge and skills that they can carry back to their work as early educators.

Linking Coursework and Practice

Throughout the EDvance program, students engage in activities designed to help connect what they learn in the university classroom to their work as early educators. EDvance emphasizes hands-on teaching practice for all students and supports ongoing reflection to enhance these experiences. EDvance also encourages students to participate in professional activities beyond the early childhood setting that foster their identities as part of the larger early childhood field and as advocates for high-quality early education.

EDvance emphasizes hands-on practice in early education classrooms

EDvance prioritizes giving students hands-on experience working in early childhood settings while in school. The nature of these opportunities differs between the lower division pathway, which serves students with little to no prior experience in ECE, and the upper division pathway, which serves working professionals.

Jumpstart is an early teaching practicum that places lower division students in Title 5 preschool classrooms, which serve children receiving subsidized care, throughout San Francisco. Jumpstart students work alongside experienced early educators who serve as mentors and provide ongoing and individualized feedback and counsel. The practicum builds a bridge between college coursework and real-world teaching in early learning settings, preparing students for employment and providing a supportive environment to put theory into action.

Traditionally, Jumpstart programs place a group of 7 to 10 students in a single classroom, where they work for 2 hours twice a week during the school year.[151] EDvance Director Stebbing described the model: "Jumpstart would come in … maybe Tuesdays and Thursdays from 9:00 to 11:00. [They would] come in and implement their curriculum, their circle time, their small group activities." However, through discussions with the San Francisco centers hosting Jumpstart students, EDvance staff realized that students who completed this Jumpstart model were not prepared to work in ECE classrooms because the program provided only a partial view of the preschool day and was largely disconnected from students' coursework.

To address these challenges, EDvance and Jumpstart collaborated to pilot a new design in San Francisco. The resulting program limits each ECE classroom and mentor teacher to three Jumpstart students who spend one full day each week in the classroom during the school year. Jumpstart students at EDvance are simultaneously enrolled in coursework in which they reflect on their experiences. (See "Bringing Coursework to Life in the Jumpstart Classroom.") In providing feedback to Jumpstart students, EDvance staff and mentor teachers introduce students to concepts from the Classroom Assessment Scoring System, a valid and widely used classroom quality assessment. This exposure enhances students' practice in the classroom and builds their familiarity with a tool used for monitoring and improving quality in many ECE settings, including many subsidized programs in California.

Bringing Coursework to Life in the Jumpstart Classroom

The sounds of students shuffling to their desks can be heard as Professor Melinda Day prepares to begin her Jumpstart course. Professor Day starts with an icebreaker to get the students engaged in the topic of the day: the early learning environment. She asks them to think back to their own early childhood environment and then to share their reflections with the class. Students volunteer a list

of details they remember: uniforms, worksheets, a big bright carpet, and letters and maps on the walls. One student shares that her classroom had English posters on the walls even though all of the children spoke Spanish. Building on this warm-up activity, Professor Day begins her lesson. The first slide reads, "The environment is the other teacher in the classroom." She goes on to tell the class that the "environment we are in affects our mood, relationships, and learning. And it doesn't change when you are over the age of 5." The class laughs.

Later, Professor Day prompts the students to think about how the environment affects their own moods, saying, "Think about a store that you really hate going to and then think about why." The students describe stores that are disorganized, overcrowded, stinky, noisy, poorly lit, or have no one to help you find what you're looking for. Professor Day queries the class again: "How do these stores make you feel?" The students describe feeling anxiety, frustration, and disappointment. One student offers, "I want to get out and never go back."

Professor Day smiles and asks, "Can these same conditions and reactions happen in a preschool classroom?" Around the room, students mumble in agreement, as the purpose of the activity becomes clear. The physical environment of the early learning setting can easily affect children's behavior. "All behavior tells you something," Professor Day shares with the class. "Sometimes it might be telling you 'I want out of this classroom.'" She goes on to ask, "What do children do that we don't like in a classroom? What role does the environment play in those behaviors?" Students take turns sharing their thoughts out loud, drawing from their own experiences in classrooms through Jumpstart.

Then, Professor Day projects a slide with two early learning setting floor plans. As the students study the slide, she asks the class, "What do you notice about these classrooms that might affect children's behavior?" Someone points out that one classroom has more defined interest areas and that the other one has a big open area that might be a runway for children. Another student notices that one of the classrooms has the coat rack and cubbies across the room from the entryway. Building on the student's observation, Professor Day demonstrates what is likely to happen when children have to cross the entire classroom to reach a coat rack: She mimics a child entering the classroom, dropping off their backpack, and then their coat, in the middle of the room as they make their way across to the other side. Again, the class laughs.

For the rest of the hour, Professor Day continues her lesson about the role of structure in the classroom. The class brainstorms the characteristics of a high-quality learning environment, deciding that an effective environment incorporates the background and interests of children, is arranged to facilitate children's engagement in varied activities, and is inviting and aesthetically pleasing. Once more, Professor Day takes the opportunity to connect the content of the coursework to the students' own experiences. This time she acknowledges the ways their own college classroom falls short of the characteristics students have just listed. She points around the room, noting that the classroom has awful lighting and that it is set up poorly for group work. She asks the class, "Is it nice, pretty, or beautiful? If I want to talk with an individual student, is it easy for me to get to them?" More laughter.

Professor Day's lesson is clear. She utilized the students' own experiences alongside humor to keep them engaged and help them internalize the importance of the classroom environment. The final step in the process involves an assignment for next time: Take a video of the early learning environment they are working in as part of Jumpstart and analyze what works and what does not. Applying theory to practice is embedded in every aspect of Professor Day's course.

EDvance has built close relationships with local ECE agencies, which helps create opportunities for Jumpstart students to be placed in high-quality ECE settings. Many of these sites employ graduates of the upper division PATH program as teachers, so students often have access to alumni mentors in addition to mentorship from the lead teacher in their classroom.

Jumpstart provides support for mentor teachers who work with EDvance students. Mentor teachers receive a small stipend ($1,000 per year) for their efforts. EDvance staff meet with each mentor teacher a minimum of three times throughout the year to discuss goals for practicum students. The workforce coordinators also provide other support for mentor teachers and students on an as-needed basis. As Stebbing described, "We have high-touch and low-touch sites. Sometimes the coaches visit more frequently." Workforce coordinators may debrief with mentor teachers, discuss students and challenges with students, model best practices in the classroom, and provide feedback on student practice videos.

Lower division students reported that working in an ECE classroom through Jumpstart provides rich learning opportunities that build on their college coursework. One student reflected on the value of working alongside a mentor teacher:

> I love my mentor teacher. [I] get to see how she interacts with the children in a way that I wouldn't get [from] a professor…. If there's a conflict between two kids not sharing a toy, I get to see how she deals with that, rather than just hearing about it [in a lecture].

Another student reflected, "It's a great program because it gives students a chance to apply what they're learning about early child development and put in into practice. It also helps to see how a day at a preschool goes and how the children and teachers interact."

Jumpstart provides students entering the ECE field for the first time with well-supported opportunities to explore and develop their interests, knowledge, and skills through early practicum experience. Jumpstart also allows students to decide if ECE is the right career for them. A Jumpstart mentor teacher explained:

> I think … Jumpstart [has] such an important role to play in this field because sometimes, until you get your feet wet and you're in there, you don't know if [ECE] is for you. [It helps you] be able to come in and see a full day, how teachers plan, what it takes to get a project going, what it takes to get kids organized and engaged in a project so that they are learning, to be able to calm a child down emotionally so that their brain is ready to take in information to learn. Until you get in there and really start working with [children], it's impossible to tell if this is for you…. It is just so important to be able to utilize a program like this where people can see, "Is it for me or isn't it?"

This focus on classroom experience persists in the upper division program, which is designed for working educators. All upper division students are employed a minimum of 25 hours per week in an ECE setting. Instructors leverage this hands-on experience in PATH courses to strengthen educators' practice and deepen classroom learning, as described further in the next section.

PATH students receive credit for their hands-on experience through the internship seminar required for the CAD major. The internship course combines practical experience in an ECE setting with formal coursework focused on helping students reflect on their teaching philosophies and articulate the skills and knowledge they have acquired through their college experience.

Previously, the CAD internship course required students to complete unpaid internships at university lab schools. Though this is a common model across the state and country, Stebbing noted that unpaid internships do not meet the needs of current early educators or the city of San Francisco. If educators are allowed to use current employment to fulfill the internship requirement, they do not have to lose wages or otherwise disrupt their work to fulfill program requirements, and ECE programs retain

> If educators are allowed to use current employment to fulfill the internship requirement, they do not have to lose wages or otherwise disrupt their work to fulfill program requirements, and ECE programs retain teachers throughout their training.

teachers throughout their training. This model has been welcomed by PATH students and, according to CAD Professor Linda Platas, will be adopted by the entire CAD department at SFSU in the 2019–20 school year.

Students in both EDvance pathways engage in firsthand experience working in ECE classrooms to complement their experiences in the classroom. One student noted that this emphasis on hands-on learning is a strength:

> While we learned the most important and technical pieces of teaching, we also had a very experiential and hands [on] learning environment in each [subject]. All of this happened under the guidance of seasoned professionals, while we also learned how to use our own knowledge and understanding to meld both the essential professional and human elements into the relationships with our own students, families, and colleagues.

As the next section describes, EDvance courses leverage these experiences to enrich students' learning, creating links between theory and practice.

Ongoing reflection bridges coursework and practice

EDvance course instructors intentionally integrate assignments and activities that draw on students' firsthand experiences. Helpfully, many faculty and instructors in both the lower division and upper division courses are current or previous early education practitioners, including some PATH alumni. Instructors with practical experience are prepared to draw deep connections between course content and the reality of teaching in an early learning classroom. Students also noted that these faculty understand their context and the challenges they encounter.

Video reflection, in which students record their teaching to review with peers and mentors, is an important tool used in both EDvance pathways. In the lower division program, video reflections are embedded throughout the Jumpstart practicum and accompanying course. Jumpstart students

record themselves engaging with children during four predetermined activities over the course of the year. The selected activities are designed to allow students to reflect on their practice as it relates to supporting children's development across different domains of learning, such as literacy and mathematics. For example, each Jumpstart student records themselves doing a large group read-aloud, a common strategy for engaging preschool children in a literacy-related activity that can be challenging to implement well.

Jumpstart students then watch their videos with their classmates, course instructors, and mentor teacher, who offer feedback to help students reflect on their own practice. Jumpstart students incorporate feedback, record themselves repeating the activity with children, and reflect on how their performance improved and how they can further develop their practice.

Students reported that video reflections are a useful source of feedback. One lower division student explained how video reflections affected her learning:

> Not only are we reflecting on ourselves, but, for example, we would comment on somebody else's video…. Just, basically, getting feedback … helps us get another perspective on what we can do better and what we're doing well.

Director Stebbing agreed that videos offer students a new and valuable perspective on their practice, saying:

> [When students] see themselves, then they can point out, "Oh, I see what I'm doing. I could have done that differently." We'll see the "aha!" moments, or "Oh, I see, I was spending all my time with this child and then there's these six children out here trying to get my attention that I'm completely ignoring." It's really helped improve practice.

The upper division PATH program also uses video reflection to generate feedback and reflection in a number of courses, including Advanced Curriculum and the Internship Seminar. As in the Jumpstart course, students are assigned a particular prompt, activity, or theme and video themselves or their environment to share with peers and their instructor for feedback.

Students in the PATH program described how, despite their initial reticence, using video to solicit feedback and support reflection has become an important part of improving their practice. A PATH alumna who now works in an ECE center in San Francisco reflected that her initial trepidation about using video gave way to an appreciation of what the new perspective showed her:

> I don't think anybody was jumping out of their seats like, "Yay, I can't wait to videotape me doing my job" … and then having to share it with other people…. As much as I felt like it was the first thing that I wanted to hate the most, it was one of the things I loved the most. Now I feel like I wish I had a video camera on me every day so that I could go back later and go, "I could do this different—better—later." I think I have much better relationships with the children because there were so many things that I wasn't seeing. It's so hard to focus your eyes on all these bodies standing around.

Students reported that the strong sense of community they feel with their cohort helped to make reflections a meaningful learning experience. For example, one student noted that her peers often provided valuable feedback:

> We have our core groups where people come and reflect, and sometimes they can give you feedback on what they would have done—not in a way to bring you down, but really just trying to bring each other up. They might say, "Oh, you could have been more intentional in this type of way," or "There was this child on the side that wasn't really paying attention," or whatever, and [they might suggest] how in the next situation you can better involve them.

Another student noted that watching her peers' videos gives her new ideas for her own "teacher resource toolbox":

> It's pretty amazing that we're able to see different learning styles and approaches and curriculums and create our own teaching approach that works for us and our temperament and the way that we're able to manage the classroom. It's kind of like a teacher resource toolbox. We're just able to pull out all these different resources, because [we] were exposed to such a vast variety.

While video reflections are a particularly powerful tool for offering students feedback on their practice, faculty and staff offer other opportunities for ongoing reflection, from assigning homework that asks students to undertake cycles of inquiry in ECE settings to incorporating class discussion questions that elicit students' critical reflections on their professional experiences. (For an example of the latter, see "Bringing Coursework to Life in the Jumpstart Classroom.") Embedding reflection throughout EDvance courses is a strategy for linking students' learning in courses and in ECE classrooms and focusing on real problems of practice they encounter in their work.

EDvance provides professional opportunities beyond early childhood classrooms

EDvance strives to offer opportunities that support students in developing as early childhood professionals who act as advocates for the children they serve, themselves, and their field. Faculty and staff actively seek out new and innovative ways to offer students and alumni opportunities to grow professionally and network with leaders in the ECE field at the local, state, and national levels, both during and after students' enrollment in the program.

> EDvance strives to offer opportunities that support students in developing as early childhood professionals who act as advocates for the children they serve, themselves, and their field.

These opportunities include participating in workshops and presenting at conferences. For example, students are encouraged to submit proposals to conferences hosted by ECE professional societies, including the National Association for the Education of Young Children and the National Black

Child Development Institute. Those who are accepted have the opportunity to attend the conference and share their knowledge with other educators. One student described such an opportunity and the impact it had on her:

> PATH has provided me and my colleagues with plenty of opportunities to grow professionally. [We] were able to attend the National Association for the Education of Young Children's Professional Learning Institute in Texas.… It gives us … another tool, another resource, another [experience] to highlight on our resume.

In March 2019, EDvance partnered with San Francisco's early childhood community to host a Leadership and Equity Summit, which faculty and staff now plan to hold annually. The summit brought together more than 350 ECE community members, including PATH students and alumni, practitioners, policymakers, and administrators, on the SFSU campus for an event focused on self-reflection and inquiry related to equity and leadership in ECE.

Students articulated that these opportunities, alongside the education they receive at SFSU, changed their perception of the work they do and its importance for their communities. One student shared her thoughts:

> It feels like a confidence boost as a person and as educators, because a lot of the time we're seen as babysitters. But through this program, the way that the courses are approached, it's done with professors who are able to understand you so that you're able to make these connections and then learn how to articulate yourself where you can be heard and seen as a professional, as opposed to a babysitter.

Alumni, including Angela Aquilizan, who now works as an EDvance Workforce Coordinator, reflected that the program shaped students' identities as professionals in the field:

> Being in the PATH program really changed my teaching practice in a lot of different ways.… It gave me a voice in my workplace as well. I used to be a quiet teacher who was just content in my own little bubble in my classroom. I started finding myself really advocating for those children with exceptional needs, and saying if my students are experiencing this, we need to make it equitable for all [of them].

EDvance provides opportunities to engage in professional development—for example, studying abroad—that supports students in cultivating their identities as professional and skilled educators, with implications both inside and outside of the classroom.

Supporting Culturally Appropriate Practice Through Opportunities to Study Abroad

Beyond the two pathways described in this case study, EDvance has also developed study abroad opportunities for students, one in South Africa and another in New Zealand, that provide a hands-on experience with ECE in another cultural context. The goal of the study abroad experience is to help students better understand the role of cultural values and systemic oppression in child development, enhance their practice, and deepen their problem-solving skills. Only a select group of students participate because space is limited and students self-fund the trip.

The study abroad opportunity in South Africa was initiated in summer 2013 as an 8-week immersive learning experience in Vrygrond, a township outside of Cape Town. Students travel to South Africa to work alongside local ECE providers in preschools and child care centers. Students work with local educators to develop and reflect on best practices, with a focus on promoting language and literacy. During the trip, students are exposed to South African living and teaching conditions and new perspectives on child rearing and teaching that they can apply to their own early childhood work. EDvance Director Lygia Stebbing explains:

> They're working in schools with no resources. You know a lot of the [classrooms] are in shipping containers. Many of [the students] come away realizing that we get so caught up in America [thinking that] teaching is about [needing resources] to be a good teacher. But really, [being] a good teacher is about … your ability to build trusting, caring relationships with children. You can actually be a good teacher in a sandbox … with nothing.

The New Zealand study abroad opportunity is a new, 2-week experience designed to expose students to an inclusive and engaging early learning curriculum rooted in respect and responsiveness to the culture of indigenous groups. For the first half of the trip, students participate in a lecture series organized by early childhood leaders in New Zealand and take excursions focused on history, indigenous culture, and culturally responsive education reform efforts. The second week, students engage directly in early learning settings serving indigenous children and families, gaining hands-on experience and insight. One PATH student reflected on how the experience shaped her growth both personally and professionally:

> I was fortunate enough to go to New Zealand this past winter, [in] January, to learn more about the learning stories. I would have never gone to New Zealand on my own, but to go to a country where they have such a big respect for education and the way they implement learning stories made me reflective of … how much work we need to be putting in here [in San Francisco] to hopefully build our field and be respected as who we are as teachers and professionals.

The study abroad programs are an example of how EDvance continues to expand its suite of strategies to engage students in developing as critical and reflective educators and early education advocates.

Promoting Student Success With a System of Supports

EDvance staff have built a system of supports to empower students to achieve their academic and professional goals, explained Director Stebbing:

> [EDvance students complete the PATH program] for themselves. They do it for their family. Yes, the workforce is saying that they need [a degree], but there's also this personal empowerment that if you believe in them and you give them the supports, they can do this. And so that's one of the big things that I've really been trying to do is change the narrative [that] they can't do it [or] they don't want to do it. They can and they do, but we need to respond as a system because it's our job to provide the services [to ensure they succeed].

These supports play a central role in EDvance's approach. Across both pathways, EDvance offers supports to create conditions for student success. The supports are comprehensive and include a cohort model that creates a community of peers, specialized academic advising and educational planning, and substantial financial supports and incentives.

A focus on relationships builds community

EDvance's approach emphasizes relationship-building to create a community of peers that supports students as they progress through the program. The program's cohort model is a key structure for building this sense of community. In both the lower division and upper division pathways, EDvance utilizes a cohort model in which students take classes together and are encouraged to support each other in their coursework.

> In both the lower division and upper division pathways, EDvance utilizes a cohort model in which students take classes together and are encouraged to support each other in their coursework.

In an interview with current lower division students, staff and instructors were praised for helping their cohort to become "a huge family." For example, Metro CAD students described an assignment, "My Story," in which students had the opportunity to write and share their personal story, often focused on their family and upbringing, with classmates. One student noted that the cohort "really opened up" through the exercise. During observations of recent Metro CAD course sessions, instructors were seen encouraging discussion and conversation among students throughout class. In one instance, the instructor intentionally asked students to work with a person whom they did not know well.

After spending 2 years in courses together, students carry the Metro CAD community with them into other courses, explained another student:

> Now I go into classes that aren't even Metro and I'll see someone who is in one of my Metro classes. I'll immediately go and sit by them, and we'll just be able to talk and we'll be able to study together because it's a community. You got really close with these people…. Even if you barely talked, you were still in two classes twice a week with these people.

Ashley Williams, Associate Director of EDvance, noted that "there's something unique about being a part of a program and knowing the people in the room, versus going to a workshop [where] there's a lot of people you don't know. We have found that [students] are more likely to go to Metro events led by other Metro peers." For example, staff reported that Metro students attend workshops hosted by SFSU's Project Connect, which provides opportunities for students from low-income and historically underrepresented communities to develop leadership skills by offering workshops for other students, among other activities.[152] Recent workshops have included resume building and support with scholarship applications.

This focus on peer relationships extends to the PATH program. EDvance staff intentionally cultivate opportunities for PATH students to build relationships with others in the program. Each year the upper division PATH program holds a mandatory weekend retreat for incoming students in the fall,

beginning the process of building community before classes even start. Set in a beautiful bayside community north of San Francisco, the retreat is designed to facilitate students' getting to know and lean on one another as they embark on a rigorous ECE preparation program. Students stay together in one large cabin and engage in trust- and community-building activities throughout the weekend. The retreat also begins a 2-year process of helping participants understand how to bring trauma-healing practices into early childhood work. Students share their own stories—often a deeply personal undertaking—and begin to connect how their own trauma and stress impact the children they teach. "You release the stress, you release those emotions, [and] you get clear so you can be ready for the kiddos so you can give your best," said a student.

Some students reported feeling uncertain about the retreat before attending. For example, one student shared, "I was complaining like, 'Why do we have to drive so far? We're going to spend the night with a lot of ladies that I don't know, they don't know me, and the snoring too.'" Yet PATH students uniformly reflected that the retreat fosters a sense of community and collaboration that is critical for their success in the program. One upper division student explained:

> I think it gives you a kick-start to [understand that] in order to do this program [you're] going to have to figure out how … we're going to support each other, and it's hard but people make it work. I think it kind of fosters that kind of community and collaboration at the [start].

Another student reflected that "one of the best attributes of this program was the cohort community and the effort that went into creating a healthy and functional space among one another. The [retreat] was key in helping create a deep connection between the students and staff."

Across both pathways, students consistently pointed to the tight-knit cohort and the broader EDvance community as important to their success. One upper division student explained that close relationships with each other have helped keep students motivated:

> We've gotten to know each other over the last 2 years. We're genuine friends. We are there for each other. We support each other.… There have been times when I am going through so much, I want to give up. And my cohort didn't allow me to give up. They kept pushing me.… It's really nice to have that type of support.

A Metro CAD and Jumpstart student offered a similar reflection:

> In Metro for the next 2 years, we're going to be in the same [classes] with the same people, so it's more of a community.… You're not going to be meeting new people every class. It's great [because] you get to really communicate with the same people.

Another PATH student explained how the cohort model led students to learn from one another:

> I think it's so important that we're working with [people from] different backgrounds and different experiences and different years [of experience] in the field, because I feel like no matter how long you've been in the field, you always have something to learn. Having a program [with people from] different backgrounds has helped me … build a more reflective practice.

The cohort model provides exposure to diverse perspectives, builds a safe environment to learn, and fosters close relationships.

Individualized advising helps students navigate the higher education system

EDvance provides students one-on-one advising and case management to help students navigate the complex university landscape and access supports they need to stay on track to graduate. Both the lower division and upper division programs employ counselors whose primary responsibility is to provide advising services, and other EDvance and SFSU staff support students on an informal basis.

In the lower division program, Metro CAD students receive academic advising from a dedicated program coordinator. Advising services are common across all the SFSU Metro academies, but according to Associate Director Williams, they are typically funded to spend only 20% of their time on the program. In contrast, EDvance employs a full-time coordinator to provide advising and instruction for Metro CAD students. The coordinator position is supported by external philanthropic funding.

Each Metro CAD student meets with the EDvance Workforce Coordinator Alicia Torres at least once each semester, and many students get to know her further in her capacity as a Metro CAD instructor. One Metro CAD student noted how available Torres was to her during her first year at SFSU: "She's really great. After class ends, she'll just stay there for a while, and she'll talk about anything with us."

The Metro CAD coordinator supports students in a variety of capacities—from guiding course selection and enrollment to facilitating access to tutoring, providing career services, and helping students reflect on their professional goals. For example, Torres reported that she advises students on how their current employment choices can influence their employment opportunities in the future. Many Metro CAD students work to support themselves, and often hold jobs in fields such as retail or food service that are unrelated to their coursework or professional aspirations. The coordinator helps them consider their employment choices and find placements in more relevant jobs, including through the Jumpstart early practicum program.

The coordinator also connects students to other, more specialized or intensive, supports. For example, EDvance works with UndocuALLY, a program that provides psychological, counseling, and referral services to undocumented students on campus. "We definitely want to make sure that our students that are undocumented know that they're welcome here. As soon as they articulate, 'I am a Dreamer' (an undocumented student), we connect them with the program," said Williams, who works with Torres to administer the lower division programs.

This close, individualized advising is facilitated by close relationships with students. Torres explained that "if [I know that] a student … struggled with something personal last semester, [I] might check in. A lot of it is just seeing them, knowing who they are, and knowing what to ask them when you see them." She has an open-door policy and encourages students to come to her office or other EDvance spaces if they need a quiet place to study or to talk about their challenges.

Academic advising is also a core support offered through the upper division PATH program. When the PATH program began, advising was an as-needed support service. Most of the "case management," or identification of student needs and referral for follow-up, was done in the classroom by instructors who had frequent contact with students. However, staff found that the needs of the students demanded a more hands-on approach, and advising services evolved into a system of required one-on-one meetings, during which advisors can identify issues and provide services or referrals to address them.

EDvance employs an academic advisor, Francesca Teixeira, to support upper division students. In recent years, PATH has also hosted a counseling intern—a graduate student in training—to help support its students. To ensure that advising services are available to PATH students, all of whom work while attending school, advisors are available until 7:00 or 7:30 each evening and on some weekends.

> To ensure that advising services are available to PATH students, all of whom work while attending school, advisors are available until 7:00 or 7:30 each evening and on some weekends.

As in the lower division, these meetings provide space for staff and EDvance students to build trusting relationships and ensure students are well supported during their program. Teixeira described her work in the advising program as "focused on empowerment and [supporting] the student holistically." Sarah Fowler, an academic counseling intern at PATH, has observed this holistic approach in action:

> Technically we are academic advisors, but I feel like Francesca Teixeira does a really beautiful job of modeling how we can support the whole student—not just in their academics, but what's going on at work that's impacting their ability to be at school. Or what's going on with their family, or the other challenges that are happening. Having an open-door policy—you can really see how that changes how students relate to you, and also are able to be successful in the program.

In addition to advising students on their academic paths, counselors connect students to employment opportunities and help them manage existing professional relationships to facilitate their success in school. They also refer students to external resources, including counseling and psychological services, campus services for undocumented students, and other support services.

EDvance also makes advising support available to prospective PATH students. EDvance staff, including Teixeira, have partnerships with community organizations to recruit and support transfer students. She said:

> We want to … help them even before they transfer. We have a very good partnership with our community partners as well as our Jumpstart workforce team members [who connect] us with the teachers out in the community that are interested in transferring to San Francisco State.
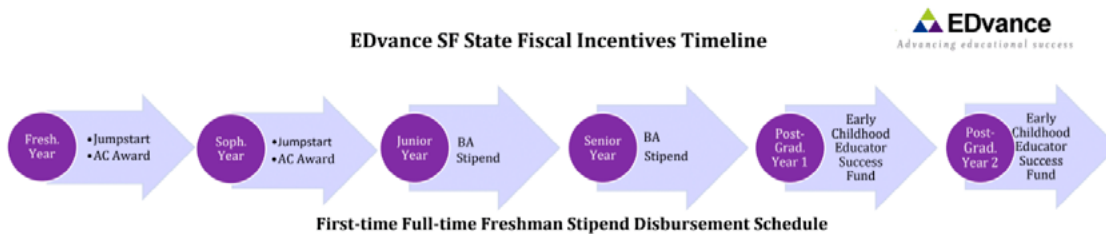
EDvance staff evaluate prospective students' transcripts and discuss their personal and professional situations to help determine if they are ready for transfer. If a student is not yet eligible, counselors help identify the courses they need to take to prepare and eventually navigate the application process, which can pose technological and language barriers for some students. Teixeira noted, "There have been students that [I have] worked with for a few years that just now have transferred in the last year or two." PATH staff form strong relationships with students and provide ongoing guidance as they progress through their program of study.

Financial supports make degree attainment debt-free for most students

The cost of college creates barriers to enrollment among many students, including early educators, who typically are paid low salaries. EDvance has woven together a system of financial supports that make degree attainment a debt-free undertaking for many of its students (see Figure 12). Financial supports available for EDvance students include book loans, scholarships, and stipends. Students in the EDvance program can receive stipends and other financial supports throughout their degree, as well as after graduation. This comprehensive system of financial supports is facilitated by both public and private funding.

Figure 12
EDvance Connects Students to Comprehensive Financial Aid

EDvance SF State Fiscal Incentives Timeline

First-time Full-time Freshman Stipend Disbursement Schedule

Time Period	Stipend	Maximum Amount
Freshman Year – Semester 1	Jumpstart Early Experience	$2,000
Freshman Year – Semester 2	Jumpstart Early Experience	$2,000
	AC Award	$1,612
Sophomore Year – Semester 1	Jumpstart Early Experience	$2,000
Sophomore Year – Semester 2	Jumpstart Early Experience	$2,000
	AC Award	$1,612
Junior Year – Semester 1	BA Stipend	$3,700
Junior Year – Semester 2	BA Stipend	$3,700
Senior Year – Semester 1	BA Stipend	$3,700
Senior Year – Semester 2	BA Stipend	$3,700
Post-Graduation – Year 1	Early Childhood Educator Success Fund	$7,400
Post-Graduation – Year 2	Early Childhood Educator Success Fund	$7,400
TOTAL = 6 Years @ Title V Center		**TOTAL = 40,824**

Note: The fiscal incentives timeline for transfer students includes eligibility for SF SEED stipends during 2 years of community college enrollment.

Source: EDvance.

Beginning in their first year of college, Metro CAD students who participate in Jumpstart are eligible to receive federal work-study wages. Students who are not eligible for federal work-study (e.g., undocumented students) can receive support from the San Francisco Office of Early Care and Education. Likewise, Metro CAD students may be eligible for the AmeriCorps Award, a fiscal incentive for students who are members of AmeriCorps service programs, including Jumpstart. The use of these award funds is restricted to educational expenses, such as tuition.[153] Jumpstart students

are able to cover 77% of their $7,300 annual tuition during their first and second years using the funds.[154] Metro students also have access to the typical suite of financial aid options provided by SFSU to cover living expenses and other costs of attendance.

The PATH program provides extensive financial supports and incentives to participating students throughout their junior and senior years. EDvance received San Francisco city and California state funding totaling $565,000 in 2019 to provide financial incentives to students and address financial burdens, large and small, related to college enrollment.[155] Fiscal Incentives Coordinator Jocelyn Chan said the program's goal is "scaffolding these [stipends] while [students are] in school to get them through their educational journey as debt-free as possible."

The SF SEED Stipend Program is a citywide program for community college or 4-year college students who are working 15 hours or more per week in a San Francisco-based early learning program. In order to qualify, students must have an individual net income of less than $60,000; be enrolled in a minimum of three credit-bearing units at an accredited 2- or 4-year institution; and have an early childhood–related major. Students who qualify are eligible to receive up to $1,200 per semester for 12 or more units of coursework at a 4-year institution.[156]

The Title 5 B.A. Stipend, which draws on funds available through the statewide, county-administered AB 212 program, is similar to SF SEED but requires that qualifying students work full time at state-contracted Title 5 programs and take at least 12 units per semester (a full course load) at a 4-year institution. If students meet these more stringent requirements, they are eligible for a larger stipend—up to $3,700 per semester. Students also must be majoring in CAD as an upper division student and be enrolled in courses that follow an approved education plan, which EDvance's PATH program does.

Students who are eligible for the Title 5 B.A. Stipend are able to cover tuition for a full-time course load without additional financial assistance. The Title 5 B.A. Stipend was designed in consultation with EDvance staff to meet San Francisco's need for qualified educators in state-contracted centers. This stipend is larger than the SF SEED Stipend and covers tuition for a full-time course load to incentivize educators to work in state-contracted centers, which serve low-income communities. EDvance's Director, Lygia Stebbing, explained:

> The reason [SFSU] wants to incentivize Title 5 centers is because Title 5 centers serve a vulnerable population of students. And there's also a high demand for early childhood educators to support these populations. So, we do want to keep our students in the field and provide the supports for them to meet their milestones.

As an incentive to continue teaching in the city of San Francisco after graduation, PATH alumni are eligible for financial incentives provided by the Early Childhood Educator Success Fund. Funded by the Peter and Mimi Haas Fund, the fund provides up to $7,400 per year to graduates who make a 2-year commitment to work in Title 5 centers in San Francisco after graduation. The fund operates as a retention bonus, according to Chan, and "keeps EDvance graduates in the field [teaching] vulnerable populations of students." In addition to their commitment to stay in the field, recipients must provide 10 to 15 hours of service to the ECE community annually. Graduates often support EDvance events.

These financial incentives are critical given the low pay that many early educators receive, and as Chan explained, "Living in the Bay Area, we know, is expensive. People are getting pushed farther and farther out," and EDvance's goal is to ensure that graduates "stay and work in their community." Many students said it was important to know that their tuition would either be supplemented or completely covered by these stipends, especially in a city like San Francisco, where the cost of living is quite high. One student stated:

> It helps knowing that we are professionals, and even though we're not paid adequately compared to elementary [teachers] or [those with] other educational backgrounds, there are [stipends like] SF SEED. I work with [families that are] struggling to buy clothes for interviews, and here I am also struggling to buy clothes for myself for interviews. But then we have incentives like SF SEED … that help us each semester pay off loans, pay off tuition. I live … and work in San Francisco, so that's also helped me keep afloat, because rent is crazy, and having those stipends helps me continue to go to work and provide and be intentional with my kids.

These financial supports are crucial to helping make attaining a bachelor's degree more affordable for current and aspiring early educators.

Next Steps for EDvance

EDvance continues to innovate to strengthen the pipeline of qualified early educators for the city of San Francisco. Throughout the case study, we have described several of EDvance's ongoing efforts to strengthen its preparation approach, such as ensuring that pathway courses help students develop key educator competencies and that advising is sufficiently intensive to effectively support students on their path to graduation. EDvance is also working to extend the early educator preparation pipeline beyond the current pathways. Finally, scaling or replicating EDvance's approach demands thoughtful consideration about developing a similar combination of funding sources and maintaining this support at an adequate and sustainable level.

Extending the early educator preparation pipeline from high school to advanced degrees

Building on its work to develop pathways to and beyond an undergraduate degree, EDvance is extending supports for early educator preparation and development, on the one hand, by working with high schoolers, and extending supports for advanced degree attainment, on the other.

During the summer of 2018, EDvance assumed leadership of a pilot program aligned with its commitment to building a robust pipeline of early educators. The pilot is a partnership between EDvance and SF YouthWorks, a unique youth internship program for 11th- and 12th-grade high school students, that provides paid work experience for students.[157] The collaboration launched a new SF High School Summer Internship in early education.

Supported by funds from the W.K. Kellogg Foundation, the pilot program provides an opportunity for high school students to get hands-on work experience in early childhood classrooms and earn money at the same time. Long-standing support from San Francisco's Office of Early Care and Education made the partnership with SF YouthWorks, which usually only hosts internships in San Francisco city government offices, possible. In its first year, the internship program placed 15 high school students in preschool programs around the

city, including Felton Institute's Martin Luther King Jr. Center, Felton Institute's Family Development Center, St. Luke Center at Kai-Ming Head Start, and Compass Children's Center. EDvance Director Stebbing expressed hope that the program could help recruit students who know they want to be early educators to SFSU and the EDvance program.

EDvance has also begun efforts to support interested program graduates in pursuing graduate degrees. Counselors and other staff already provide support for students to apply for a master's in education or special education through the SFSU Departments of Early Education and Special Education, respectively, if they desire. More recently, EDvance has begun work with the Department of Elementary Education at SFSU to update the curriculum for an M.A. in early childhood leadership and began piloting coursework in the fall of 2018.

Institutionalizing funding for a highly supportive early educator preparation program

EDvance's students benefit from the program's consistent support from funding that supplements what is typically available through the university, including state, city, and philanthropic funding for early educator preparation and support.

These resources have enabled EDvance to develop a flexible and responsive system of supports that layers on to the foundation provided by the CAD Department and SFSU. For example, EDvance is able to fund special sections of courses in the upper division pathway in order to offer them at times when working educators are available to attend. September Jarrett, the former Executive Director of the San Francisco Office of Early Care and Education, described the role of this external funding in enabling EDvance's early educator preparation approach:

> Funding is critical in that either the public funding—the public contract funding from different departments—or the private funding fills critical gaps that the public colleges, or San Francisco State, do not offer students. Whether it's a stipend, or specialized counseling, the cohort [model], the tutoring—those are things that are absolutely essential ingredients to the success and the caliber of the students that are generated from [EDvance] that don't exist in the college generally.

Program leaders have developed strong relationships with a number of partners in and around San Francisco to cultivate and sustain these sources of funding.

At the same time, to expand or replicate EDvance's approach would require new efforts to marshal public or private resources sufficient to implement the highly supportive model. In the early educator preparation area, in which resources are often scarce, funding EDvance's intensive model on a large scale is challenging. Program leaders have ongoing conversations with colleagues at the university to discuss how elements of the program might be folded into SFSU's general operations, and they continue to pursue other opportunities to scale up their efforts.

> To expand or replicate EDvance's approach would require new efforts to marshal public or private resources sufficient to implement the highly supportive model.

Conclusion and Key Takeaways

EDvance has developed an innovative and highly supportive approach to building a pipeline of qualified early educators in San Francisco. EDvance's two-tiered bachelor's degree pathway supports current educators in attaining a degree and offers potential educators the educational and practical experiences they need to choose and prepare for careers in ECE. The approach is distinguished by a number of features, including the following:

- EDvance has developed a **clear pathway** to a bachelor's degree, with two potential entry points serving educators at different stages of their careers. The pathways leverage the university's interdisciplinary curriculum to ensure coursework reflects the **specialized knowledge** early educators need, including learning about concepts such as child development, curriculum and assessment, and social justice.

- **Collaborative structures** such as faculty learning communities and working groups have helped to create cohesive and targeted courses of study tailored to the needs of ECE students.

- Instructors apply **teaching strategies that link coursework to practice** and draw on the personal experiences of current and future educators to deepen learning, including ongoing reflection.

- All EDvance students are supported in **gaining hands-on experience** in early childhood classrooms. For lower division students, Jumpstart offers a supervised practicum experience, in which students **work closely alongside a mentor teacher** in subsidized care settings throughout San Francisco to build and apply their knowledge and skills. Upper division PATH students are employed at least 25 hours per week in an early childhood setting and use video reflections to receive **individualized feedback from faculty and peer mentors**.

- EDvance prioritizes **relationship-building** to support student success, by utilizing **cohorts** of students who complete the program together.

- EDvance provides intensive **financial supports** that substantially reduce or eliminate the financial burden of degree attainment for students, in part through philanthropic funds. EDvance also provides extensive **academic supports**, such as specialized advising and individual tutoring, and offers hybrid courses (a combination of online and in-person) to meet the scheduling needs of full-time educators.

- Staff maintain **strong partnerships with early care and education providers** in San Francisco and prioritize relationships with centers that serve high-need neighborhoods. These relationships help EDvance identify educators for the upper division PATH program and ensure that the curriculum reflects the skills and knowledge educators need when they enter the classroom. These partnerships also yield opportunities to place lower division students in early learning settings throughout the city. EDvance also opens its events to community partners and maps much of its work to the city's quality improvement efforts.

EDvance provides the proof of concept that 4-year institutions can provide pathways to a bachelor's degree that support both the existing workforce and aspiring educators in preparing to teach in ECE settings. By offering intensive support services and a clear pathway, since 2013 EDvance has graduated more than 90% of its PATH students in just 2 years.[158] Although EDvance is a boutique program supported by extensive philanthropic funds, its approach to promoting higher education for early educators offers a model for state policymakers and other institutions of higher education to consider with a combination of innovative funding and pedagogical strategies to build a pipeline of qualified early educators who reflect California's racial, ethnic, cultural, and linguistic diversity.

CHAPTER 4: Common Features of Promising Preparation Models

The three case studies in this report highlight distinct approaches to early educator preparation:

- The Family Child Care Apprenticeship supports licensed, home-based family child care providers in earning California Child Development Permits through no-cost college coursework, on-site coaching, and wage supplements.

- Skyline College's Education/Child Development Program takes a relationship-based approach to supporting students at various stages of their ECE careers in earning an associate degree. Its on-site lab school provides well-mentored, hands-on teaching practice for students.

- EDvance offers two carefully designed pathways tailored to the needs of aspiring and current early educators, especially those working in subsidized San Francisco ECE centers. Both pathways combine thoughtfully sequenced courses with opportunities for hands-on practice and mentorship and a comprehensive, well-articulated set of academic and financial supports.

The models target different segments of the current or future early childhood workforce and employ a range of mechanisms to support participants in achieving professional preparation and certification milestones. This diversity suggests that there is no one approach to early educator preparation that will meet the needs of all students. Instead, a combination of approaches may be needed to effectively develop a skilled and diverse ECE workforce, including models designed to help current educators build on their ECE expertise to continue their learning and others to prepare new educators to enter the field.

Yet the models do share common features in their efforts to prepare a racially, ethnically, culturally, and linguistically diverse pool of educators to deliver rich learning experiences to young children. Specifically, the programs:

- seek to build diverse and qualified pipelines of early educators locally by creating pathways aligned to national and state ECE standards and by intentionally recruiting racially, ethnically, culturally, and linguistically diverse community members;

- encourage the formation of strong relationships among students, faculty, and staff to promote student persistence and success in meeting educational goals;

- provide multifaceted supports to meet the diverse academic and financial needs of students;

- expand opportunities for clinical practice in supportive and feedback-rich environments;

- build a well-supported and diverse staff of instructors, academic advisors, coaches, and other support providers; and

- leverage community partnerships and funding sources to strengthen their programs.

The three programs take an intentional approach, developed over time, to ensure that each of these components is woven together as part of a coherent system. The following sections explore these cross-cutting themes in greater detail. These shared components provide lessons about how programs in California and other states might go about strengthening early educator preparation and cultivating a high-quality and diverse workforce.

Local Early Educator Pipelines and Pathways

Increasingly, "grow your own" educator preparation programs—partnerships between preparation programs and school districts to recruit and prepare local community members to enter the teaching profession—are regarded as a promising approach to building a diverse and well-prepared k–12 educator workforce.[159] The programs highlighted in this report share some affinities with these emerging grow-your-own approaches: They focus specifically on developing local pipelines of qualified educators who reflect the racial, ethnic, cultural, and linguistic diversity of their communities and the ECE field. EDvance and the Family Child Care Apprenticeship name this goal explicitly. Available data from the three programs indicate each has achieved a measure of success in recruiting and graduating a racially, ethnically, and linguistically diverse pool of educators.

> The programs highlighted in this report share some affinities with emerging grow-your-own approaches: They focus specifically on developing local pipelines of qualified educators who reflect the racial, ethnic, cultural, and linguistic diversity of their communities and the ECE field.

To accomplish this aim, the programs have **adopted highly localized recruitment strategies**. The Family Child Care Apprenticeship leverages partnerships with child care resource and referral networks, which maintain relationships with local child care providers, to identify providers for the program. EDvance cultivates relationships with subsidized ECE providers throughout San Francisco to spread awareness of the program and identify potential participants. Staff have centered their efforts on the Mission and Bayview–Hunters Point, areas with large Latino/a and African American communities. Further, all three programs are developing high school pathways to extend opportunities to a new set of potential educators. Skyline is cultivating relationships with local high schools, where faculty teach classes for dual enrollment.

To ensure students are qualified to teach in local ECE programs, the programs have developed **clear pathways aligned with recognized credentials and degrees**. The Family Child Care Apprenticeship offers coursework to earn California Child Development Permits in a three-tiered pathway. EDvance and Skyline College both have thoughtfully designed course sequences that introduce students to important educator knowledge and skills while efficiently meeting graduation requirements. These pathways allow students to transfer efficiently from community college to state universities. Students who follow the EDvance and Skyline pathways are also eligible to earn California Child Development Permits and work in ECE settings while completing their degrees. These clearly articulated pathways, organized around recognized professional milestones, are designed to guide educators efficiently to graduation or permit attainment and avoid enrolling in duplicative or remedial coursework along the way.

Relationship-Building Among Students, Instructors, and Staff

Previous research has identified the creation of collaborative, social, and productive learning environments as a key element of high-quality educator preparation and development.[160] Student cohorts, in particular, have been found to be an effective structure for encouraging the formation of close relationships that promote student persistence and success in higher education, especially among students considered nontraditional college enrollees.[161] For example, a study of current early educators participating in six bachelor's degree completion cohorts in California found that cohort members served as valuable personal and professional resources.[162]

Consistent with this research, each of the programs **prioritizes relationship-building** among program staff, faculty, and students to create safe, inclusive, and supportive learning communities. Students in each of the programs report that they are known and supported, which contribute to feelings of belonging and empowerment. They attributed their satisfaction and success with their preparation in part to this strong culture of relationships.

To help foster relationships, all three programs **create cohorts of learners** who take coursework and advance through their preparation together. In the Family Child Care Apprenticeship and EDvance, all students are grouped into cohorts. Skyline College recently launched a small, cohort-based learning community for students pursuing ECE teaching. Students and staff from all three programs report that cohorts are a source of academic and emotional support and generate professional relationships and friendships.

The programs also encourage the use of **interactive and collaborative pedagogical approaches** in courses. Skyline College has small class sizes, and instructors often use student group work as a strategy in classes to build rapport and deepen student learning. Likewise, EDvance has intentionally embedded activities, such as having students reflect on videos of their teaching, that promote collaboration and discussion among students and, in some cases, program alumni who serve as peer mentors. Faculty and staff in all three programs confer frequently about students' needs and share strategies their peers can use to scaffold coursework and practical experiences. EDvance and Skyline offer additional opportunities for students to work collaboratively through special events or workshops. Students starting EDvance's upper division pathway attend a multiday retreat focused on understanding and healing trauma that spurs relationship-building before the cohort ever begins classes.

Opportunities for Clinical Practice in Feedback-Rich Environments

Research suggests that coaching and mentoring can be effective in changing educators' practice, connecting theory to practice, and enhancing the learning of children in their care.[163] Further, there is evidence that cycles of feedback and reflection—often a central strategy in mentoring—can help teachers thoughtfully make changes to their practice, to the benefit of the children they serve.[164] All of the models emphasize **opportunities to engage in clinical practice with support from instructors, mentors, and peers**. Engaging with supervisors, mentors, faculty, and peers in these contexts helps to create feedback-rich learning environments and opportunities for reflection as students apply their new knowledge and skills in ECE settings.

Though all of the programs have created structures to support clinical practice beginning early in educators' preparation, each has taken a different approach. Skyline's on-site lab school offers students an opportunity to gain early experience in the classroom through course observations, internships, and paid employment. Lab school interns are supported by well-scaffolded mentorship

and a small stipend. Family Child Care Apprentices continue to run their businesses while enrolled in higher education coursework, and they receive mentorship and on-site coaching to enhance their practice, particularly the nature of their interactions with children in their care, while in the program.

EDvance offers Jumpstart, a mentored and paid early practicum experience for first- and second-year college students. Jumpstart students are placed in state-subsidized early childhood classrooms with mentor teachers throughout San Francisco while concurrently taking an accompanying course focused on developing essential educator knowledge and skills. EDvance has also made a concerted effort to bring a focus on reflective practice into the university classroom by incorporating students' reflection on video clips of their own teaching into both the Jumpstart and upper division curriculum. The video reflections are designed to support students in explicitly linking the concepts and theories learned in their coursework to their day-to-day work with young children in ECE settings.

Finally, in these models, coursework and clinical experiences incorporate **knowledge of tools and frameworks that are used in day-to-day practice** in California, preparing students to work in subsidized ECE settings upon completion of the program. In the Family Child Care Apprenticeship, coaches organize their observations around the Classroom Assessment Scoring System, an assessment of teacher-child interactions that is embedded in California's quality rating and improvement system. EDvance upper division students learn about the Desired Results Developmental Profile, a child assessment required in state-subsidized ECE programs in California, as part of their assessment course and create a portfolio aligned with professional competencies during their senior year. Skyline provides students with early experience in conducting child assessments, with a particular focus on state-required assessments; the tools are revisited repeatedly throughout the curriculum. These experiences are intended to give students a foundation on which they can continue to build as they work, learn, and develop professionally in ECE settings.

Multifaceted Student Supports

Research has documented that students from low-income households, students of color, and other students historically underrepresented in higher education disproportionately face academic and financial obstacles to college access and degree completion.[165] Yet research also demonstrates that offering tailored supports to address student needs can mitigate these barriers. For example, studies have shown that individualized advising and case management is an effective approach to increasing college persistence and completion rates among students who identify as low income, first generation, or as part of other groups historically underrepresented in higher education.[166]

Each of the early educator preparation programs highlighted in the report has taken intentional steps to address these barriers and support diverse cohorts of students. One of the steps the programs have taken is to build in supports to help students navigate and succeed in college coursework while earning a credential or degree. All three of the programs provide **individualized advising and/or counseling** to help students select courses, connect to university and community resources, and triage other challenges that create obstacles to their learning. These advisors provide a consistent and trusted point of contact that allows students to more successfully navigate higher education systems and procedures and fulfill educational and professional requirements.

The programs have **hired staff to work individually with students**. Skyline has a specialized ECE advisor; the Family Child Care Apprenticeship offers on-site coaches and site coordinators; and EDvance provides a cadre of coaches, counselors, and workforce coordinators. The Family Child

Care Apprenticeship intentionally hires bilingual site coordinators and coaches to ensure that apprentices, many of whom are native Spanish speakers, are well supported by their advisors. As is described later in this section, many of the coaches and instructors employed by the programs are, or have recently been, early educators, and the programs have prioritized hiring staff who reflect the racial, ethnic, cultural, and linguistic diversity of the field. These elements of shared background and experience provide a useful foundation for productive mentoring and advising relationships.

Each program offers **courses on evenings or weekends**, when current educators or working students are often more readily able to attend. The Family Child Care Apprenticeship also offers courses at community sites, which are typically more familiar to apprentices than college campuses. Skyline and EDvance both offer hybrid courses that combine online and in-person learning, strategically engaging technology to make programs accessible without eliminating interpersonal relationships.

The programs also are designed to be supportive academically and to address the challenges students traditionally experience in general education coursework in subjects such as mathematics and English. These academic supports are tailored to meet the unique needs of students in these programs. EDvance offers **dedicated tutoring** to all its students and provides course-embedded writing tutoring in upper division classes. In the upper division pathway, general education courses are selected for their relevance to ECE, providing students a point of entry to the content. Skyline instructors strive to make ECE courses "student ready" by **building appropriate scaffolding** and using formative assessment to adapt assignments in ways that support student learning. Skyline also offers a Math for Elementary Teachers course that is tailored to aspiring educators and covers math content as well as pedagogy for teaching math to children.

Finally, the programs provide **financial supports to reduce or eliminate costs to students**, typically by offering no- or low-cost coursework and paid experiences in ECE classrooms. The Family Child Care Apprenticeship uses workforce development grants to fully fund each apprentice's education, including tuition, required fees, books, a laptop, and a monthly wage enhancement. EDvance students who work in subsidized early childhood settings are eligible to receive incentives and locally administered state funding for early educators, federal work-study dollars, and philanthropic support. These subsidies cover the bulk of student tuition each semester, and the program is designed for students to remain employed and earn their usual salary while attending school. Skyline provides stipends for lab school students through funds for career technical education. Students and staff indicate that these financial supports are crucial for ensuring access to preparation programs, especially among current educators, for whom low wages typically make college tuition unaffordable.

Well-Supported and Diverse Staff

Many early educator preparation programs in California disproportionately rely on part-time and adjunct faculty,[167] and the programs highlighted in this report are no exception. All depend on adjunct and part-time faculty to an extent. The Family Child Care Apprenticeship program has also occasionally encountered challenges securing appropriate faculty members to teach courses, especially off-site courses or courses that take place on evenings and weekends. These common challenges suggest a need for additional exploration of strategies to support the development of a stable, full-time faculty for educator preparation.

Working within these constraints, the programs highlighted in the report have sought to develop a well-supported and diverse staff. To start, they have **intentionally recruited and hired staff who possess expertise in ECE practice**. Many of EDvance's part-time faculty are current ECE practitioners in San Francisco who have deep relationships with the community and are well positioned to teach students about the latest tools of the profession, including state standards and child assessments. The staff and coaches for the Family Child Care Apprenticeship were recruited from within partner organizations and have extensive backgrounds providing professional development for early educators and, more specifically, for home-based child care providers.

> The programs highlighted in the report have sought to develop a well-supported and diverse staff. To start, they have intentionally recruited and hired staff who possess expertise in ECE practice.

The programs are also attentive to **recruiting and hiring staff who reflect the racial, ethnic, cultural, and linguistic diversity of the field**. EDvance's commitment to building a local pipeline of diverse ECE professionals begins with recruiting students for its programs and extends to the hiring of its staff, many of whom are women of color with experience in the ECE field and several of whom are program alumni. The Family Child Care Apprenticeship has hired bilingual coaches and staff to support its many bilingual apprentices. Skyline College, as a whole, is making efforts to hire faculty of color by diversifying its recruitment strategies.

The programs also support **professional learning and collaboration among instructors and coaches**, creating structures for support and growth among staff. Lower division EDvance faculty participate in faculty learning communities centered on issues of social justice and equity in pathway courses. The Family Child Care Apprenticeship has developed an onboarding process for instructors that teach in preparation programs, especially instructors without early childhood expertise that teach in programs designed for current educators.

Community Partnerships and Funding to Strengthen Preparation

All of the preparation programs have developed partnerships and leveraged available resources to offer an uncommon level of support for their students despite the general scarcity of resources in the ECE field.

The preparation models are **deeply and authentically collaborative approaches** that rest on cooperation between a variety of stakeholders: institutions of higher education, community organizations, ECE providers, resource and referral agencies, philanthropic organizations, and local ECE agencies. These **partnerships provide resources—financial and otherwise—that allow these programs to succeed**. EDvance's deep relationships with ECE stakeholders in the city of San Francisco facilitate high-quality placements for practicum students and expand its capacity to recruit students and place graduates. Collaboration between institutions of higher education and resource and referral agencies enables Family Child Care Apprenticeship courses to be held off campus. Skyline's communication with local ECE groups helped inform changes to the program's curriculum and make the case for investments in its high-quality lab school.

Further, each of the programs **leverages funding from multiple sources** to build a system of supports (see Appendix F). Programs need funding to hire advisors and case managers who offer intensive and individualized advising, compensate mentors and coaches who provide one-on-one guidance and support in ECE classrooms, open special class sections that accommodate working students' schedules, subsidize students' tuition, and pay students for time spent working while in school. Students and staff from each of the programs reflected that the availability of these comprehensive supports is essential for students' academic success, growth as ECE practitioners, and feelings of belonging and support.

The funding streams tapped by each program differ somewhat, reflecting a range of public and private sources. The Family Child Care Apprenticeship has thus far been supported entirely by state workforce development grants. Skyline College's Education/Child Development Program largely runs like other community college departments. It is supported by student tuition dollars, state funding for higher education and career technical education, and benefits from high property tax revenues in San Mateo County. Special grants from the state or philanthropic partners have catalyzed a handful of innovative programs, such as its high-quality lab school and specialized ECE advising, and several successful initiatives have been institutionalized using college general funds. EDvance leverages county quality improvement dollars and philanthropic funds to provide students with opportunities and supports, from advising and special class sections to financial incentives and mentoring, above and beyond what is supported by student tuition and usual university funding.

However, the funding that these programs rely on is not always consistent or sustainable. The state workforce development grants that provided much of the support for the development and implementation of the Family Child Care Apprenticeship program sunsetted in the summer of 2019. Organizers are actively seeking additional funding sources to continue the program.

Conclusion

The innovative programs described in these case studies, while representing three very different models of early educator preparation, have six key features in common that likely contribute to their success. These include (1) a focus on building a pipeline of diverse, qualified early educators in their local communities; (2) encouraging the formation of strong relationships among students and staff; (3) providing key academic and financial supports to meet diverse students' needs; (4) linking theory to practice in feedback-rich environments; (5) supporting faculty and staff; and (6) leveraging community partnerships and funds to strengthen their programs. These features are furthermore woven together intentionally to ensure that the program is coherent. The next chapter examines how one state, New Jersey, put policies into place to help foster the development of many of these features statewide, rapidly expanding its pool of qualified early educators. It is followed by a chapter discussing implications for future ECE policy development to support a diverse, high-quality workforce.

CHAPTER 5: New Jersey: Preparing an ECE Workforce at Scale

Hanna Melnick and Madelyn Gardner

The case studies in this report have highlighted ways that preparation programs in California are supporting the development of a diverse, well-prepared workforce at the local level. But how can policymakers and educators apply these lessons at scale? New Jersey's experience implementing the *Abbott v. Burke* court rulings in the early 2000s provides an example of how one state rapidly grew its supply of credentialed early educators. After increasing qualification requirements for preschool teachers of 3- and 4-year-olds in the state's poorest districts, the state made significant new investments in higher education and ongoing professional learning to support current early educators in meeting the new mandate and to build a robust pipeline of future educators. The state's policies fostered a significant and rapid shift in the preparation and supply of credentialed educators. Many of these teachers were members of the existing ECE workforce, although, as will be discussed, data are lacking in regard to the reform's impact on the racial, ethnic, cultural, and linguistic diversity of preschool teachers.

New Jersey's story is particularly compelling given that longitudinal studies of the state's preschool program have revealed significant long-term benefits for participating children, including lower rates of special education placement and improvements in math, literacy, and science scores that persisted at least through 5th grade.[168] Here, we describe this story and consider lessons for other states. This case complements the case studies of the Family Child Care Apprenticeships, Skyline College, and EDvance in that it shows how some of the programs' shared components can be developed and supported through state policy. However, this case is notably different in that the unit of study is a state, rather than a program, and thus focuses more on structures and funding mechanisms needed for sustaining high-quality preparation than on the relationships, processes, and curriculum that are core to individual participants' experiences.

Overview and Context

New Jersey's preschool teacher requirements in the late 1990s resembled those of many states today. Educators working in various settings were required to meet different preparation requirements. Public schools required teachers to hold a B.A. and P-8 teaching credential, which did not include specialized early childhood content. In private settings, many teachers held an associate degree, a Child Development Associate (CDA) credential, or less.[169] Studies of preschool program quality in New Jersey prior to full implementation of the Abbott program showed that most child care settings were underfunded and of low quality.[170]

In the 1990s and early 2000s, New Jersey enacted a wave of education reforms to meet new mandates laid out in a series of state Supreme Court decisions in *Abbott v. Burke*, which found the state's school funding law unconstitutional in its treatment of high-poverty, urban school districts. In 1998, the court required the state to provide universal access to high-quality preschool for 3- and 4-year-olds in the state's 31 poorest school districts, which serve roughly 20% of enrolled students in the state.[171] The court mandated that the preschool program—which became known as the Abbott Preschool Program—be established immediately and be made universally available by the 1999–2000 school year.[172] Districts were further allowed to offer preschool classes through Head Start and private child care providers in addition to public schools.

In a 2000 decision, the court subsequently clarified its intent that the Abbott Preschool Program, regardless of setting, meet the same high quality standards to ensure that investments would lead to long-term benefits. Chief among these requirements was that all lead teachers in each classroom would be required to hold a bachelor's degree with a preschool to 3rd grade (P-3) certification. Requirements also included a maximum class size of 15 with a teacher and assistant teacher; utilization of a state-sanctioned, developmentally appropriate curriculum linked to core state content standards; adequate facilities; and services for transportation, health, special education, and bilingual education as needed.[173] Programs that did not meet Abbott standards could continue to serve children but would not receive state funding.

> Chief among Abbott's requirements was that lead teachers in each classroom would be required to hold a bachelor's degree with a preschool to 3rd grade (P-3) certification.

Most districts relied on Head Start and private child care programs to quickly scale the new program and provide universal preschool access. By 2003–04, one third (32%) of Abbott preschool teachers worked in public school settings, 58% in private preschool centers, and 10% in Head Start programs.[174] The workforce in private child care and Head Start, in comparison to public school systems, had a wealth of early childhood expertise, reported Ellen Frede, who served as Assistant to the New Jersey Commissioner of Education in the Office of Early Childhood Education at the New Jersey Department of Education from 2002 to 2005:

> The expertise was clearly in the child care community. That's not to say that we were unaware of the low quality of [many classrooms], but that was a resources issue…. [Teachers in private settings and Head Start] might not have had the degrees, although a lot of them did. [But] they certainly had more expertise in pre-k education than the majority of school district officials.

Private child care and Head Start providers also already had appropriate facilities for preschool classes.

The educational attainment of the preschool workforce, especially in private and Head Start settings, shifted dramatically with the new degree and credential requirements. To serve approximately 43,000 3- and 4-year-olds in Abbott districts, an estimated 2,900 teachers needed to be certified.[175] In 1999–2000, just before the Abbott Preschool Program began, approximately 38% of teachers met the Abbott decision's requirement of a B.A. with ECE specialization.[176] By 2002–03, there were approximately 2,500 students enrolled in higher education programs aimed at earning a P-3 credential.[177] Half (49%) of all teachers were fully qualified and 82% were on track to complete their degree in 2 years.[178] In 2004, the court provided a waiver to give educators an additional 2 years to earn their credentials if they were 30 or fewer credits away from meeting the mandate.[179] By 2005–06, almost all teachers (97%) were certified (see Figure 13).[180] Although the state's mandate was not met in the initial timeline of 4 years, this was still an impressive feat.

Figure 13
The Portion of Certified Teachers Increased Rapidly Under *Abbott*
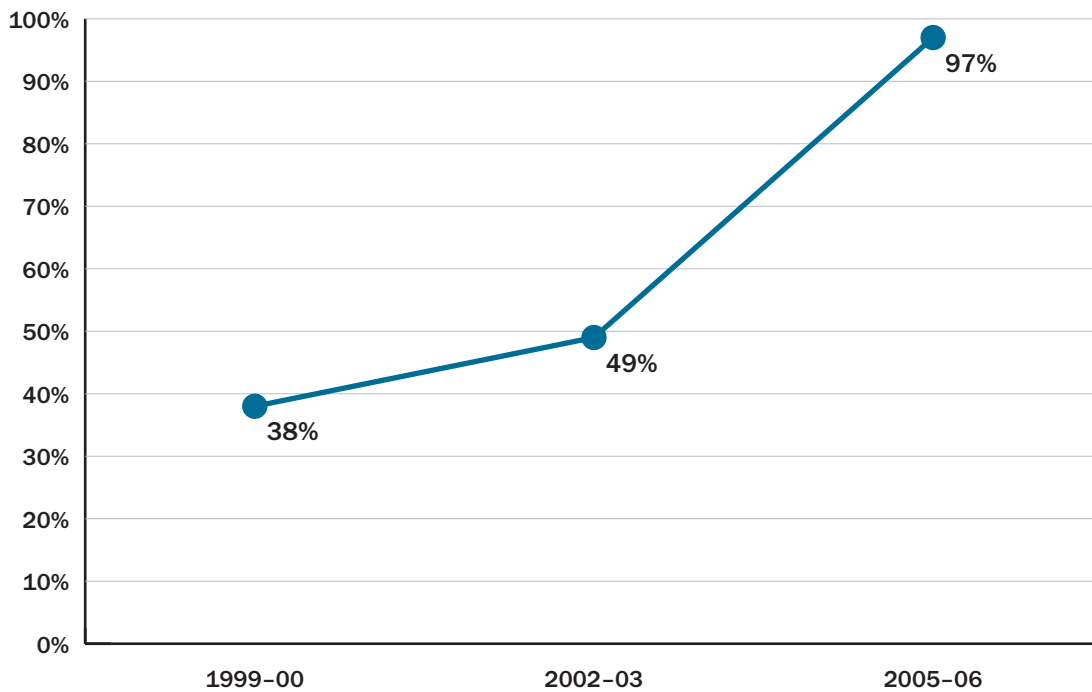
Sources: MacInnes, G. (2009). *In Plain Sight: Simple, Difficult Lessons From New Jersey's Expensive Effort to Close the Achievement Gap.* New York, NY: Century Foundation; Ryan, S., & Ackerman, D. (2004). *Creating a qualified preschool teaching workforce part I—Getting qualified: A report on the efforts of preschool teachers in New Jersey's* Abbott *districts to improve their qualifications.* New Brunswick, NJ: National Institute for Early Education Research; Frede, E., Jung, K., Barnett, W. S., Lamy, C. E., & Figueras, A. (2007). *The Abbott Preschool Program longitudinal effects study (APPLES): Interim report.* New Brunswick, NJ: National Institute for Early Education Research.

Multiple Strategies for Bolstering Early Educators' Credentials

To rapidly prepare an early learning workforce to meet the state's new qualification requirements, New Jersey sought to increase the credentials and specialized ECE knowledge and skills of the existing workforce and make early education a more viable career pathway for aspiring educators. The state used several strategies in tandem to achieve these outcomes, including creating multiple pathways to a credential; offering higher education scholarships and stipends to teachers; and providing supports for working educators, such as substitute teachers to cover their teaching responsibilities while in classes and coursework offered at convenient locations and times. The state also ensured pay parity between credentialed preschool and k–12 teachers and provided supports for higher education capacity-building.

The state created multiple pathways to a credential

To meet the court's mandate, the New Jersey Commission on Higher Education quickly established a P-3 certification requirement and worked with higher education partners to design certification programs. These programs were designed to have multiple pathways to accommodate educators at various stages of their careers. Having multiple pathways was important to ensure that the current workforce could earn a credential and continue to work in their communities, said Joanne Cote-Bonanno, a faculty member at Montclair State University during the Abbott years and now Associate Provost of Academic Programs and Assessment at Montclair State University:

> The New Jersey Commission on Higher Education quickly established a P-3 certification requirement and worked with higher education partners to design certification programs. These programs were designed to have multiple pathways to accommodate educators at various stages of their careers.

> Many neighborhood people who had worked for years were really at risk of not being able to keep their jobs with their community schools. We had to take people with bachelor's degrees first, [but] we also worked with people to get them a bachelor's degree so that they could take advantage of this as well because we wanted as many of them as we could assist to stay within the school. That's what we were asked to do by the state. And that made sense to us philosophically in the department.

Students enrolled in one of three main pathways to a degree. The majority of the students enrolled in P-3 credential programs in 2002–03 (58%) were enrolled in a **traditional, 4-year B.A. program** that included a P-3 or dual P-3/k–8 credential (see Figure 14).[181] These programs typically required 30 units in ECE and 60 units of general education, as well as 30 units in a non-teaching major (New Jersey law requires students to major in a subject other than education).

Educators who already had a B.A. that did not specialize in early childhood could enroll in **postbaccalaureate programs** that included non-degree certification programs or earn their master's degree in ECE. In 2002–03, 18% of students pursuing a P-3 credential were enrolled in postbaccalaureate programs.

Finally, early educators with a B.A. who were already employed as an Abbott preschool teacher could take the **Alternate Route**, created in 2001 and offered at seven universities. The Alternate Route is similar to the postbaccalaureate programs but allows educators to complete their clinical training at the school where they are employed. Frede noted that the New Jersey Department of Education knew from prior studies that "a good percentage [of preschool teachers] already had bachelor's degrees; they just weren't bachelor's degrees in early childhood education. And so having an alternate route was hugely important to meeting the requirement for degreed teachers." About one quarter of students (24%) enrolled in 2002–03 took advantage of this option. The route required 12–15 credits at an approved program, coaching or mentorship from a colleague in the school district for an academic year, and evaluation by school or district staff.[182]

Figure 14
Students Enrolled in Various P-3 Certification Pathways (2002–03)

- 24% Alternate Route
- 58% B.A. Program
- 18% M.A./Post-B.A. Certification Program
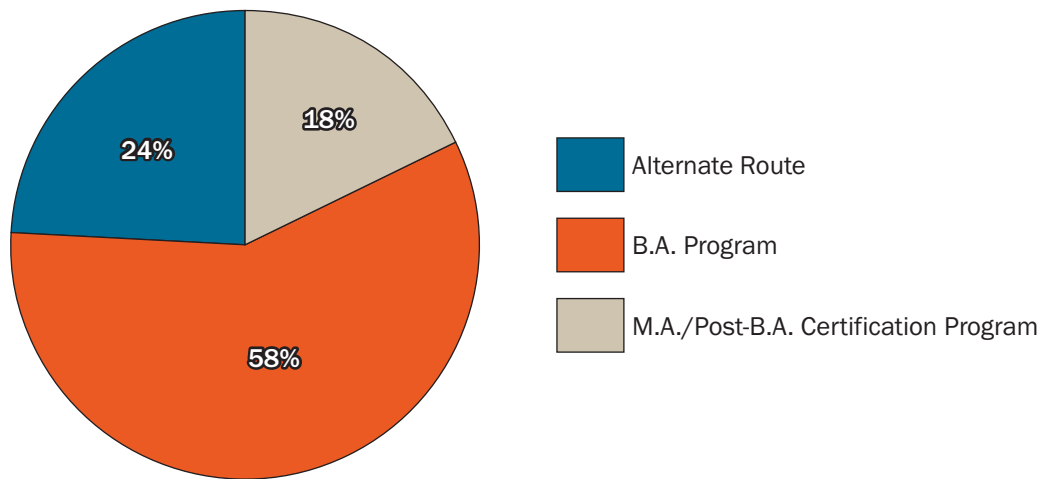
Source: Lobman, C., Ryan, S., & McLaughlin, J. (2005). Reconstructing teacher education to prepare qualified preschool teachers: Lessons from New Jersey. *Early Childhood Research and Practice*, *7*(2), 23–39.

Some students completed courses toward their B.A. at community colleges; however, coursework did not always transfer to credential-granting institutions because articulation agreements with 4-year institutions were not yet comprehensive. Community colleges were furthermore not accredited to award the P-3 certification required to teach in the Abbott Preschool Program.[183]

Scholarships enabled students to go back to school

The state provided substantial funding to subsidize educators returning to school. Scholarships were administered by the New Jersey Professional Development Center, a state-funded organization created by court mandate and tasked with coordinating professional growth activities for the ECE workforce. Educators could receive up to $5,000 per year for tuition, plus an additional $50 per course for books and other expenses. This amount would have covered the full cost of tuition at public schools, although not incidental expenses such as travel and child care.[184]

By 2003, 59% of students enrolled in a P-3 certification program in New Jersey were receiving a state or local scholarship for coursework, a third were paying out of pocket, and the rest may have relied on other sources of funding.[185] (Some students paying their own tuition may have been pursuing master's degrees that included coursework beyond the court's mandate.[186]) Scholarships were a key support, said Adriana Birne, Director of Early Childhood Programs in Union City, an Abbott district. As an example, she pointed to the story of a Colombian immigrant who received her B.A. with one of these scholarships:

> She fell in love with the profession [and the idea] of becoming a teacher one day, but she did not have the means to pay for the university.… She got her CDA. But when *Abbott* came up in 1999, she was hired as a teacher assistant and then became the group teacher. Now remember, she did not have a B.A., but *Abbott* gave her 5 years. She went back to college, got her B.A. free of charge, and she went right

back and now she has her master's degree…. Her schooling was paid for by the scholarship that she was awarded, and she is now a teacher in our school. So for her it was an opportunity beyond her wildest dreams.

To spread the word about the scholarships, the state took a number of steps. For example, the Department of Education notified center directors and school districts, resource and referral agencies informed providers and parents, and advocacy partners such as Advocates for Children of New Jersey pushed out information to their networks and hosted meetings.

After 2006, state funding for the scholarships diminished. However, New Jersey currently offers funding for early educator scholarships through its quality rating and improvement system (QRIS), with funding going through local ECE programs.[187]

Pay parity with k–12 was a critical incentive to attract and retain educators

In 2002, a follow-up court decision to the original *Abbott* case (*Abbott VII*) required that New Jersey pay preschool teachers who received P-3 certification on the same pay scale as other district educators.[188] Pay parity was seen as a necessary step for retaining newly qualified teachers because educators holding a P-3 credential were also eligible to work in k–12 schools, which offered better pay and benefits. The thinking at the time, said Tonya Coston, Deputy Assistant Commissioner for Early Childhood Education in New Jersey, was:

> If we don't [have] pay parity, then it's just going to be a revolving door…. Without parity, all we're going to do—all the resources we're pumping into these centers around professional development—will all be a waste because we're going to constantly have a new set of teachers, a new set of teachers, a new set of teachers.

Jacqueline Jones, New Jersey's Assistant Commissioner for Early Childhood Education from 2006 to 2009, concurred, saying, "The great fear was that if we didn't have parity in pay, then folks would get a B.A. and then they'd leave the private provider settings, leave the Head Start programs, [and] go to the schools" where pay and benefits were more generous. "While [parity] was the right thing to do, it was also a way to maintain the stability of each of these programs," she explained.

Supporting districts with pay parity was no simple matter, since each of New Jersey's districts has its own unique pay scale negotiated by local unions, and thus district teacher salaries varied widely. In the early Abbott years, districts engaged in zero-based budgeting for their pre-k programs to ensure they had adequate funding. Each district submitted a funding request to the state for all needed outlays each year, and state staff analyzed and approved each district's budget individually. This budgeting process made state education department staff acutely aware of districts' financial needs, but it absorbed huge amounts of district and state staff time.

The state moved to a regional per-pupil funding formula in 2006 to mitigate this issue. "I did worry that we were kind of losing some intimacy with the district and our real understanding of how things work," said Jones. "But if you're sitting there in Trenton trying to decide if a child care center should get two tricycles or three, it gets a little absurd." The state used data from the zero-based budgeting process to determine a per-pupil amount that covered the quality inputs demanded by the program, including teacher salaries paid at parity. The state also provided supplemental funding to Head Start so these programs could pay teachers at parity, reduce class sizes, and offer a full day.

From the beginning of the Abbott Preschool Program, the state covered districts' costs for teachers' salaries and training. However, preschool teachers were not allowed to receive pay at parity with k–12 teachers until they received a credential, so state funding initially went mainly to scholarships and education supports, rather than salaries. As preschool teachers earned their credentials, state funding for Abbott preschool programs gradually shifted toward teacher salaries, without a sharp overnight increase in required expenditures.

State grants allowed higher education to expand programs

Developing P-3 credentialing programs to serve several thousand students in under 4 years was no small task. Joanne Cote-Bonanno of Montclair State University recalled going to Trenton and being told that Montclair would need to develop a P-3 credential—from scratch—over the summer. "At that time, they told us that—this is probably late April, beginning of May—'By August 17, you have to have a program ready.'"

In order to build higher education's capacity to adequately serve these students, New Jersey made significant, multifaceted investments. Chief among these investments were two large, competitive grant programs administered through the New Jersey Commission on Higher Education—Teacher Quality and Capacity Grants and Teacher Effectiveness Grants for preschool and k–12 teacher preparation. In 2002 and 2003, the legislature appropriated $13 million (the equivalent of over $18 million in 2019) for the grants.[189] The grants were specifically targeted toward hiring faculty in areas of need, including ECE, and allowed colleges to greatly increase their ECE faculty. Fifty-two new faculty positions were created with grant funds and later built into universities' base grants for ongoing state funding; additional positions were created with institutional funds.[190]

> In order to build higher education's capacity to adequately serve these students, New Jersey made significant, multifaceted investments. Chief among these investments were two large, competitive grant programs.

At Montclair State University, these capacity-building grants from the state were important for developing a brand-new program, said Cote-Bonanno:

> I think it did provide us an entryway into areas we would not have been able to accomplish…. That's clear because funding in a state institution in New Jersey, like probably many other places, is very thin. I really do think that it helped a lot.

The grants also helped the university build relationships with Abbott districts and gave faculty the opportunity to participate in national conferences where they learned more about recent developments in early childhood research.

Capacity to offer P-3 credentials grew quickly. Fourteen of the state's 21 colleges and universities with teacher preparation programs created new programs for P-3 certification aligned with standards from the National Association for the Education of Young Children.[191] Most institutions opted to develop a dual P-3 and k–8 certificate, while one chose to add only a P-3 endorsement

program for teachers who already had their k–8 certification to specialize in ECE.[192] The number of P-3 certificates awarded each year climbed steadily over the first 4 years, rising from 89 in 2001 to 502 in 2004.[193]

Despite the incentive of state grants, initially some regions of New Jersey remained underserved. "No university wanted to take this on to work with the schools in southern New Jersey," said Cote-Bonanno, describing it as a rural region that is home to many children from disadvantaged backgrounds. As a result, Montclair State University, a few hours' drive away, stepped in to offer its coursework and credential on the campus of a local community college in Cumberland County for teachers with a B.A. who could not access university programs elsewhere. Montclair faculty eventually traveled to other locations as well. "People who could not get to us, we went to them as best as we possibly could," Cote-Bonanno said. In those years, Montclair's off-campus work was mainly with teachers already in the early learning workforce who had a B.A. and needed certification; only later would the university develop articulation with community colleges to provide a full degree.

Early studies revealed that colleges were mostly successful in finding qualified faculty to teach in the new P-3 programs. Of full-time staff, 75% had a degree in ECE and 82% had directly worked with 3- or 4-year-olds.[194] The availability of faculty with ECE expertise was likely due in part to New Jersey's discontinued Nursery/Kindergarten certification. The credential, which was available until the 1980s, was one of the specializations offered by teacher preparation programs in the state. Though it was discontinued before the *Abbott* ruling, some of the faculty who taught early childhood–focused courses for the certification still worked in teacher education. Many of these faculty belonged to the New Jersey chapter of the Association of Early Childhood Teacher Educators, making them easy to mobilize.[195]

A challenge, however, was that ECE faculty did not reflect the diversity of the university students and children in their communities. Of all faculty members, 81% were White and at least 5 of the 14 schools offering a degree had entirely White faculties.[196] Faculty homogeneity raises equity concerns and also has implications for student success; research has shown that underrepresented community college students of color fare better when taught by faculty of color.[197]

Colleges made coursework and supports available to nontraditional students

In addition to providing financial support for teachers, the state and institutions of higher education took steps to make credentialing coursework available to working students. These steps included providing substitutes for preschool classes, coursework in convenient locations and online, courses at nights and on weekends, academic supports, and academic advising.

The state realized early that to make coursework accessible, current early childhood teachers would need substitute teachers to cover their classes while they attended higher education courses. "Providers [said], 'My boss isn't going to release me because where are they going to get substitutes from? Or how are they going to even pay for a substitute if they could find one?'" said Tonya Coston. A state ECE advisory committee recommended that the state begin to provide funding for substitute teachers to enable current preschool teachers to attend their credentialing courses, which it ultimately did.

Institutions of higher education made efforts to ensure that courses were located in places and scheduled at times convenient for teachers who were already in the field. Two universities, including Montclair, added "extension sites" to provide access to coursework in central and southern New

Jersey Abbott districts.[198] In 2002–03, nearly 60% of colleges reported offering classes on-site at school districts; 33% offered courses at community-based child care centers; 55% offered courses at satellite facilities; and 18% offered classes online.[199] Colleges also offered night and weekend courses.

P-3 certification programs require clinical work, and at least seven colleges allowed students to conduct their student teaching in their current work placements.[200] For the Alternate Route program, clinical experience was overseen and evaluated by district staff. Higher education faculty made other accommodations as well. For example, Montclair State University hired more university supervisors and adjunct faculty who were local to the neighborhoods in which students were teaching, including former students who went on to receive their master's degree. Per Montclair's supervision model at the time, these staff went into classrooms at least five times during the year to observe and support teachers in their work.

Higher education faculty recognized that the students entering P-3 certification programs needed additional support, such as tutoring and advising, to successfully complete a degree. "We really used to engage the students and support the students as much as we could because our traditional services for students were not available in the evening at that time," recalled Cote-Bonanno. "We would do workshops for them…. We were doing some ESL…. We worked with the students we had at any given cohort and provided them the assistance that we could because [we] wanted to retain them and get them their certification." Some 60% of P-3 programs offered nonacademic mentoring, and many provided academic tutoring and workshops.[201] Montclair, for example, provided transcript review through the ECE department to support students in choosing an expedient course sequence.

Overall, a key component of higher education's success was its willingness to be flexible to support and be responsive to the Abbott reform while continuing to maintain high standards, said Ellen Frede, former Assistant to the New Jersey Commissioner of Education:

> The majority of teachers [had not] completed their undergraduate degree and [needed] support—and people had to be more willing to compromise. Colleges were willing for this particular program to allow teachers to do their student teaching in the classroom where they were already a teacher. They relaxed their rules during this time period because otherwise it becomes almost an impossibility to take a semester off in order to do your student teaching. And it didn't make any sense given that we had an Alternate Route that allowed you to do it that way. The overarching issue here would be having some flexibility or being open to flexibility, but keeping the high standards and high expectations at the same time.

An analysis of focus group interviews conducted in 2004 suggests that many programs did try to support mid-career students and non-native English speakers and respond to the unique needs of the students they served, similar to the relationship-based supports highlighted in the previous case studies.[202] Yet the faculty interviewed suggested that individualized supports were limited by the availability of trained staff to provide these services.

In sum, New Jersey developed programs that strived to accommodate the responsibilities of working students, helping to ensure that the current workforce and other students considered nontraditional had access to credentialing programs.

Districts supported educator quality at the school and center level

Extensive professional learning opportunities for all preschool teachers was another important component of New Jersey's teacher preparation efforts. Teachers had on-site support, both while they were pursuing a degree and after degree completion. Many of the professional development supports remain in effect for the Abbott Preschool Program today and extend to Abbott staff in Head Start and child care settings as well as public schools.

From the beginning of the Abbott reforms, each district was required to designate an early childhood supervisor charged with managing various aspects of the pre-k expansion, including professional learning for preschool teachers. ECE supervisors were part of an advisory committee for refining program standards and received supplementary training, including informational meetings and participation in a professional learning community.

Each district additionally had a team of master teachers, reporting to the early childhood supervisor, who coached teachers and planned professional development.[203] Starting in 2003, master teachers were required to hold a state-recognized instructional certification, and districts with large numbers of dual language learners or students with individualized education plans were required to hire master teachers with specialized expertise.[204] Master teachers received intensive, 10-day training from the state Department of Education on issues ranging from instruction to adult supervision. "It's really important that well-prepared teachers end up in an environment … where their leaders are well prepared and understand [how to support them]," said Frede, explaining why the department created the position and invested in supervisors' development.

School districts were also required to have preschool intervention and referral teams under Abbott, and these teams helped support pre-k educator quality. These teams consisted of professionals from various disciplines, including teachers, psychologists, social workers, and speech therapists. Frede explained, "Their job was not to diagnose and [assess]. Their job was to help teachers understand the kids better and adapt to the needs of the children who are not yet identified [with disabilities]." This team also supported teachers in dealing with children's challenging behaviors, an issue with which teachers consistently struggled.

Though each district had an early childhood supervisor and a team of master teachers, one challenge was a lack of initial investment in preparation for school principals and site directors who play an important role in supporting teachers and children. The New Jersey Professional Development Center accordingly created the Directors' Academy for site directors of preschool programs. The academy offered a 45-hour, state-funded training for directors of private preschools and Head Start programs to learn more about instructional support, business administration, and the Abbott Preschool Program.[205] Principals tasked with overseeing preschool programs, however, were not invited to attend the Directors' Academy and often had little knowledge of ECE.

High-Quality Professional Development Continues After P-3 Credentialing Programs in Union City, NJ

Union City, an Abbott district that has been highlighted for its outstanding results with a high-need population, leveraged state investments to quickly develop a pool of qualified preschool educators. Nearly 60% of individuals in Union City are immigrants, and 86% of households speak a language other than English. Eighty percent of the population is Latino/a. Since the creation of the Abbott Preschool Program, Union City's school district has provided joint professional development for teachers in the district, Head Start, and private preschools. Working with private providers was important, says Birne, "to give them the idea that even though they were working as daycare providers, they were still professionals and they were still considered part of our program." Intensive, differentiated coaching was—and still is—provided to all district preschool teachers regardless of setting. Master teachers are assigned 20 classrooms of public school or child care teachers, with whom they work weekly. They also conduct professional learning workshops during naptime once or twice a month. Master teachers support principals in overseeing both the preschool classes and kindergarten, so that principals with less training in ECE can develop a better understanding of instruction and how teachers are doing.

Sources: Kirp, D. (2013). *Improbable Scholars: The Rebirth of a Great American School System and a Strategy for America's Schools*. New York, NY: Oxford University Press; United States Census Bureau. (2019). Quick facts: Union City, New Jersey, https://www.census.gov/quickfacts/unioncitycitynewjersey (accessed 10/24/19); interview with Adriana Birne, Director of Early Childhood Programs in Union City (2019, July 10).

Challenges

New Jersey is a model of how investments in early educator preparation and development can rapidly and systemically transform the preschool workforce. However, the state did encounter a number of challenges as well (described below), which other states should consider when investing in systems of preparation and related supports for early educators.

Supporting students without a B.A.

Although many early educators took advantage of scholarships to receive their teaching credential, data are not available to indicate how many teachers without a B.A. prior to Abbott successfully earned a teaching credential and remained in the workforce. Of the 2,500 students enrolled in ECE programs in 2002–03, 58% were enrolled in B.A. programs, suggesting that many educators attempted to earn a B.A.[206] It is not clear, however, how many of these students graduated and how many of them remained in teaching positions.

Supporting educators through a 4-year B.A. program while they continued working was a much bigger challenge than getting students who already held a B.A. to finish a 15-credit Alternate Route or postbaccalaureate program. "You start out saying, this is great, we're going to get everybody a degree, and then you realize that this isn't as easy as it seems," Assistant Commissioner Jones reflected on the early years of the Abbott scholarships. Jones continued:

> Everybody isn't going to jump up and say, "Oh, good," because even when you say we're going to be able to pay you more money, we're going to help pay for a degree, folks are often at points in their lives when they just can't do that. And that's a

real challenge…. There was a lot of concern in the Head Start program that many of the teachers in Head Start who reflected the ethnic, linguistic, and cultural diversity of the neighborhoods didn't have degrees but had decades of experience. And they had real questions as to why they had to do this, because they knew what they were doing. They would get new teachers who come in with their fancy degrees and had no idea how to manage classrooms…. I thought these were pretty legitimate questions. But I think it was the right thing to do to ask them to go back and get degrees and engage in that continuous learning. I think you need that for professionalization of the field.

Stakeholders across the state recognized the gravity of requiring educators already working in the field to obtain a B.A., and early on they discussed the possibility of waiving the requirement for experienced educators. Nancy Lauter, Professor Emeritus at Montclair State University, said that the decision to require a B.A. was not made lightly:

I remember sitting, before all this happened, in statewide meetings [with early childhood faculty across the state]. I actually tried to make a case, perhaps wrongly so, that those people who had been teaching out in the field for more than 5 years somehow should be grandfathered in. Obviously, that didn't happen. And in retrospect, probably best that they do have a certificate. But it was hard.

Community colleges often play an important role when it comes to educating nontraditional students, but associate degree coursework focused on birth to age 5 did not always align with P-3 coursework. Four-year colleges in the state did not consistently accept these credits for transfer at the time. Since state requirements allowed a maximum of 30 credits in ECE to count toward a degree, 4-year colleges granting the credential wanted those courses to be taken on their campuses. Many 4-year colleges tried to make it easier for students to transfer credits from community colleges, but courses were not articulated across the state. According to Lauter, articulation agreements were made individually with some community colleges for certain courses. "We did work very closely with the community colleges—this was extremely challenging—trying to set what we call reciprocal agreements. If they followed a certain path at the community college, they could come right into Montclair as a junior." The New Jersey Legislature later required articulation agreements between all 2- and 4-year colleges, which facilitated the transfer of some credits, especially general education classes.

Students without a B.A. also had lower levels of academic preparedness, a challenge raised in focus groups with higher education faculty in 2003 conducted by Carrie Lobman, Sharon Ryan, and Jill McLaughlin. The researchers commented:

Teacher educators felt particularly challenged in working with a student population that they saw as being unprepared for college-level work. Respondents from community colleges commented on the difficulty students have getting through readings, passing core courses, and the poor quality of their assignments. They particularly identified the challenges they face with students/teachers who need to develop their English language skills.[207]

The lack of data on the pathways for teachers without a B.A. is particularly troubling because almost all of these teachers were teaching in private settings and Head Start and were predominantly women of color. As other states consider raising their qualification requirements for early educators, policymakers might pay particular attention to providing supports for educators without a degree and collecting data on student outcomes in degree programs.

Incomplete data on workforce diversity

Little is known about how policy changes under Abbott affected the diversity of the workforce, because the state did not collect information on teachers' race and ethnicity before and after the reform. Maintaining a diverse workforce was not an explicit policy goal when Abbott was rolled out, and, given the contractual nature of the relationship, policymakers did not believe it was appropriate to collect census data on teachers' race and ethnicity.[208]

Existing evidence on teacher demographics from studies conducted in 2002–03 and 2006 suggests that the workforce composition did change during the years of the reforms. In 2002, soon after the Abbott Preschool Program was established, New Jersey's early learning workforce resembled the national early educator workforce. Forty-four percent were White, 33% African American, 16% Hispanic, and 3% Asian.[209] Head Start and private providers had notably more teachers of color than school districts and more closely mirrored the students they served, with 68% of all African American and 71% of all Hispanic educators teaching in private settings and Head Start, compared to just 36% of White educators. Educators had been in the classroom an average of 10 years, and the majority had more than 5 years of experience.[210]

By 2006, when the court required that all state preschool teachers have a P-3 credential, teacher demographics had shifted. The portion of African Americans in the Abbott preschool workforce decreased 9 percentage points to 24%, while the portion that identified as Hispanic increased 5 percentage points to 21%. The portion of White teachers stayed about the same. Preschool teachers working in community-based settings and Head Start programs became less diverse, while school districts became more diverse.[211] It is important to note that since the size of the workforce increased between 2002 and 2006, a decline in the overall percentage of teachers from a particular group does not necessarily mean that existing African American teachers left. Data additionally show that the number of lead preschool teachers who spoke more than one language increased, with as many as 40% of teachers in all settings speaking a language other than English.[212]

Unanswered questions about the changing demographics suggest the need to collect more data on teacher demographics before, during, and after any major policy changes to evaluate the effects of policies on educator diversity. It also suggests the need to carefully weigh the potential impact of educator requirements on educators' racial, ethnic, cultural, and linguistic diversity while intentionally planning to support the success of diverse educators.

Retaining teachers without compensation parity

Wage parity has helped Abbott districts retain credentialed educators in private settings and Head Start. Pay parity is not compensation parity, however, and school districts often offer benefits such as a pension, health benefits, and job protection through a union that private centers and Head Start could not (and still cannot) afford, despite receiving the same state funding per pupil.

In a 2002–03 survey, 33% of teachers enrolled in P-3 certification programs said they intended to leave their place of work after receiving their degrees. Most (80%) of these teachers were working in Head Start or private settings and stated the intention to teach in a school district.[213] While we do not know the extent to which teachers changed positions once certified, Tonya Coston, Deputy Assistant Commissioner, believes that "for a long time, wage parity was enough to slow" the revolving door between public schools and other preschool settings. However, New Jersey has recently undertaken a second ambitious expansion of state preschool that will add new school-based preschool jobs in many non-Abbott districts. State administrators are concerned the expansion will prompt a new wave of turnover in private preschool and Head Start settings if compensation parity is not better addressed.

Another unresolved challenge with pay parity is that some private providers offer both Abbott preschool and other care options, including care for infants and toddlers, creating pay disparities among teachers working in the same building. These inequities within private settings can be challenging, said Jones, and are partly due to the lack of parallel professionalization processes for educators working with infants and toddlers. Coston noted that New Jersey is hoping to take up the issue of compensation parity at a system level—including not only preschool, but also infant and toddler care providers—through the state's Early Learning Commission, which includes representatives from the New Jersey Departments of Human Services, Health, and Education.

Preparing educators to meet the needs of diverse learners

Surveys of teachers who participated in P-3 credentialing programs in the early Abbott years suggest that programs could have had a more extensive focus on meeting the needs of dual language learners and children with special needs. Less than half of teachers surveyed in 2002–03 reported that they felt effective in working with these populations.[214] While almost all teachers participated in foundational coursework that covered topics such as child development and literacy, a lower percentage participated in coursework focused on supporting children with special needs (78%) and dual language learners (66%). Furthermore, only 48% and 38% of teachers reported that their coursework prepared them to teach children with special needs and dual language learners, respectively. In comparison, 91% of teachers reported that their higher education credential classes met their needs related to understanding child development. Although these findings rely on students' self-report, and thus provide an incomplete picture of preparation programs' efforts, they suggest the need for states to consider how the content offered in early childhood preparation programs will enable teachers to support diverse learners.

Conclusion and Key Takeaways

New Jersey is a useful example for other states to learn from as they consider increasing the qualifications and capacity of their early learning workforce. In under 6 years, New Jersey went from having no early childhood credential and 38% of ECE teachers holding a B.A. with early childhood specialization to nearly all Abbott Preschool Program teachers holding a degree and P-3 credential, even in Head Start and private preschool settings. Although the circumstances of the reforms were unique, the steps that the state took to support and develop its workforce were not. These included:

- **Setting high standards for preschool providers.** New Jersey's P-3 credential requirement raised expectations for early educators and professionalized a field once seen as babysitting.

- **Providing multiple pathways to a degree.** New Jersey offered B.A. programs with ECE specialization, postbaccalaureate programs including an M.A. in ECE, and an Alternate Route for early educators already in the workforce.

- **Offering scholarships and other financial assistance.** For more than half of all teachers going back to school, tuition and some other expenses were covered by the state.

- **Ensuring pay equal to district jobs.** Pay parity was critical in order to stem a revolving door of teachers moving from private settings to better-paying school districts. Overall compensation, however, remains unequal.

- **Helping higher education increase its capacity.** Grants allowed early childhood faculty to collaborate and create new programs as well as hire new faculty and supervisors, as well as travel to off-campus locations.

- **Supporting working students.** Supports included substitute teachers, courses offered at convenient locations and times and online, the option to conduct clinical work in students' places of employment, and a variety of academic supports.

- **Providing ongoing professional development in schools, even after teachers are certified.** Higher education coursework was only one component of teachers' professional development. Intensive support, including ongoing workshops and coaching, were provided in districts and in private settings to support teachers' continuous learning.

The state of New Jersey provided the funding and resources to offer supports at scale. The initial investments created the conditions for success in the state's ambitious pursuit of a rapid, significant shift in the credentials of state preschool teachers. After less than a decade, nearly all state preschool teachers possessed a B.A. and P-3 credential. High expectations, coupled with support, said Ellen Frede, proved to be a successful combination:

> I think the most important thing is an attitude that people *want* to get the degree and *can* get the degree. Too often there's a kind of tyranny of low expectations in policy and thinking that seems to imply the current teachers of color are not going to be successful and therefore we have to have a standard that's low. I think what we showed was that with support and time, the current workforce was capable and willing to work really hard to get their degree.

Although the legal context in which these investments were made is unique, New Jersey's steps to develop its workforce provide a model for other states seeking to raise the bar on preparation for preschool educators. The Abbott Preschool Program's lasting benefits for children illustrate the long-term payoff of the state's commitment to quality. It also provides a reminder that changes to educator requirements should be carefully considered and monitored, in order to continually ensure that supports put in place are successful in developing and retaining a diverse workforce.

Implications for Policy

This report has illustrated various ways in which innovative early education preparation programs in California have sought to develop a diverse, high-quality workforce. The accomplishments of these programs are unusual, but they need not be. As the case study of New Jersey has shown, states can play an important role in ensuring that educator preparation is of high quality and that early educators have access to financial and other supports they need to complete their higher education programs successfully. These supports, furthermore, can be made accessible to early educators across the professional continuum, from aspiring educators with no ECE experience to seasoned educators who want to further their education and expertise. Specific steps that states can take to support the educators of our youngest learners include the following (see Figure 15 on p. 115):

1. **Build the capacity of higher education programs and ECE faculty to prepare a diverse workforce.** Each of the programs described in this report has relied on outside funding to develop its faculty and staff and continuously improve its quality. Grants for teacher preparation programs were important for New Jersey's institutions of higher education to develop P-3 credentialing programs on a short timeline and hire needed faculty. States should consider providing colleges with grants for capacity-building, including hiring and training well-qualified, diverse faculty. New hires should have expertise in ECE and be able to support a diverse cohort of teachers. In addition, grants could be used to develop graduate programs in early learning to support the development of teacher educators and instructional leaders with expertise in ECE.[215] As in New Jersey, funds could also be used to support flexible scheduling and the provision of courses in alternative locations to make coursework accessible to more students.

2. **Support high-quality clinical practice.** At the core of the programs we studied are intensive clinical experiences, including for working early educators, supported by instructors, mentors, and peers that provide educators multiple opportunities to receive feedback and apply their learning. The programs provided this clinical practice in a variety of ways, including in apprenticeships, a lab school, and a mentored and paid early practicum experience in partnership with local ECE programs. States can increase the availability of these promising models by providing funding for program development and the ongoing resources needed to sustain them. States can also facilitate learning networks that allow institutes of higher education to learn from one another.

3. **Develop clear pathways for students to move from 2- to 4-year colleges.** Many ECE students complete their initial college coursework at community colleges. Many states have begun to facilitate transfer agreements with community colleges; for example, California has developed an associate degree for transfer in ECE that guarantees placement at a 4-year college. However, there is a lack of clarity as to how the ECE coursework offered in a B.A. program should differ from or build on coursework offered at community colleges. States can help incentivize collaboration between 2- and 4-year institutes of higher education to develop these pathways and align coursework by providing colleges and universities with funding to support these efforts.[216]

4. **Fund academic supports for ECE students, including specialized advising.** Many students in ECE programs are nontraditional students returning to the classroom after many years, and many are English learners. These students often need academic assistance and help navigating the higher education system.[217] One of these supports, advising, was a key component of all three innovative programs described in this report and is especially important for supporting a diverse group of students. To help students complete rigorous coursework on time, states can provide funding for specialized ECE advising and tutoring.

5. **Offer financial assistance to educators earning an early childhood permit, degree, or credential.** Given their low wages, early educators should not be expected to bear the financial burden of higher education costs.[218] Increasing financial support for early educators' higher education is essential, particularly for educators of color who disproportionately struggle with higher education costs.[219] State-provided financial assistance could be extended to aspiring early educators and those already working in the field and could include the cost of books, required fees, technology, transportation, substitutes to cover current teachers' classes, and other incidental expenses as well as the cost of tuition. New Jersey, for example, provided scholarships and a stipend to all early educators working in the field who could verify that they were on track to complete their degree in a timely fashion from an accredited credentialing program.

6. **Set clear, high expectations for early childhood educators.** Most states have identified professional standards for early educators that reflect the complex work of supporting young children.[220] Minimum preparation requirements, however, are inconsistent across programs and are typically insufficient for meeting these standards. The development of an early childhood–specific teaching credential on par with k–12 credentials, such as the P-3 credential that New Jersey created, could significantly advance both the coherence of preservice preparation and the professionalization of the field. Any required credential or permit should include an intensive clinical component, which research shows is critical for professional learning.[221] A formal accreditation process for early childhood programs can further help ensure that the courses that students take comprise a coherent plan of study.

These policy recommendations would help states develop more qualified early educators and do so more efficiently. In addition to supporting educators as they increase their qualifications, however, states must have policies in place to retain those teachers once they are in the field. Most importantly, they must **compensate early educators adequately**. In a field in which educators are often paid one half to one third of the wages of their k–12 counterparts,[222] compensation increases must accompany increases in qualification requirements or taxpayers will be filling a leaky bucket. Higher compensation was an important part of New Jersey's success in raising the qualifications of its workforce. States might consider phasing in wage increases as educators earn higher credentials. In the early years of New Jersey's ECE reforms, the bulk of new spending went toward higher education supports for educators going back to school to meet new degree requirements. As teachers earned their degrees, funding gradually shifted toward salary increases for newly credentialed teachers.

Although it was not the focus of this study, it is important to note that high-quality and accessible preservice preparation is only the first step in the process of cultivating a diverse, effective, and sustainable early educator pipeline; states must also **provide ongoing professional development** to build educators' knowledge and skills in the classroom and enhance leaders' capacity to effectively support educators. High-quality professional development, including induction and early career mentoring programs, has been shown to increase educator retention.[223] These supports

were part of New Jersey's success in the Abbott districts, where all teachers received intensive professional development and coaching at their schools from a trained cadre of mentor teachers. States should therefore consider investing in state or local coaching capacity to support all early educators, especially in their first years of teaching.

Finally, states should **collect better data on the ECE workforce**, including information about early educators' higher education paths, their permit or degree completion, and their ensuing wages. Analysts should be able to disaggregate these data by educators' race, ethnicity, and native language. With this information, states can better understand where they are now in terms of preparing a diverse cohort of teachers, and where they need to go.

Figure 15
Key Elements for Developing an Early Educator Workforce

Build Effective Higher Education Pathways:	Support ECE Students in Meeting High Expectations:
Build the capacity of higher education programs and ECE faculty to prepare a diverse workforce	Fund academic supports for ECE students, including specialized advising
Support high-quality clinical practice	Offer financial assistance to educators earning an early childhood permit, degree, or credential
Develop clear pathways to progress from 2- to 4-year colleges	Set clear, high expectations for early childhood educators

Foundational Elements:		
Adequate compensation	Ongoing professional development	ECE workforce data

Conclusion

ECE programs have the potential to dramatically change the course of children's lives, especially when programs are led by highly skilled educators. Yet across the nation, expectations for teachers are typically low and the workforce is poorly supported. The examples in this report offer valuable lessons for policymakers about how to change this equation, such that every child has a teacher who is held to, and meets, high standards and every child has the opportunity to learn from educators who reflect the racial, ethnic, cultural, and linguistic diversity of young children and their families.

APPENDIX A: Study Participants by Site

Each case study is based on more than 20 interviews with staff, faculty, students, and other stakeholders involved in designing or implementing the case study models.

Family Child Care Apprenticeship

Faculty and staff

- Guadalupe Arias, Professional Development Supervisor, Child Care Resource Center
- Lisa Cook, Dean of Liberal Arts and Social Sciences, Berkeley City College
- Rochelle Crawford, Program Manager, Child Care Resource Center
- Susan Garcia, Coach, Child Care Resource Center
- Peggy Velasco, Associate Professor of Child Development, Los Angeles Trade Technical College
- Alma Villarreal, Program Supervisor, Child Care Resource Center
- Randi Wolfe, Service Employees International Union Educator Training Center Training Grants Coordinator for the Early Educator Apprenticeships

Students and alumni

- Beatriz Andrade
- Nataly Aranjo
- Brenda Araujo
- Shirlet Arnold
- Morena Barrera
- Rosa Maria Batarse
- Yvonne Cottage
- Carmen Del Alamo
- Lorena Espinoza
- Pauly Flores
- Kameena Freeman
- Aurora Granados
- Madelyn Hall
- Julia Hensch
- Heidi Hill
- Josefina Landazuri
- Loretta Martinez
- Kathleen Nuño
- Antonia L. Rivas
- Janeth Sanchez
- Ana Villalobos

Skyline College Education/Child Development Department and Lab School

Faculty and staff

- Kristina Brower, Program Services Coordinator, Business, Education and Professional Programs
- Melinda Day, Assistant Professor and Program Coordinator, Cañada College
- Nataliya Gamburg, Master Teacher, Business, Education and Professional Programs; California Mentor Teacher
- David Hasson, Professor, Math Department
- Alexa Moore, Child Development Laboratory Center Master Teacher; Adjunct Faculty
- Nicole Porter, Professor, Education/ Child Development
- Regina Stanback Stroud, former President (2011–19)
- Jennifer Taylor-Mendoza, Vice President, Instruction
- Andrea Vizenor, Dean of Strategic Partnerships & Workforce Development
- Tina Watts, Child Development Services Coordinator, Business, Education and Professional Programs, Child Development Lab Center
- Kate Williams Browne, Professor; Program Coordinator, Business, Education and Professional Programs

Students and alumni

- Gay Aguirre
- Sara Burton
- Andrea Gabriel

- Jacqi Galea
- Kifah Gheith
- Stephanie Lopez
- Kelsey Mendoza
- Jing Nie
- Simon Ortiz Espinoza
- MyShanique Primes
- Ryan Van Arkel

EDvance at San Francisco State University

Faculty and staff

- David Anderson, Director, Marian Wright Edelman Institute
- Angela Aquilizan, Workforce Development Coordinator
- Jocelyn Chan, Fiscal Incentive Coordinator
- Laura Engel, Head Teacher, Felton Institute
- Sylvia Marie Gin, Administrative Assistant
- Stephanie Moore, Compliance Manager
- Christine Nevarez, PATH Coordinator
- Lauren Ngoi, Workforce Development Coordinator
- Brijae Pointer, Jumpstart Workforce Coordinator
- Lygia Stebbing, Director
- Francesca Teixeira, Academic Advisor
- Alicia Torres, Director of Special Projects
- Ashley Williams, Associate Director

Students and alumni

- Jessica Campos
- Albert Chu
- Isabel Dettaro
- Grizzell Escobar
- Stephanie Estrada
- Jonshá Harris
- Ashley Kelly
- Yingshan (Lisa) Li
- Grace Lyon
- Karla Mandujano
- Elizabeth Moncada
- Azul Müller

- Sueli Nunes
- Noelle Owusu
- Rondavia Poydras
- Karen Quijada
- Yohana Quiroz
- Merced Sanchez Rocha
- Rosalinda Rosas
- Mariya Semeit
- Cristina Serrano
- Melissa Serrano
- Lilian Silva
- Jacqueline Slayton
- Kelley Wheatley
- Angelica Victoria Wolf

Abbott Preschool Program, New Jersey

- Adriana Birne, Director of Early Childhood Programs, Union City
- Tonya Coston, Deputy Assistant Commissioner for Early Childhood Education, New Jersey Department of Education
- Joanne Cote-Bonanno, Associate Provost of Academic Programs and Assessment, Montclair State University
- Ellen Frede, Senior Co-Director at the National Institute for Early Education Research; former Assistant to the New Jersey Commissioner of Education in the Office of Early Childhood Education, New Jersey Department of Education (2002–05)
- Katherine Hodges, Research Project Coordinator, National Institute for Early Education Research
- Jacqueline Jones, President and CEO, Foundation for Child Development; former Assistant Commissioner for Early Childhood Education, New Jersey Department of Education (2006–09)
- Nancy Lauter, Professor Emeritus, Montclair State University

APPENDIX B: Methodology

The primary focus of the report is in-depth case studies of three model programs intended to strengthen early educator preparation in California. The study illustrates the possibilities and challenges of developing innovative, accessible, and supportive approaches to preparation.

Case Study Site Selection

Drawing on background research and conversations with early childhood education (ECE) experts, we used a snowball sampling technique to identify programs that:

- prepare early childhood educators to work with children from birth to age 5;
- culminate in the receipt of a credential or degree recognized by the state;
- intentionally recruit and support current or future educators from the local community who reflect the field's racial, ethnic, cultural, and linguistic diversity; and
- are designed consistent with research-based features of high-quality teacher preparation, described further below.

Collectively, the models also reflect a range of preparation approaches and targeted geographies (e.g., urban and rural locales, Northern and Southern California).

We complement these in-depth cases with a briefer examination of New Jersey's investments in early educator preparation in the late 1990s and early 2000s. The New Jersey case is useful for understanding what types of policies and structures may be necessary to quickly transform early educator preparation at scale. The case was selected as one of the few examples of a state making comprehensive investments to rapidly develop a corps of credentialed early educators.

Although this report is limited to three programs, there are clearly other strong models of early educator preparation in the state from which others can learn.

Features of Effective Teacher Preparation

The three California models described in this report were selected in part because they reflect design features that research suggests are associated with high-quality educator preparation, including:

- **A focus on foundational knowledge in child development and age-appropriate instruction.** Research and professional standards underscore that educators must be equipped with deep and specialized knowledge about topics such as the science of child development and learning, subject matter and learning trajectories for core content areas (e.g., literacy, numeracy), and principles of observation and assessment.[224] Educators must also be prepared to apply that expert knowledge to construct learning environments that are age appropriate and responsive to the diverse learning needs of individual children.[225]

- **Sustained and supervised clinical experience or job-embedded coaching.** Student teaching or other clinical practice is essential for high-quality teacher preparation.[226] These experiences are most effective when educators have opportunities to connect hands-on practice to knowledge developed through higher education courses or other structured learning opportunities.[227] Relatedly, a growing body of evidence indicates that coaching— expert mentorship providing individualized counsel and guidance—is an effective strategy

for enhancing the quality of educators' teaching and the achievement of their students, though the quality and duration of coaching matters for these outcomes.[228]

- **Supports and structures to promote student access and success.** Research has documented structural barriers to college access and completion, particularly among students of color. The high cost of college creates significant obstacles for many students, who must work or rely on student loans to attend. Providing financial supports, such as scholarships, can expand access to educator preparation programs.[229] Likewise, academic supports, such as advising or tutoring, can help keep students in school and on track to graduation.[230] Intensive advising provided by a counselor was an integral part of the Accelerated Study in Associate Programs, a program that more than doubled community college completion rates at the City University of New York.[231]

These features are uncommon in early educator preparation programs in California and other states.[232] The approaches highlighted in the report were identified through background research as models designed to incorporate these features. This study was not designed to evaluate the efficacy of the programs' implementation of these features, but rather to describe these and other approaches used to support educator success in their preparation and to cultivate a diverse pool of early educators.

Data Sources

Case studies of the FCC Apprenticeship, Skyline, and EDvance entailed the following:

- **Interviews of key stakeholders** such as program faculty, current program participants, program graduates, local early childhood leaders, community organization leaders, and others involved in program development and support. Interviews focused on the program's history and context, recruitment and application processes, curriculum content, instructional approaches, supports for student access and success, evidence of outcomes, and lessons learned through implementation.
- **Observations of program participants** in their current school, clinical placement, or apprenticeship site.
- **Observations of program courses** and other key program components (e.g., coaching, tutoring).
- An **analysis of research** on program features or effectiveness, including external evaluations and data on attainment, retention, and placements.

A **brief online survey** focused on exposure to key topics in ECE, the nature of mentoring and field experiences, and overall satisfaction with preparation received was distributed to program participants and alumni by program staff at Skyline College and EDvance. However, due to low response rates (below 50%), the survey results were excluded from analysis given the potential for bias and lack of representativeness. The FCC Apprenticeship was recently the subject of an external evaluation, so no survey was conducted.

The case study of New Jersey included interviews with key stakeholders involved in the Abbott Preschool Program from 1999 to 2007, including policymakers, university faculty members, and researchers. It also included analysis of extant research on the Abbott programs that was conducted both during and after the reforms.

Together, these data sources informed an in-depth, iterative analysis of program design, implementation challenges, and implications for state policy.

APPENDIX C: EDvance Know, Do, Believe Matrix

SAN FRANCISCO STATE UNIVERSITY PATH CURRICULUM BACKWARD DESIGN
KNOW, DO, BELIEVE MATRIX

	KNOW (K) (identify, describe, explain, discuss, differentiate)	DO (D) (demonstrate, practice, apply, synthesize, etc.)	BELIEVE (B) (value, appreciate, acknowledge, respect that…)
Theory (T)	• T-K1 describe developmental theories: sensory, temperamental, typical, atypical, cultural • T-K2 explain cognition, social-emotional, physical, language development • T-K3 explain multiple intelligence, adult learning theory • T-K4 describe pedagogical theories: constructive, liberatory, inquiry, Montessori, Waldorf, Reggio, CRT • T-K5 explain the project approach, inclusion, STEAM, language, teacher research, emergent, creative, early intervention • T-K6 describe leadership theory • T-K7 describe family systems theory	• T-D1 integrate and apply developmental, pedagogical, family systems, and leadership theories in practice • T-D2 clearly articulate theory to families, coworkers, and the field	• T-B1 values theory as an underpinning of change • T-B2 is committed to strength-based approaches • T-B3

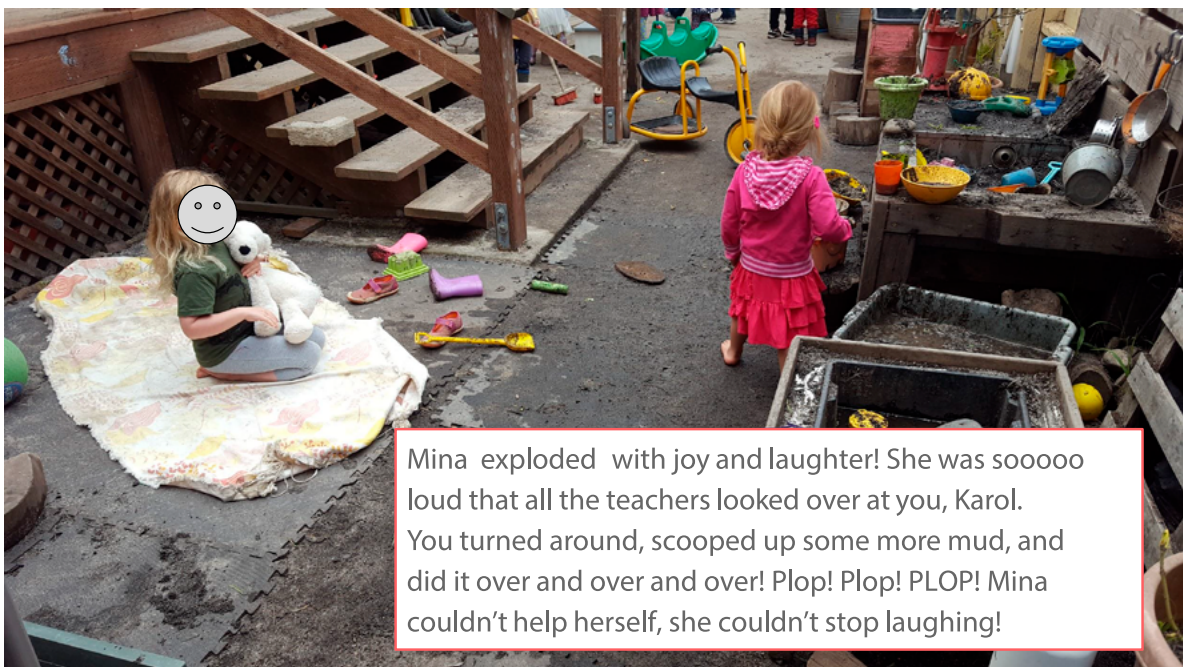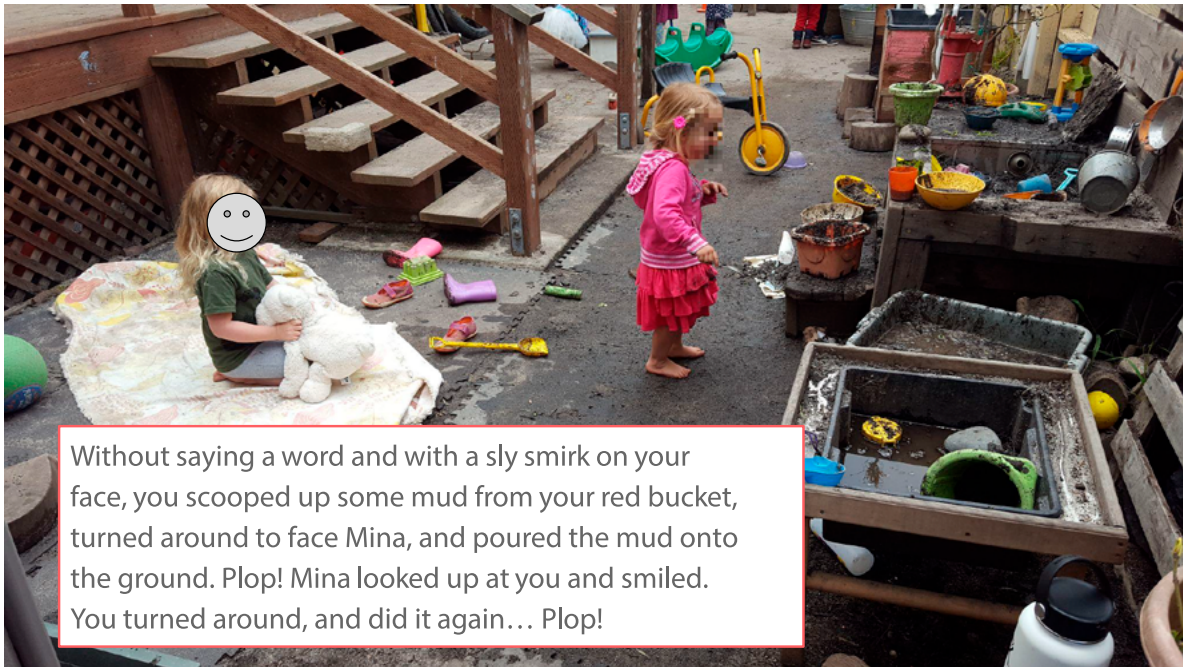|	KNOW (K) (identify, describe, explain, discuss, differentiate)	DO (D) (demonstrate, practice, apply, synthesize, etc.)	BELIEVE (B) (value, appreciate, acknowledge, respect that...)
Social Justice (SJ)	• SJ-K1 differentiate between equity v. equality • SJ-K2 describe culture, diversity, multiculturalism • SJ-K3 differentiate between asset v. deficit • SJ-K4 differentiate between race v. ethnicity • SJ-K5 identify and explain systems of power and privilege • SJ-K6 describe oppression • SJ-K7 describe cultural humility	• SJ-D1 integrate and apply social justice concepts and values in collaboration and problem-solving across multiple perspectives • SJ-D2 critically reflect on own beliefs, values, attitudes and understand how they intersect with systems of power and privilege • SJ-D3 advocate for social change at all levels of ecological model	• SJ-B1 values social justice as a framework for achieving ECE equity • SJ-B2 believes they are change agents • SJ-B3 adopt social justice as a personal and professional lens for practice in the field
The ECE Profession (ECE)	• ECE-K1 describe ECE Competencies • ECE-K2 describe characteristics, dispositions of ECE • ECE-K3 explain the ECE settings and structures in the field • ECE-K4 identify the kinds of ECE Programs • ECE-K5 identify standards and tools (QRS) • ECE-K6 recognize professional options	• ECE-D1 practice intentionality and reflection • ECE-D2 establish and promote trusting relationships • ECE-D3 pursue informed professional choices and options • ECE-D4 advocate for personal through systemic change • ECE-D5 contribute to knowledge and development in the field • ECE-D6 use standards and tools to make data-informed plans and practice • ECE-D7 advocate for self and others	• ECE-B1 believe their education has value; there is connection to their work • ECE-B2 believe every child and family deserve high-quality services • ECE-B3 believe working with young children is important • ECE-B4 believe their skills are valuable and transferable beyond ECE

	KNOW (K) (identify, describe, explain, discuss, differentiate)	DO (D) (demonstrate, practice, apply, synthesize, etc.)	BELIEVE (B) (value, appreciate, acknowledge, respect that...)
Research (R)	• R-K1 describe the role of observation, inquiry, assessment, methods, evaluation in the research process • R-K2 differentiate between basic and applied research • R-K3 explain the role of IRB in ECE research	• R-D1 articulate and apply the cycle of inquiry • R-D2 use research to inform and guide practice • R-D3 use observation tools to assess and support children and curriculum (development and pedagogy) • R-D4 collect, share, and apply one's own data for program and professional development • R-D5 analyze academic texts and scholarly, peer-reviewed articles	• R-B1 value the role of research in the advancement of the ECE field • R-B2 respect human subjects • R-B3 believe observation is a gift not a choice
Communication (C) Written and Oral	• C-K1 identify APA format for in-text citations and references • C-K2 differentiate between disciplinary writing conventions (observational reports, literature reviews, teacher reflections, etc.) • C-K3 identify library search tools • C-K4 identify characteristics of a professional and engaging presentation	• C-D1 accurately use APA format to write in-text citations and references • C-D2 accurately write in specific disciplinary conventions • C-D3 conduct library search and select relevant and credible sources • C-D4 plan and conduct professional and engaging presentations	• C-B1 recognize the value and importance of professional, disciplinary writing • C-B2 recognize the value and importance of oral communication • C-B3

|	KNOW (K) (identify, describe, explain, discuss, differentiate)	DO (D) (demonstrate, practice, apply, synthesize, etc.)	BELIEVE (B) (value, appreciate, acknowledge, respect that...)
Collaboration and Teamwork (CT)	• CT-K1 identify models of listening, feedback, planning, support, cultural response • CT-K2 describe teamwork and collaboration theories: schema, Jim Knight, thinking lens, systems theory • CT-K3 describe the stages of group process and group maintenance	• CT-D1 effectively manage group projects using delegation, organization, problem-solving, conflict resolution, facilitation, mediation, and editing • CT-D2 apply stages of group process	• CT-B1 value the cohort model • CT-B2 appreciate strength and process-based feedback • CT-B3 believe adult collaboration as a learning model for children • CT-B4 believe ECE is a team-driven profession
Professionalism (P)	• P-K1 identify and explain the ECE Code of ethics • P-K2 explain the importance of confidentiality • P-K3 describe the educational philosophy of agency	• P-D1 practice professional communication with children and their families • P-D2 practice professional habits such as punctuality, preparedness • P-D3 participate in communities of reflective practice • P-D4 develop and practice a personal philosophy of education and teaching	• P-B1 believe teaching is a valuable profession • P-B2 values oneself as a lifelong learner • P-B3 value being a passionate professional • P-B4 believe in their own ability to demonstrate their skills and knowledge

Source: Adapted from EDvance handout.

APPENDIX D: EDvance Learning Stories

Below is an excerpt of a learning story, written by an EDvance PATH student and shared with permission (children's names have been changed). The story includes the teacher's recounting of one child's actions at preschool, his analysis of how those actions demonstrate her development and learning, her father's reaction to the story, and developmental competencies she demonstrated. The complete learning story includes additional context about the child's behavior and how the teacher will continue to support the child's learning in the future.

Without saying a word and with a sly smirk on your face, you scooped up some mud from your red bucket, turned around to face Mina, and poured the mud onto the ground. Plop! Mina looked up at you and smiled. You turned around, and did it again… Plop!

Mina exploded with joy and laughter! She was sooooo loud that all the teachers looked over at you, Karol. You turned around, scooped up some more mud, and did it over and over and over! Plop! Plop! PLOP! Mina couldn't help herself, she couldn't stop laughing!

What It Means

Karol, you are so tuned in to others' feelings and needs. From sharing the mud kitchen with Finn to making Mina laugh so hysterically that all the teachers felt the urge to check on you two, it's no accident that everyone wants to play and be around you. Your emotional awareness at such a young age is astounding! You and your friends are at an age that many adults regard as hopelessly egocentric, yet you are living proof that adults can, and frequently, are wrong. While you were so engaged and fixated in your mud kitchen, you not only had

6 days later
April 24, 2018

7 days later
April 25, 2018
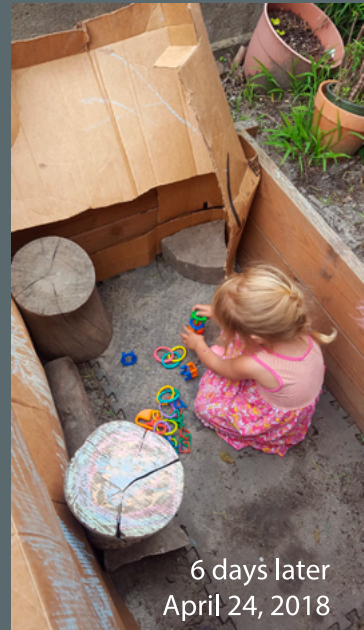
the mindfulness to notice Mina's depression and despair for her Mom, but you did something about it! You reminded her of the joy to be experienced even when we are away from the ones we love most. You made her feel so good that she was in a happy mood for the rest of the day. As your teachers, it's our job to support your emotional development by always accepting and responding to your feelings. Last week, you did exactly that for Mina. You are such an amazing friend, Karol.

Family Response

Hi Albert,

Thank you for the "Soup and Poop" story. My favorite thing about this story was getting an idea about how Karol acts when I'm not there. I'm always curious about how different she might be at school versus at home. Even though I know she has her good and bad moments like anyone else, it was great to read this story of her being so observant and empathetic. I am proud of her.

Thanks again,

Dad

DRDP Measures

- ☒ ATL-REG 1: Attention Maintenance
- ☒ 2: Self-Comforting
- ☒ 3: Imitation
- ☒ 4: Curiosity and Initiative in Learning
- ☒ 6: Engagement and Persistence
- ☒ 7: Shared Use of Space and Materials
- ☒ SED 1: Identity of Self in Relation to Others
- ☒ 2: Social and Emotional Understanding
- ☒ 3: Relationships and Social Interactions with Familiar Adults
- ☒ 4: Relationships and Social Interactions with Peers
- ☒ 5: Symbolic and Sociodramatic Play
- ☒ LLD 1: Understanding of Language (Receptive)
- ☒ 2: Responsiveness to Language
- ☒ 3: Communication and Use of Language (Expressive)
- ☒ 4: Reciprocal Communication and Conversation
- ☒ 8: Phonological Awareness

- ☒ ELD 1: Comprehension of English (Receptive English)
- ☒ 2: Self-Expression in English (Expressive English)
- ☒ COG 1: Spatial Relationships
- ☒ 2: Classification
- ☒ 3: Number Sense of Quantity
- ☒ 6: Patterning
- ☒ 8: Cause and Effect
- ☒ 9: Inquiry Through Observation and Investigation
- ☒ 10: Documentation and Communication of Inquiry
- ☒ 11: Knowledge of the Natural World
- ☒ PD-HLTH 1: Perceptual-Motor Skills and Movement Concepts
- ☒ 2: Gross Locomotor Movement Skills
- ☒ 3: Gross Motor Manipulative Skills
- ☒ 4: Fine Motor Manipulative Skills
- ☒ HSS 2: Sense of Place
- ☒ VPA 1: Visual Art

Research Inquiry Cycle for PATH Students and Faculty
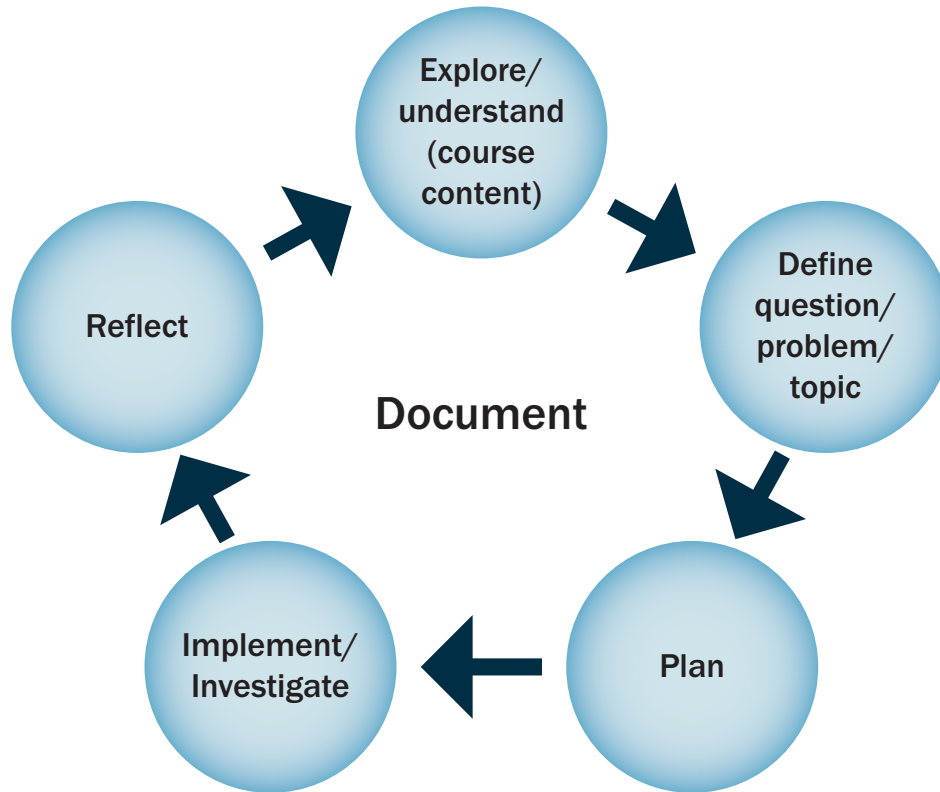
Explore/Understand: The concepts of early childhood education (developmental and pedagogical theory)

Define Questions: Solo, or in collaboration with instructors and/or peer cohort, identify a question or questions that help you understand and apply the concepts within your own practice

Plan: Develop systematic plans to investigate your question(s)

Implement/Investigate: Put plans into action, collect data and documentation for analysis and reflection

Reflect: With instructors and peer cohort, [reflect on] the implications of your implementation and documentation. What have you learned? What new questions emerge? What new content expands your investigation?

Source: Adapted from EDvance handout.

APPENDIX F: Funding Sources for Case Study Sites

Source	Family Child Care Apprenticeship	Skyline College Education/ Child Development Program	EDvance at San Francisco State University
Federal	• Workforce Innovation and Opportunity Act (*through California Workforce Accelerator Fund*)		
State	• Child Development Staff Retention Program (AB 212) • California Workforce Accelerator Fund • California Apprenticeship Initiative • State general fund	• Child Development Staff Retention Program (AB 212) • State general fund and Proposition 98 (*funding for public higher education*)[233] • Strong Workforce (*funding for career technical education*)	• Child Development Staff Retention Program (AB 212) • State general fund and Proposition 98 (*funding for public higher education*)[234] • Quality Counts California (*quality rating and improvement system*)
Local	• Resource and referral agencies (in-kind)	• First 5 California county grants • Skyline President's Innovation Fund	• First 5 California county grants • San Francisco Public Education Enrichment Fund
Private		• Student tuition • Philanthropic grants	• Student tuition • Philanthropic grants

Sources: Personal communication, Randi Wolfe, Training Grants Coordinator for the Early Educator Apprenticeship (2019, November 25); personal communication, Kristina Brower, Skyline College Student Services Coordinator EDU/CD (2019, November 25); personal communication, Lygia Stebbing, EDvance Director (2019, November 26).

Endnotes

1. Parker, E., Diffey, L., & Atchison, B. (2018). *How states fund pre-k: A primer for policymakers*. Denver, CO: Education Commission of the States. https://www.ecs.org/wp-content/uploads/How_States_Fund_Pre-K.pdf; Phillips, D. A., & Shonkoff, J. P. (Eds.). (2000). *From neurons to neighborhoods: The science of early childhood development.* Washington, DC: National Academies Press; Cannon, J., Kilburn, R., Karoly, L., Mattox, T., Muchow, A., & Buenaventura, M. (2017). *Investing Early: Taking Stock of Outcomes and Economic Returns From Early Childhood Programs.* Santa Monica, CA: RAND Corporation; Phillips, D. A., Lipsey, M. W., Dodge, K. A., Haskins, R., Bassok, D., Burchinal, M. R., Duncan, G. J., Dynarski, M., Magnuson, K. A., & Weiland, C. (2017). *Puzzling it out: The current state of scientific knowledge on pre-kindergarten effects. A consensus statement.* Washington, DC: Brookings Institution.

2. Whitebook, M., & McLean, C. (2017). *Educator expectations, qualifications, and earnings: Shared challenges and divergent systems in ECE and k–12.* Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. https://cscce.berkeley.edu/files/2017/Educator-Expectations-Qualifications-and-Earnings.pdf (accessed 08/22/19).

3. California, Connecticut, and North Carolina are three such states. National Conference for State Legislatures. (2019). Early care and education bill tracking. http://www.ncsl.org/research/human-services/early-care-and-education-bill-tracking.aspx (accessed 07/30/19).

4. Kelley, P., & Camilli, G. (2007). *The impact of teacher education on outcomes in center-based early childhood education programs: A meta-analysis*. (Working paper). New Brunswick, NJ: NIEER), 5–7; Bueno, M., Darling-Hammond, L., & Gonzales, G. (2008). *Preparing Teachers for Pre-K: What Policymakers Should Know and Be Able to Do*. Washington, DC: Pre-K Now.

5. Workman, E., Guernsey, L., & Mead, S. (2018). *Pre-k teachers and bachelor's degrees: Envisioning equitable access to high-quality preparation programs*. Washington, DC: New America. https://bellwethereducation.org/sites/default/files/New%20America%20and%20Bellwether%20Paper%20on%20PreK-Teachers-Bachelors-Degrees%20February%202018.pdf.

6. Kaplan, M. (2018). *It takes a community: Leveraging community college capacity to transform the early childhood workforce*. Washington, DC: Bellwether Education Partners; Sakai, L., Kipnis, F., Whitebook, M., & Schaack, D. (2014). Yes they can: Supporting bachelor degree attainment for early childhood practitioners. *Early Childhood Research and Practice*, *16*(1), 1.

7. Carver-Thomas, D. (2018). *Diversifying the teaching profession: How to recruit and retain teachers of color*. Palo Alto, CA: Learning Policy Institute; NAACP and Center for Responsible Lending. (2019). *Quicksand: Borrowers of color and the student debt crisis.* Washington, DC: Author. https://www.responsiblelending.org/sites/default/files/nodes/files/research-publication/crl-quicksand-student-debt-crisis-jul2019.pdf (accessed 08/22/19).

8. Whitebook, M., McLean, C., Austin, L. J. E., & Edwards, B. (2018). *Early childhood workforce index—2018*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. http://cscce.berkeley.edu/topic/early-childhood-workforce-index/2018/ (accessed 05/17/19).

9. Carver-Thomas, D. (2018). *Diversifying the teaching profession: How to recruit and retain teachers of color*. Palo Alto, CA: Learning Policy Institute.

10. Coffman, J., Green, M., Bruner, C., & Daniel, Y. (2010). *Reaching for quality: Lessons from New Jersey on raising preschool teacher qualifications while maintaining workforce diversity*. Washington, DC: The BUILD Initiative; Matthews, H. (2008). *Charting progress for babies in child care: Support a diverse and culturally competent workforce*. Washington, DC: Center for Law and Social Policy.

11. For example, a study by Ingersoll and colleagues found that first-year teachers who entered the profession with comprehensive preparation (e.g., completing multiple teaching methods courses, conducting classroom observations, and undertaking mentored student teaching) were two to three times less likely to leave the profession than teachers who received limited preparation before they entered the classroom. Ingersoll, R., Merrill, L., & May, H. (2014). *What are the effects of teacher education and preparation on beginning teacher attrition?* Philadelphia, PA: Consortium for Policy Research in Education, University of Pennsylvania.

12. See, for example: AB 123 (Calif. 2019–20). https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB123; Capital Public Radio. (2019). Advocates call California's budget a 'big win' for early childhood education. http://www.capradio.org/articles/2019/06/14/advocates-call-californias-budget-a-big-win-for-early-childhood-education/ (accessed 08/22/19).

13. Data from 2013 indicate that 46% of early educators identify as Hispanic, 38% as White, 10% as Asian, and 6% as Black. About half of California's educators speak only English, 37% speak Spanish, and the remainder speak another language. See: Migration Policy Institute. (2015). *California: Quick stats on young children and workers providing early childhood education and care (ECEC)*. Washington, DC: Author. https://www.migrationpolicy.org/sites/default/files/publications/ECEC-Workforce-California-FactSheet.pdf (accessed 09/15/19).

14. Darling-Hammond, L., & Bransford, J. (Eds.). *Preparing Teachers for a Changing World: What Teachers Should Learn and Be Able to Do*. San Francisco, CA: John Wiley & Sons. See also: Allen, L., & Kelly, B. B. (Eds.). (2015). *Transforming the Workforce for Children Birth Through Age 8: A Unifying Foundation*. Washington, DC: National Academies Press; Meloy, B., & Schachner, A. (2019). *Early childhood essentials: A framework for aligning child skills and educator competencies*. Palo Alto, CA: Learning Policy Institute.

15. Darling-Hammond, L., Hammerness, K., Grossman, P., Rust, F., & Shulman, L. (2007). "The Design of Teacher Education Programs" in Darling-Hammond, L., & Bransford, J. (Eds.). *Preparing Teachers for a Changing World: What Teachers Should Learn and Be Able to Do* (pp. 390–441). San Francisco, CA: John Wiley & Sons.

16. Carver-Thomas, D. (2018). *Diversifying the teaching profession: How to recruit and retain teachers of color*. Palo Alto, CA: Learning Policy Institute; Bettinger, E. P., & Baker, R. B. (2014). The effects of student coaching: An evaluation of a randomized experiment in student advising. *Educational Evaluation and Policy Analysis*, *36*(1), 3–19; Kolenovic, Z., Linderman, D., & Karp, M. M. (2013). Improving student outcomes via comprehensive supports: Three-year outcomes from CUNY's Accelerated Study in Associate Programs (ASAP). *Community College Review*, *41*(4), 271–291; Linderman, D., & Kolenovic, Z. (2013). Moving the completion needle at community colleges: CUNY's Accelerated Study in Associate Programs (ASAP). *Change: The Magazine of Higher Learning*, *45*(5), 43–50.

17. Podolsky, A., Kini, T., Bishop, J., & Darling-Hammond, L. (2016). *Solving the teacher shortage: How to attract and retain excellent educators*. Palo Alto, CA: Learning Policy Institute. https://learningpolicyinstitute.org/product/solving-teacher-shortage; Ingersoll, R., Merrill, L., & May, H. (2014). *What are the effects of teacher education and preparation on beginning teacher attrition?* Philadelphia, PA: Consortium for Policy Research in Education, University of Pennsylvania.

18. Allen, L., & Kelly, B. B. (Eds.). (2015). *Transforming the Workforce for Children Birth Through Age 8: A Unifying Foundation*. Washington, DC: National Academies Press; Whitebook, M. (2014). *Building a skilled teacher workforce: Shared and divergent challenges in early care and education and in grades k–12*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley.

19. Melnick, H., Ali, T. T., Gardner, M., Maier, A., & Wechsler, M. (2017). *Understanding California's early care and education system*. Palo Alto, CA: Learning Policy Institute. https://learningpolicyinstitute.org/product/understanding-californias-early-care-education-system-report.

20. Licensed family child care providers and licensed-exempt providers are not required to hold a California Child Development Permit.

21. California Commission on Teacher Credentialing. (2016). *Child Development Permits*. https://www.ctc.ca.gov/docs/default-source/leaflets/cl797.pdf?sfvrsn=0 (accessed 06/10/19).

22. Head Start Performance Standards, 45 C.F.R. §§1301–1302 (2016); Head Start Act of 2007, 42 U.S.C. §§636–648A (2007).

23. Completing an associate degree is one way to meet the educational requirements for the Teacher level of the California Child Development Permit. California Commission on Teacher Credentialing. (2016). *Child Development Permits*. https://www.ctc.ca.gov/docs/default-source/leaflets/cl797.pdf?sfvrsn=0 (accessed 06/10/19).

24. Transitional kindergarten is a preschool program for children who turn 5 just after the kindergarten cutoff date. California Commission on Teacher Credentialing. (2019). Teaching credential requirements. https://www.ctc.ca.gov/credentials/req-teaching (accessed 09/30/19); Melnick, H., Ali, T. T., Gardner, M., Maier, A., & Wechsler, M. (2017). *Understanding California's early care and education system*. Palo Alto, CA: Learning Policy Institute. https://learningpolicyinstitute.org/product/understanding-californias-early-care-education-system-report.

25. Whitebook, M., McLean, C., Austin, L. J. E., & Edwards, B. (2018). *Early childhood workforce index—2018*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. http://cscce.berkeley.edu/topic/early-childhood-workforce-index/2018/ (accessed 05/17/19); Barnett, W. S., & Kasmin, R. (n.d.). *Teacher compensation parity policies and state-funded pre-k programs*. New Brunswick, NJ: National Institute for Early Education Research and Center for the Study of Child Care Employment, University of California, Berkeley.

26. The survey data do not specify whether the degrees educators hold are in ECE. Austin, L. J. E., Edwards, B., & Whitebook, M. (2018). *California's ECE workforce: What we know now and the data deficit that remains*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. https://cscce.berkeley.edu/californias-ece-workforce/.

27. Whitebook, M., McLean, C., Austin, L. J. E., & Edwards, B. (2018). *Early childhood workforce index—2018*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. http://cscce.berkeley.edu/topic/early-childhood-workforce-index/2018/ (accessed 05/17/19).

28. Austin, L. J. E., Whitebook, M., Kipnis, F., Sakai, L., Abbasi, F., & Amanta, F. (2015). *Teaching the teachers of our youngest children: The state of early childhood higher education in California, 2015.* Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. http://twb8-ca.net/wpcontent/uploads/2016/05/Teaching-the-Teachers-of-Our-Youngest-Children.pdf.

29. Austin, L. J. E., Whitebook, M., Kipnis, F., Sakai, L., Abbasi, F., & Amanta, F. (2015). *Teaching the teachers of our youngest children: The state of early childhood higher education in California, 2015*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. http://twb8-ca.net/wpcontent/uploads/2016/05/Teaching-the-Teachers-of-Our-Youngest-Children.pdf.

30. Austin, L. J. E., Whitebook, M., Kipnis, F., Sakai, L., Abbasi, F., & Amanta, F. (2015). *Teaching the teachers of our youngest children: The state of early childhood higher education in California, 2015*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. http://twb8-ca.net/wpcontent/uploads/2016/05/Teaching-the-Teachers-of-Our-Youngest-Children.pdf; Stipek, D. (2018). *Getting down to facts II: Early childhood education in California*. Palo Alto, CA: Stanford University & Policy Analysis for California Education. https://www.gettingdowntofacts.com/sites/default/files/2018-09/GDTFII_Report_Stipek.pdf.

31. Austin, L. J. E., & Whitebook, M. (2015). *Early childhood higher education: Taking stock across the states*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. https://cscce.berkeley.edu/early-childhood-higher-education-taking-stock-across-the-states/.

32. Allen, L., & Kelly, B. B. (Eds.). (2015). *Transforming the Workforce for Children Birth Through Age 8: A Unifying Foundation*. Washington, DC: National Academies Press; National Association for the Education of Young Children. (n.d.). Power to the profession. https://www.naeyc.org/our-work/initiatives/profession (accessed 09/23/19).

33. First 5 California and California Department of Education. (2016). *Transforming the workforce for children birth through age 8: Implementation plan for the state of California*. Sacramento, CA: Authors. http://twb8-ca.net/files/CA_TWB8_Implementation_Plan.pdf; California Assembly Blue Ribbon Commission on Early Childhood Education. (2019, April). *Final report*. Sacramento, CA: Author. https://speaker.asmdc.org/sites/speaker.asmdc.org/files/pdf/BRC-Final-Report.pdf (accessed 09/28/19).

34. California Commission on Teacher Credentialing. (2019, February). *California standards for the teaching profession: Early childhood teacher standards and teaching performance expectations*. Sacramento, CA: Author. https://www.ctc.ca.gov/docs/default-source/commission/agendas/2019-02/2019-02-4b.pdf?sfvrsn=2.

35. California Commission on Teacher Credentialing. (2019, April). *California early childhood education: Program guidelines*. Sacramento, CA: Author. https://www.ctc.ca.gov/docs/default-source/educator-prep/standards/ece-program-guidelines-pdf.pdf?sfvrsn=4.

36. Kaplan, M. (2018). *It takes a community: Leveraging community college capacity to transform the early childhood workforce.* Washington, DC: Bellwether Education Partners; Sakai, L., Kipnis, F., Whitebook, M., & Schaack, D. (2014). Yes they can: Supporting bachelor degree attainment for early childhood practitioners. *Early Childhood Research and Practice*, *16*(1), 1.

37. NAACP and Center for Responsible Lending. (2019). *Quicksand: Borrowers of color and the student debt crisis*. Washington, DC: Author. https://www.responsiblelending.org/sites/default/files/nodes/files/research-publication/crl-quicksand-student-debt-crisis-jul2019.pdf; Finney, J. E. (2014). Why the finance model for public higher education is broken and must be fixed. *Penn Wharton Public Policy Initiative*, *2*(6). https://publicpolicy.wharton.upenn.edu/issue-brief/v2n6.php.

38. NAACP and Center for Responsible Lending. (2019). *Quicksand: Borrowers of color and the student debt crisis.* Washington, DC: Author. https://www.responsiblelending.org/sites/default/files/nodes/files/research-publication/crl-quicksand-student-debt-crisis-jul2019.pdf; Carver-Thomas, D. (2018). *Diversifying the teaching profession: How to recruit and retain teachers of color.* Palo Alto, CA: Learning Policy Institute; Finney, J. E. (2014). Why the finance model for public higher education is broken and must be fixed. *Penn Wharton Public Policy Initiative, 2*(6). https://publicpolicy.wharton.upenn.edu/issue-brief/v2n6.php.

39. The median income for a child care provider in California is just over $24,000, or the 7th percentile of all workers in the state. Whitebook, M., McLean, C., & Austin, L. J. E. (2016). *Early childhood workforce index 2016: California* [fact sheet]. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. https://cscce.berkeley.edu/files/2016/Index-2016-California.pdf.

40. Although students enroll in community colleges for reasons other than a degree—for example, early childhood educators take courses to attain a Child Development Teaching Permit that does not require a degree—degree attainment is still a goal for the majority of community college students. Public Policy Institute of California Higher Education Center. (2017). *Improving college completion.* San Francisco, CA: Author. https://www.ppic.org/wp-content/uploads/r_0917jj2r.pdf.

41. Carver-Thomas, D. (2018). *Diversifying the teaching profession: How to recruit and retain teachers of color*. Palo Alto, CA: Learning Policy Institute.

42. Kaplan, M. (2018). *It takes a community: Leveraging community college capacity to transform the early childhood workforce*. Washington, DC: Bellwether Education Partners.

43. Burdman, P., Booth, K., Bahr, P. R., McNaughtan, J., Jackson, G., & Thorn, C. (2018). *Multiple paths forward: Diversifying mathematics as a strategy for college success.* San Francisco, CA: WestEd & Just Equations. https://www.wested.org/resources/multiple-paths-forward/; Schak, O., Metzger, I., Bass, J., McCann, C., & English, J. (2017). *Developmental education: Challenges and strategies for reform*. Washington, DC: U.S. Department of Education, Office of English Language Acquisition. https://www2.ed.gov/about/offices/list/opepd/education-strategies.pdf.

44. Public Policy Institute of California Higher Education Center. (2017). *Improving college completion*. San Francisco, CA: Author. https://www.ppic.org/wp-content/uploads/r_0917jj2r.pdf.

45. Public Policy Institute of California Higher Education Center. (2017). *Increasing equity and diversity*. San Francisco, CA: Author. https://www.ppic.org/wp-content/uploads/r_0917orr.pdf.

46. Partnerships for Education, Articulation, and Coordination Through Higher Education. (2014). *Paper 2—Joining pipelines: Articulation and alignment between and among the California Community Colleges, the California State University System, and private universities in Los Angeles County*. Los Angeles, CA: Author. https://docs.wixstatic.com/ugd/fbd0dc_30731e13ef02471c91a4535de77a3a71.pdf.

47. Stipek, D. (2018). *Getting down to facts II: Early childhood education in California.* Palo Alto, CA: Stanford University & Policy Analysis for California Education. https://www.gettingdowntofacts.com/sites/default/files/2018-09/GDTFII_Report_Stipek.pdf; Partnerships for Education, Articulation and Coordination through Higher Education (PEACH). (2014). *Paper 2—Joining pipelines: Articulation and alignment between and among the California Community Colleges, the California State University System, and private universities in Los Angeles County*. Los Angeles, CA: Author. https://docs.wixstatic.com/ugd/fbd0dc_30731e13ef02471c91a4535de77a3a71.pdf.

48. California Community Colleges. (2018). What is AB 705? https://assessment.cccco.edu/ab-705-implementation (accessed 07/30/19).

49. California Assembly Blue Ribbon Commission on Early Childhood Education. (2019). *Final report.* Sacramento, CA: Author. https://speaker.asmdc.org/sites/speaker.asmdc.org/files/pdf/BRC-Final-Report.pdf (accessed 09/28/19).

50. SEIU Education & Support Fund. (n.d.). Programs. https://www.seiueducation.org/services-programs (accessed 10/24/19).

51. Center on Education and Skills, New America. (2019). *Building strong and inclusive economies through apprenticeship.* Washington, DC: New America. https://www.newamerica.org/education-policy/reports/state-policy-agenda-2019/.

52. SEIU. (n.d.). What type of work do SEIU members do? https://www.seiu.org/cards/these-fast-facts-will-tell-you-how-were-organized/ (accessed 06/10/19).

53. The Early Educator Apprenticeships began as an initiative of SEIU's Early Educator Training Center, which was founded to provide affordable, accessible education and training to early educators in home-based, center-based, and school-based settings. See: SEIU. (n.d.). About us. http://seiuearlyeducatortraining.org/sample-page/ (accessed 05/08/19).

54. Workman, E. (2019). *Earning while learning with early educator apprenticeship programs.* Washington, DC: New America. https://www.newamerica.org/education-policy/reports/earning-while-learning-with-early-educator-apprenticeship-programs/#registered-apprenticeship-could-improve-access-and-completion.

55. Unpublished data from Tikkun Consulting Inc. (personal communication, Randi Wolfe, Training Grants Coordinator for the Early Educator Apprenticeship, 2019, June 21).

56. California Commission on Teacher Credentialing. (2016). *Child Development Permits.* https://www.ctc.ca.gov/docs/default-source/leaflets/cl797.pdf?sfvrsn=0 (accessed 06/10/19).

57. Half of all lead teachers in Head Start programs are required to hold a bachelor's degree, though in practice many more (74%) now hold a 4-year degree in ECE or a related field. Kaplan, M. & Mead, S. (2017). *The best teachers for our littlest learners? Lessons from Head Start's last decade.* Washington, DC: Bellwether Education Partners. https://bellwethereducation.org/sites/default/files/Bellwether_HeadStartWorkforce.pdf.

58. Department of Industrial Relations. (2018). Apprenticeship standards of the SEIU Head Start Apprenticeship Program. https://www.dir.ca.gov/das/standards/100007_SEIUHeadStart.pdf (accessed 06/10/19).

59. SEIU Education & Support Fund. (n.d.). Programs. https://www.seiueducation.org/services-programs (accessed 10/24/19).

60. SEIU Education & Support Fund. (n.d.). Programs. https://www.seiueducation.org/services-programs (accessed 10/24/19).

61. Wolfe, R., & Chavarin, J. (2018). *ECEPTS Apprenticeships: Early care & education pathways to success*. Paper presented at the National Association for the Education of Young Children National Conference, Washington, DC.

62. Center on Education and Skills, New America. (2019). *Building strong and inclusive economies through apprenticeship*. Washington, DC: New America. https://www.newamerica.org/education-policy/reports/state-policy-agenda-2019/.

63. Wolfe served as the Grants Coordinator for the Early Educator Apprenticeships at the Service Employees International Union Educator Training Center from 2015 to 2019, including while the research for this case study was being conducted.

64. Unpublished data from Tikkun Consulting Inc. (personal communication, Randi Wolfe, Training Grants Coordinator for the Early Educator Apprenticeship, 2019, June 8).

65. Unpublished data from Tikkun Consulting Inc. (personal communication, Randi Wolfe, Training Grants Coordinator for the Early Educator Apprenticeship, 2019, April 11).

66. The initiative is funded with Proposition 98 dollars. Foundation for California Community Colleges. (n.d.). About CAI Hub. https://caihub.foundationccc.org/About-CAI-Hub (accessed 06/10/19).

67. Collins, L., Chavez, L., Simon, P., & Mollica, J. (2017). *Big ideas in workforce innovation: Catalyze change, accelerate impact.* Oakland, CA: Career Ladders Project. https://www.careerladdersproject.org/wp-content/uploads/2017/08/Catalyze-Change-Accelerate-Impact.pdf (accessed 06/10/19).

68. California Workforce Development Board. (n.d.). Workforce Accelerator Fund. https://cwdb.ca.gov/initiatives/workforce-accelerator-fund/ (accessed 06/10/19).

69. The registration process requires that program managers develop standards and form a committee to administer the apprenticeship in accordance with those standards. The standards they develop articulate key aspects of the apprenticeships' approach, including essential skills to be learned in each tier of each pathway, the number of hours required to learn those skills, the types of learning opportunities apprentices will be afforded, and the apprentices' wage schedule. See, for example: Department of Industrial Relations. (2018). Apprenticeship standards of the SEIU Head Start Apprenticeship Program. https://www.dir.ca.gov/das/standards/100007_SEIUHeadStart.pdf (accessed 06/10/19).

70. California Apprenticeship Council Title 9 Regulations, §210. https://www.dir.ca.gov/t8/210.html.

71. Whitebook, M., McLean, C., Austin, L. J. E., & Edwards, B. (2018). *The early childhood workforce index—2018.* Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. http://cscce.berkeley.edu/topic/early-childhood-workforce-index/2018/ (accessed 05/17/19).

72. California data suggest licensed family child care providers represent just under 10% of the home-based workforce (and 5% of the overall workforce). Calculated using data from Austin, L. J. E., Edwards, B., & Whitebook, M. (2018). *California's ECE workforce: What we know now and the data deficit that remains.* Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. http://cscce.berkeley.edu/californias-ece-workforce/ (accessed 06/10/19).

73. California Child Care Resource & Referral Network. (2017). *2017 California child care portfolio.* San Francisco, CA: Author. https://rrnetwork.org/research/child-care-portfolio (accessed 06/10/19). See also: Austin, L. J. E., Edwards, B., & Whitebook, M. (2018). *California's ECE workforce: What we know now and the data deficit that remains.* Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. http://cscce.berkeley.edu/californias-ece-workforce/ (accessed 06/10/19).

74. Austin, L. J. E., Edwards, B., & Whitebook, M. (2018). *California's ECE workforce: What we know now and the data deficit that remains.* Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. http://cscce.berkeley.edu/californias-ece-workforce/ (accessed 06/10/19).

75. King, C., Li, W., Welti, K., Middleton, A., & Hirilall, A. (2019). *California child care study: Final report.* Sacramento, CA: Child Trends.

76. Porter, T., Paulsell, D., Del Grosso, P., Avellar, S., Hass, R., & Vuong, L. (2010). *A review of the literature on home-based child care: Implications for future directions.* Princeton, NJ: Mathematica Policy Research. https://www.acf.hhs.gov/sites/default/files/opre/lit_review.pdf.

77. National Center on Early Childhood Quality Assurance. (2017). *Engaging family child care providers in quality improvement systems.* Fairfax, VA: Author. https://childcareta.acf.hhs.gov/sites/default/files/public/engaging_fcc_qi_systems_1.pdf.

78. California Department of Education. (2017). *Quality Counts California: Rating matrix with elements and points for consortia common tiers 1, 3, and 4.* https://drive.google.com/drive/folders/1dGYJIe-mezaXyGpmasgNrHRm1gGPjYLY.

79. SEIU Education & Support Fund. (n.d.). Programs. https://www.seiueducation.org/services-programs (accessed 10/24/19).

80. To register the FCC Apprenticeship with the Division of Apprenticeship Standards, program administrators needed to demonstrate that apprentices earned the equivalent of minimum wage or higher. They did so by showing how many children a provider would need to care for to receive state reimbursements that equal or exceed minimum wage.

81. For example, Los Angeles and San Fernando Valley are home to upward of 8,000 people per square mile. Antelope Valley's two largest cities—Lancaster and Palmdale—have approximately 1,600 and 1,400 people per square mile, respectively. The average population density in Los Angeles County as a whole is 2,000 people per square mile. United States Census Bureau. (2018). QuickFacts: Geography. [population per square mile, 2010]. https://www.census.gov/quickfacts/fact/table/losangelescountycalifornia,losangelescitycalifornia,sanfernandocitycalifornia,palmdalecitycalifornia,lancastercitycalifornia/PST045218.

82. Personal email with Randi Wolfe, Training Grants Coordinator for the Early Educator Apprenticeships (2019, June 21).

83. SEIU Education & Support Fund. (n.d.). Programs. https://www.seiueducation.org/services-programs (accessed 10/24/19); Melnick, H., Ali, T. T., Gardner, M., Maier, A., & Wechsler, M. (2017). *Understanding California's early care and education system*. Palo Alto, CA: Learning Policy Institute. https://learningpolicyinstitute.org/product/understanding-californias-early-care-education-system-report.

84. Unpublished data from Tikkun Consulting Inc. (personal communication, Randi Wolfe, Training Grants Coordinator for the Early Educator Apprenticeship, 2019, June 8).

85. Unpublished data from Tikkun Consulting Inc. (personal communication, Randi Wolfe, Training Grants Coordinator for the Early Educator Apprenticeship, 2019, May 29).

86. Racial and ethnic identifiers reported are those used in source data. Unpublished data from Tikkun Consulting Inc. (personal communication, Randi Wolfe, Training Grants Coordinator for the Early Educator Apprenticeship, 2019, May 7).

87. Austin, L. J. E., Edwards, B., & Whitebook, M. (2018). *California's ECE workforce: What we know now and the data deficit that remains.* Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. http://cscce.berkeley.edu/californias-ece-workforce/ (accessed 06/10/19).

88. California Commission on Teacher Credentialing. (2016). *Child Development Permits.* https://www.ctc.ca.gov/docs/default-source/leaflets/cl797.pdf?sfvrsn=0 (accessed 06/10/19).

89. Burdman, P., Booth, K., Thorn, C., Bahr, P. R., McNaughtan, J., & Jackson, G. (2018). *Multiple paths forward: Diversifying mathematics as a strategy for college success.* San Francisco, CA: WestEd & Just Equations. https://www.wested.org/resources/multiple-paths-forward/. See also: Whitebook, M., Schaack, D., Kipnis, F., Austin, L., & Sakai, L. (2013). *From aspiration to attainment: Practices that support educational success, Los Angeles Universal Preschool's Child Development Workforce Initiative.* Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley.

90. Foundation for California Community Colleges. (n.d.). California Apprenticeship Initiative. https://foundationccc.org/What-We-Do/Workforce-Development/Workforce-Services/California-Apprenticeship-Initiative (accessed 06/10/19).

91. Teachstone Training. (2018). *Why CLASS? Exploring the promise of the Classroom Assessment Scoring System (CLASS).* Charlottesville, VA: Author.

92. California Department of Education. (2017). Quality Counts California: Rating matrix with elements and points for consortia common tiers 1, 3, and 4. https://drive.google.com/drive/folders/1dGYJIe-mezaXyGpmasgNrHRm1gGPjYLY (accessed 08/31/19).

93. Child Care Resource Center. (n.d.). Family Child Care Home Education Network. https://ccrcca.org/parents/family-child-care-home-education-network (accessed 06/10/19).

94. Darling-Hammond, L., Oakes, J., Wojcikiewicz, S., Hyler, M. E., Guha, R., Podolsky, A., Kini, T., Cook-Harvey, C., Mercer, C., & Harrell, A. (2019). *Preparing Teachers for Deeper Learning.* Cambridge, MA: Harvard Education Press; Darling-Hammond, L., Hyler, M. E., Gardner, M., & Espinoza, D. (2017). *Effective teacher professional development.* Palo Alto, CA: Learning Policy Institute. https://learningpolicyinstitute.org/product/effective-teacher-professional-development-report.

95. National Center on Early Childhood Quality Assurance. (2017). *Engaging family child care providers in quality improvement systems.* Washington, DC: Author. https://childcareta.acf.hhs.gov/sites/default/files/public/engaging_fcc_qi_systems_1.pdf; Zinsser, K. M., Christensen, C. G., & Luz Torres, B. A. (2016). She's supporting them; who's supporting her? Preschool center-level social-emotional supports and teacher well-being. *Journal of School Psychology*, *59*, 55–66.

96. National Center on Early Childhood Quality Assurance. (2017). *Engaging family child care providers in quality improvement systems.* Washington, DC: Author. https://childcareta.acf.hhs.gov/sites/default/files/public/engaging_fcc_qi_systems_1.pdf.

97. U.S. Department of Health and Human Services & U.S. Department of Education. (2016). *High-quality early learning settings depend on a high-quality workforce: Low compensation undermines quality.* Washington, DC: Author.

98. AB 212, 1999–2000. (Calif. 2000). https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=199920000AB212.

99. Tuition at all California community colleges was $46 per unit for state residents as of 2019. Additional fees may be required. See: California Community Colleges. (n.d.). Pay for college. https://www.cccco.edu/Students/Pay-for-College (accessed 09/30/19).

100. California Commission on Teacher Credentialing. (2017). Fee schedule information. https://www.ctc.ca.gov/docs/default-source/leaflets/cl659.pdf?sfvrsn=4 (accessed 06/10/19).

101. Oncken, L. (2016.). "The First Pillar of Care: Cost" in Schulte, B., & Durana, A. (Eds.). *The New America Care Report.* Washington, DC: New America. https://www.newamerica.org/in-depth/care-report/first-pillar-care-cost/.

102. Costs vary based on the professional target being pursued and the specific supports provided (e.g., size of wage enhancement or the availability of tutoring or childcare). Unpublished data from Tikkun Consulting Inc. (personal communication, 2019, April 11).

103. New America. (2019, May 29). *Announcing the Partnership to Advance Youth Apprenticeship grantees and PAYA Network* [Press release]. https://www.newamerica.org/education-policy/press-releases/paya-grantee-announcement/ (accessed 06/10/19).

104. Child Care Aware. (2016). *Parents and the high cost of child care*. Arlington, VA: Author.

105. Whitebook, M., McLean, C., & Austin, L. J. E. (2016). *Early childhood workforce index 2016: California* [Fact sheet]. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. https://cscce.berkeley.edu/files/2016/Index-2016-California.pdf.

106. Austin, L. J. E., Edwards, B., & Whitebook, M. (2018). California's ECE workforce: *What we know now and the data deficit that remains*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. http://cscce.berkeley.edu/californias-ece-workforce/ (accessed 06/10/19).

107. The department also offers ECE certificates, which can signify that a student has completed the coursework necessary to be eligible for a California Child Development Permit. See: Skyline College. (n.d.). Degrees and Certificates. https://skylinecollege.edu/epicenter/degrees.php (accessed 10/29/19).

108. Office of Planning, Research, and Institutional Effectiveness (PRIE). (2019). *Skyline College student characteristics: Early Childhood Education/Education Courses*. San Bruno, CA: Skyline College. http://www.skylinecollege.edu/prie/assets/programdata/ece_edu_apr.pdf.

109. "Full-time" is defined as taking at least 12 units, or 4 courses. Office of Planning, Research, and Institutional Effectiveness (PRIE). (2019). *Skyline College student characteristics: Early Childhood Education/Education Courses*. San Bruno, CA: Skyline College. http://www.skylinecollege.edu/prie/assets/programdata/ece_edu_apr.pdf.

110. Personal email with Kristina Brower, Skyline College Student Services Coordinator EDU/CD (2019, March 28).

111. An additional 0.9% are taking courses for a 4-year college program, and 3% are taking classes for college preparation. Data for 2018–19. Office of Planning, Research, and Institutional Effectiveness (PRIE). (2019). *Skyline College student characteristics: Early Childhood Education/Education Courses*. San Bruno, CA: Skyline College. http://www.skylinecollege.edu/prie/assets/programdata/ece_edu_apr.pdf.

112. Students who said their primary goal was a career certificate had their education goal listed as "Acquire Job Skills/New Career," "Earn 2 year Certificate without Transfer," "Maintain Certificate/License," "Update Job Skills/ Job Advance," or "Earn Vocational Certificate without Transfer." See: Office of Planning, Research, and Institutional Effectiveness (PRIE). (2019). *Skyline College student characteristics: Early Childhood Education/Education Courses*. San Bruno, CA: Skyline College. http://www.skylinecollege.edu/prie/assets/programdata/ece_edu_apr.pdf.

113. Child Development Training Consortium. (n.d.). Curriculum Alignment Project (CAP). https://www.childdevelopment.org/cs/cdtc/print/htdocs/services_cap.htm (accessed 11/20/19).

114. Interviews conducted by the Learning Policy Institute with administrators of early educator stipends indicate that ECE students often inadvertently take many more than the required number of credits to graduate. Melnick, H., Meloy, B., Gardner, M., Wechsler, M., & Maier, A. (2018). *Building an early learning system that works: Next steps for California*. Palo Alto, CA: Learning Policy Institute.

115. Skyline College. (n.d.). Catalog 2019–20. Early Childhood Education Associate in Science Degree Program. http://catalog.skylinecollege.edu/current/programs/early-childhood-education-as.php (accessed 04/29/19).

116. Burdman, P., Booth, K., Thorn, C., Bahr, P. R., McNaughtan, J., & Jackson, G. (2018). *Multiple paths forward: Diversifying mathematics as a strategy for college success*. San Francisco, CA: WestEd & Just Equations. https://www.wested.org/resources/multiple-paths-forward/.

117. Data on Math for Elementary School Teachers is based on data from 2017–18 and 2018–19 and received by email communication with Skyline Planning, Research and Institutional Effectiveness (2019, July 31); data for in-person math classes at Skyline is for Fall 2018, retrieved from: California Community Colleges Management Information Systems Data Mart. (n.d.). Credit course retention/success rate summary report. https://datamart.cccco.edu/Outcomes/Course_Ret_Success.aspx (accessed 05/03/19).

118. Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Palo Alto, CA: Learning Policy Institute. https://learningpolicyinstitute.org/product/effective-teacher-professional-development-report.

119. Personal email with Kristina Brower, Skyline College Student Services Coordinator EDU/CD (2019, March 28).

120. Funding was originally provided through the President's Innovation Fund, designed to support new programs at the college. Staff expect to continue funding the stipend through Strong Workforce funds, available for Career Technical Education programs. Skyline College. (n.d.). President's Innovation Fund. https://www.skylinecollege.edu/presidentsoffice/innovationfund.php (accessed 04/29/19); Skyline College. (n.d.). Strong Workforce. http://skylinecollege.edu/careerandworkforce/strongworkforce.php (accessed 04/29/19).

121. California Early Childhood Mentor Program. (n.d.). California Early Childhood Mentor Program. https://www.ecementor.org/index.html (accessed 10/31/19).

122. Melnick, H., Ali, T. T., Gardner, M., Maier, A., & Wechsler, M. (2017). *Understanding California's early care and education system*. Palo Alto, CA: Learning Policy Institute. https://learningpolicyinstitute.org/product/understanding-californias-early-care-education-system-report.

123. California Community College Early Childhood Educators. (2017). A call for investment in the Community College Lab Schools. https://cccece.net/wp-content/uploads/2018/09/Investment-in-Lab-Schools-2017.docx (accessed 10/31/19).

124. Interview with Tina Watts, Child Development Services Coordinator, Business, Education and Professional Programs, Child Development Center, Skyline College (2019, March 13).

125. Kaplan, M. (2018). *It takes a community: Leveraging community college capacity to transform the early childhood workforce.* Washington, DC: Bellwether Education Partners; Kipnis, F., Whitebook, M., Almaraz, M., Sakai, L., & Austin, L. J. E. (2011). *Learning together: A study of six B.A. completion cohort programs in early care and education: Year 3*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. https://cscce.berkeley.edu/files/2011/LearningTogetherYear3Report1.pdf.

126. As quoted in Melnick, H., Meloy, B., Gardner, M., Wechsler, M., & Maier, A. (2018). *Building an early learning system that works: Next steps for California*. Palo Alto, CA: Learning Policy Institute.

127. Tuition support is available through the county QRIS Teacher Stipend Program, also known as AB 212. San Mateo County Office of Education. (2019). Teacher Stipend Program. https://www.smcoe.org/about/child-care-partnership-council/teacher-stipend-program.html.

128. With 47 degrees awarded, this suggests a 15% degree-completion rate. Sixty-two percent, or 198 of these students, stated their goal was to earn a degree, implying a 24% completion rate among this group. Data on student enrollment and goals from Office of Planning, Research, and Institutional Effectiveness (PRIE). (2019). *Skyline College student characteristics: Early Childhood Education/Education Courses*. San Bruno, CA: Skyline College. http://www.skylinecollege.edu/prie/assets/programdata/ece_edu_apr.pdf; data on degree completion from California Community Colleges Management Information Systems Data Mart. (n.d.). Program awards summary report. https://datamart.cccco.edu/Outcomes/Course_Ret_Success.aspx (accessed 10/30/19).

129. Zinshteyn, M. (2018, August 28). A California community college adopts a New York model that doubled graduation rates. *EdSource*. https://edsource.org/2018/a-california-community-college-adopts-a-new-york-model-that-doubled-graduation-rates/601701.

130. Sixty-three percent of students surveyed for this study reported having a Child Development Permit. However, due to the low survey response rate, it is impossible to know whether this is reflective of all EDU/CD students.

131. Data represent all Skyline students enrolled in fall 2018, not just those in EDU/CD. Forty percent were daytime students, and 27% took courses both during the day and at night. Eighty-five percent of Skyline students were enrolled in at least one in-person course. Skyline College. (2018). Fact Sheet 2018–19. https://skylinecollege.edu/aboutskyline/factsheet.php (accessed 04/29/19).

132. Austin, L. J. E., Whitebook, M., Kipnis, F., Sakai, L., Abbasi, F., & Amanta, F. (2015). *Teaching the teachers of our youngest children: The state of early childhood higher education in California, 2015.* Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. http://twb8-ca.net/wpcontent/uploads/2016/05/Teaching-the-Teachers-of-Our-Youngest-Children.pdf.

133. See, for example: California Assembly Blue Ribbon Commission on Early Childhood Education. (2019, April). *Final report*. Sacramento, CA: Author. https://speaker.asmdc.org/sites/speaker.asmdc.org/files/pdf/BRC-Final-Report.pdf (accessed 09/28/19).

134. EDvance. (n.d.). *EDvance: Program overview* [Program handout]. San Francisco, CA: Author.

135. California Commission on Teacher Credentialing. (2016). *Child Development Permits.* https://www.ctc.ca.gov/docs/default-source/leaflets/cl797.pdf?sfvrsn=0 (accessed 06/10/19).

136. EDvance. (n.d.). *EDvance: Program overview* [Program handout]. San Francisco, CA: Author.

137. San Francisco State University. (n.d.). Academic bulletin 2019–2020: The Marian Wright Edelman Institute for the Study of Children, Youth & Families. http://bulletin.sfsu.edu/resources/research-special-learning-facilities/edelman-institute/ (accessed 08/20/19).

138. San Francisco State University. (n.d.). Marian Wright Edelman Institute. http://edelman.sfsu.edu/ (accessed 08/20/19).

139. Austin, L. J. E., Whitebook, M., Kipnis, F., Sakai, L., Abbasi, F., & Amanta, F. (2015). *Teaching the teachers of our youngest children: The state of early childhood higher education in California, 2015.* Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. http://twb8-ca.net/wpcontent/uploads/2016/05/Teaching-the-Teachers-of-Our-Youngest-Children.pdf.

140. California State University. (n.d.). Student Dashboard. Graduation and continuation rates: First-time, full-time freshmen. http://asd.calstate.edu/dashboard/graduation-success.html (accessed 08/20/19).

141. California State University. (n.d.). Student Dashboard. Graduation and continuation rates: First-time, full-time freshmen. http://asd.calstate.edu/dashboard/graduation-success.html (accessed 08/20/19).

142. The Metro College Success Program and CAD department have collaborated on a child development–themed Metro Academy since before EDvance was created, though EDvance is now a key partner in the initiative.

143. Unpublished data from EDvance, Marian Wright Edelman Institute, San Francisco State University (personal communication, 2019, June 25).

144. Data retrieved from Department of Child and Adolescent Development, San Francisco State University (n.d.). About PATH. http://cad.sfsu.edu/path/about (accessed 09/25/19).

145. Unpublished data from EDvance, Marian Wright Edelman Institute, San Francisco State University (personal communication, 2019, June 29).

146. Office of Institutional Research, San Francisco State University. (n.d.). Student enrollment reports. https://ir.sfsu.edu/content/students-data (accessed 07/30/19).

147. A teacher permit requires 24 units (8 courses) in early childhood education and 16 units (5 courses) of general education courses, plus 175 days of field experience. California Commission on Teacher Credentialing. (2016). *Child Development Permits.* https://www.ctc.ca.gov/docs/default-source/leaflets/cl797.pdf?sfvrsn=0 (accessed 06/10/19).

148. San Francisco State University. (2019). *San Francisco State University Bulletin 2019–2020: Special Education (SPED).* San Francisco, CA: Author. http://bulletin.sfsu.edu/courses/sped/sped.pdf (accessed 08/20/19).

149. Recent changes to California law prohibit community colleges from requiring students to enroll in non-credit-bearing remedial courses.

150. Unpublished data from EDvance, Marian Wright Edelman Institute, San Francisco State University (personal communication, 2019, February 22).

151. Jumpstart. (2019). Our program. https://www.jstart.org/our-work/program/ (accessed 08/20/19).

152. Associated Students of San Francisco State University. (n.d.). Project Connect. http://asi.sfsu.edu/asprograms/%20project-connect/ (accessed 08/20/19).

153. Office of Student Financial Aid, San Francisco State University. (n.d.). AmeriCorps Awards. http://financialaid.sfsu.edu/newavoidpell (accessed 08/20/19).

154. Reflects tuition rate for 2018–19 school year. Office of Student Financial Aid, San Francisco State University. (n.d.). Cost of attendance 2018–2019. https://financialaid.sfsu.edu/Welcome (accessed 08/20/19); calculations by Learning Policy Institute.

155. Unpublished data from EDvance, Marian Wright Edelman Institute, San Francisco State University (personal communication, 2019, June 25).

156. San Francisco State University. (2019). SF SEED. https://sfseed.sfsu.edu (accessed 08/20/19).

157. San Francisco YouthWorks. (n.d.). Welcome to SF YouthWorks. http://sfyouthworks.org (accessed 08/20/19).

158. Unpublished data from EDvance, Marian Wright Edelman Institute, San Francisco State University (personal communication, 2019, June 25).

159. Valenzuela, A. (2017). *Grow your own educator programs: A review of the literature with an emphasis on equity-based approaches.* Austin, TX: Intercultural Development Research Association; Carver-Thomas, D. (2018). *Diversifying the teaching profession: How to recruit and retain teachers of color.* Palo Alto, CA: Learning Policy Institute.

160. Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development.* Palo Alto, CA: Learning Policy Institute. https://learningpolicyinstitute.org/product/effective-teacher-professional-development-report; Darling-Hammond, L., Oakes, J., Wojcikiewicz, S., Hyler, M. E., Guha, R., Podolsky, A., Kini, T., Cook-Harvey, C., Mercer, C., & Harrell, A. (2019). *Preparing Teachers for Deeper Learning.* Cambridge, MA: Harvard Education Press.

161. Dukakis, K., Bellm, D., Seer, N., & Lee, Y. (2007). *Chutes or ladders? Creating support services to help early childhood students succeed in higher education.* Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley; Price, D. V. (2005). *Learning communities and student success in postsecondary education: A background paper.* New York, NY: MDRC.

162. Kipnis, F., Whitebook, M., Almaraz, M., Sakai, L., & Austin, L. J. E. (2012). *Learning together: A study of six B.A. completion cohort programs in early care and education: Year 4.* Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. https://cscce.berkeley.edu/files/2012/LearningTogetherYear4Report.pdf.

163. Darling-Hammond, L., Oakes, J., Wojcikiewicz, S., Hyler, M. E., Guha, R., Podolsky, A., Kini, T., Cook-Harvey, C., Mercer, C., & Harrell, A. (2019). *Preparing Teachers for Deeper Learning.* Cambridge, MA: Harvard Education Press.

164. Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Palo Alto, CA: Learning Policy Institute.

165. NAACP and Center for Responsible Lending. (2019). *Quicksand: Borrowers of color and the student debt crisis.* Washington, DC: Author. https://www.responsiblelending.org/sites/default/files/nodes/files/research-publication/crl-quicksand-student-debt-crisis-jul2019.pdf; Carver-Thomas, D. (2018). *Diversifying the teaching profession: How to recruit and retain teachers of color.* Palo Alto, CA: Learning Policy Institute.

166. Bettinger, E. P., & Baker, R. B. (2014). The effects of student coaching: An evaluation of a randomized experiment in student advising. *Educational Evaluation and Policy Analysis*, *36*(1), 3–19; Kolenovic, Z., Linderman, D., & Karp, M. M. (2013). Improving student outcomes via comprehensive supports: Three-year outcomes from CUNY's Accelerated Study in Associate Programs (ASAP). *Community College Review*, *41*(4), 271–291; Linderman, D., & Kolenovic, Z. (2013). Moving the completion needle at community colleges: CUNY's Accelerated Study in Associate Programs (ASAP). *Change: The Magazine of Higher Learning*, *45*(5), 43–50.

167. Stipek, D. (2018). *Getting down to facts II: Early childhood education in California.* Palo Alto, CA: Stanford University & Policy Analysis for California Education. https://www.gettingdowntofacts.com/sites/default/files/2018-09/GDTFII_Report_Stipek.pdf.

168. Barnett, W. S., Jung, K., Youn, M., & Frede, E. (2013). *Abbott Preschool Program longitudinal effects study: Fifth grade follow-up.* New Brunswick, NJ: National Institute for Early Education Research.

169. Coffman, J., Green, M., Bruner, C., & Daniel, Y. (2010) *Reaching for quality: Lessons from New Jersey on raising preschool teacher qualifications while maintaining workforce diversity.* Washington, DC: The BUILD Initiative; By comparison, in 2018, just half of all states required a B.A. and credential. Friedman-Krauss, A. H., Barnett, W. S., Garver, K. A., Hodges, K. S., Weisenfeld, G. G., & DiCrecchio, N. (2019). *The state of preschool 2018.* New Brunswick, NJ: National Institute for Early Education Research.

170. A study conducted of Abbott classrooms in 1999–2000 found that of 262 classrooms rated on the 7-point Early Childhood Environmental Rating Scale, 34% of community-based programs were of inadequate quality (below 3) and only 9% were considered good (above 5). Barnett, W. S., Tarr, J. E., Esposito-Lamy, C., & Frede, E. (2001). *Fragile lives, shattered dreams: A report on implementation of preschool education in New Jersey's Abbott districts. CEER report.* New Brunswick, NJ: Rutgers University.

171. Enrolled students made up 20% of the enrolled student population in 2009–10. Chakrabarti, R., & Sutherland, S. (2013). New Jersey's Abbott Districts: Education finances during the Great Recession. *Federal Reserve Bank of New York: Current Issues in Economics and Finance, 19*(4).

172. *Abbott v. Burke*, 153 N.J. 480 (May 1998). https://edlawcenter.org/assets/files/pdfs/abott-v-burke/Abbott_V.pdf.

173. *Abbott v. Burke*, 163 N.J. 95 (Mar. 2000). https://edlawcenter.org/assets/files/pdfs/abott-v-burke/Abbott_VI.pdf.

174. Ryan, S., & Ackerman, D. J. (2005). Using pressure and support to create a qualified workforce. *Education Policy Analysis Archives*, *13*(23).

175. Lobman, C., Ryan, S., & McLaughlin, J. (2005). Reconstructing teacher education to prepare qualified preschool teachers: Lessons from New Jersey. *Early Childhood Research and Practice*, *7*(2), 23–39.

176. MacInnes, G. (2009). *In Plain Sight: Simple, Difficult Lessons from New Jersey's Expensive Effort to Close the Achievement Gap.* New York, NY: Century Foundation.

177. Lobman, C., Ryan, S., & McLaughlin, J. (2005). Reconstructing teacher education to prepare qualified preschool teachers: Lessons from New Jersey. *Early Childhood Research and Practice*, *7*(2), 23–39.

178. Ryan, S., & Ackerman, D. (2004). *Creating a qualified preschool teaching workforce: Part I—Getting qualified: A report on the efforts of preschool teachers in New Jersey's Abbott districts to improve their qualifications.* New Brunswick, NJ: National Institute for Early Education Research.

179. Coffman, J., Green, M., Bruner, C., & Daniel, Y. (2010) *Reaching for quality: Lessons from New Jersey on raising preschool teacher qualifications while maintaining workforce diversity.* Washington, DC: The BUILD Initiative.

180. Frede, E., Jung, K., Barnett, W. S., Lamy, C. E., & Figueras, A. (2007). *The Abbott Preschool Program longitudinal effects study (APPLES): Interim report.* New Brunswick, NJ: National Institute for Early Education Research.

181. Lobman, C., Ryan, S., & McLaughlin, J. (2005). Reconstructing teacher education to prepare qualified preschool teachers: Lessons from New Jersey. *Early Childhood Research and Practice*, *7*(2), 23–39.

182. Lobman, C., Ryan, S., McLaughlin, J., & Ackerman, D. J. (2016). *Educating preschool teachers: Mapping the teacher preparation and professional development system in New Jersey*. New Brunswick, NJ: Rutgers University Graduate School of Education. https://www.fcd-us.org/assets/2016/04/EducatingPreschoolTeachers.pdf; New Jersey Department of Education. (2019). Certification & Induction: Alternate Route. https://nj.gov/education/license/alternate.htm (accessed 07/30/19).

183. Lobman, C., Ryan, S., McLaughlin, J., & Ackerman, D. J. (2016). *Educating preschool teachers: Mapping the teacher preparation and professional development system in New Jersey*. New Brunswick, NJ: Rutgers University Graduate School of Education. https://www.fcd-us.org/assets/2016/04/EducatingPreschoolTeachers.pdf.

184. Ryan, S., & Ackerman, D. J. (2005). Using pressure and support to create a qualified workforce. *Education Policy Analysis Archives*, *13*(23).

185. Ryan, S., & Ackerman, D. J. (2005). Using pressure and support to create a qualified workforce. *Education Policy Analysis Archives*, *13*(23).

186. Interview with Ellen Frede, Senior Co-Director at the National Institute for Early Education Research and former Assistant to the New Jersey Commissioner of Education in the Office of Early Childhood Education at the New Jersey Department of Education (2019, July 29).

187. New Jersey Department of Early Learning. (2015, December). *Early Learning Matters*. https://www.nj.gov/education/ece/rttt/newsletter/December15.pdf.

188. Whitebook, M., Ryan, S., Kipnis, F., & Sakai, L. (2008). *Partnering for preschool: A study of center directors in New Jersey's mixed-delivery Abbott Program*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley.

189. New Jersey Commission on Higher Education. (2004). *A report on outcomes of Teacher Education Grants*. Trenton, NJ: Author; Bureau of Labor Statistics. (n.d.). CPI inflation calculator. https://data.bls.gov/cgi-bin/cpicalc.pl?cost1=13.00&year1=200301&year2=201908 (accessed 07/31/19).

190. New Jersey Commission on Higher Education. (2004). *A report on outcomes of Teacher Education Grants*. Trenton, NJ: Author.

191. Ryan, S., & Lobman, C. (2006). *Carrots and sticks: New Jersey's effort to create a qualified P-3 workforce*. New York, NY: Foundation for Child Development; Lobman, C., Ryan, S., McLaughlin, J., & Ackerman, D. J. (2016). *Educating preschool teachers: Mapping the teacher preparation and professional development system in New Jersey*. New Brunswick, NJ: Rutgers University Graduate School of Education. https://www.fcd-us.org/assets/2016/04/EducatingPreschoolTeachers.pdf.

192. Lobman, C., Ryan, S., McLaughlin, J., & Ackerman, D. J. (2016). *Educating preschool teachers: Mapping the teacher preparation and professional development system in New Jersey*. New Brunswick, NJ: Rutgers University Graduate School of Education. https://www.fcd-us.org/assets/2016/04/EducatingPreschoolTeachers.pdf.

193. New Jersey Commission on Higher Education. (2004). *A report on outcomes of Teacher Education Grants*. Trenton, NJ: Author.

194. Lobman, C., Ryan, S., & McLaughlin, J. (2005). Reconstructing teacher education to prepare qualified preschool teachers: Lessons from New Jersey. *Early Childhood Research and Practice*, *7*(2), 23–39.

195. Lobman, C., Ryan, S., & McLaughlin, J. (2005). Reconstructing teacher education to prepare qualified preschool teachers: Lessons from New Jersey. *Early Childhood Research and Practice*, *7*(2), 23–39.

196. Lobman, C., Ryan, S., & McLaughlin, J. (2005). Reconstructing teacher education to prepare qualified preschool teachers: Lessons from New Jersey. *Early Childhood Research and Practice*, *7*(2), 23–39.

197. Fairlie, R. W., Hoffmann, F., & Oreopoulos, P. (2014.) A community college instructor like me: Race and ethnicity interactions in the classroom. *American Economic Review*, *104*(8), 2567–2591.

198. Ryan, S., & Ackerman, D. J. (2005). Using pressure and support to create a qualified workforce. *Education Policy Analysis Archives*, *13*(23).

199. Lobman, C., Ryan, S., & McLaughlin, J. (2005). Reconstructing teacher education to prepare qualified preschool teachers: Lessons from New Jersey. *Early Childhood Research and Practice*, 7(2), 23–39.

200. Lobman, C., Ryan, S., & McLaughlin, J. (2005). Reconstructing teacher education to prepare qualified preschool teachers: Lessons from New Jersey. *Early Childhood Research and Practice*, 7(2), 23–39.

201. Lobman, C., Ryan, S., & McLaughlin, J. (2005). Reconstructing teacher education to prepare qualified preschool teachers: Lessons from New Jersey. *Early Childhood Research and Practice*, 7(2), 23–39.

202. Lobman, C., Ryan, S., & McLaughlin, J. (2004). *Toward a unified system of early childhood teacher education and professional development: Conversations with stakeholders*. New Brunswick, NJ: Rutgers Graduate School of Education.

203. Ryan, S., & Lobman, C. (2006). *Carrots and sticks: New Jersey's effort to create a qualified P-3 workforce*. New York, NY: Foundation for Child Development.

204. Interview with Ellen Frede, Senior Co-Director at the National Institute for Early Education Research and former Assistant to the NJ Commissioner of Education in the Office of Early Childhood Education at the New Jersey Department of Education (2019, July 29); For reference, see revised preschool implementation guidelines. New Jersey Department of Education Preschool Program. (2015). Implementation guidelines. https://www.nj.gov/education/ece/guide/impguidelines.pdf.

205. Whitebook, M., Ryan, S., Kipnis, F., & Sakai, L. (2008). *Partnering for preschool: A study of center directors in New Jersey's mixed-delivery Abbott Program*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley.

206. Lobman, C., Ryan, S., & McLaughlin, J. (2005). Reconstructing teacher education to prepare qualified preschool teachers: Lessons from New Jersey. *Early Childhood Research and Practice*, 7(2), 23–39.

207. Lobman, C., Ryan, S., & McLaughlin, J. (2004). *Toward a unified system of early childhood teacher education and professional development: Conversations with stakeholders*. New Brunswick, NJ: Rutgers Graduate School of Education.

208. Coffman, J., Green, M., Bruner, C., & Daniel, Y. (2010) *Reaching for quality: Lessons from New Jersey on raising preschool teacher qualifications while maintaining workforce diversity*. Washington, DC: The BUILD Initiative; interview with Ellen Frede, Senior Co-Director at the National Institute for Early Education Research and former Assistant to the New Jersey Commissioner of Education in the Office of Early Childhood Education at the New Jersey Department of Education (2019, July 29).

209. Coffman, J., Green, M., Bruner, C., & Daniel, Y. (2010) *Reaching for quality: Lessons from New Jersey on raising preschool teacher qualifications while maintaining workforce diversity*. Washington, DC: The BUILD Initiative.

210. Data are from a survey conducted by researchers from 2002 to 2003. Baseline data from before the Abbott program began in 1999 are not available. Ryan, S., Ackerman, D., & Song, H. (2005). *Getting qualified and becoming knowledgeable: Preschool teachers' perspectives on their professional preparation*. Unpublished manuscript. Rutgers University, New Brunswick, NJ.

211. Available data show that the percentage of educators in Head Start and private preschool programs identifying as African American or Hispanic decreased from 2002 to 2006, while the number of non-White educators in the workforce remained about the same. This suggests that the number of non-White educators in public schools increased. Data from Ackerman, D. (2008). Recruiting and retaining a qualified workforce. Unpublished manuscript, as cited in Coffman, J., Green, M., Bruner, C., & Daniel, Y. (2010). *Reaching for quality: Lessons from New Jersey on raising preschool teacher qualifications while maintaining workforce diversity*. Washington, DC: The BUILD Initiative.

212. Frede, E., Jung, K., Barnett, W. S., Lamy, C. E., & Figueras, A. (2007). *The Abbott Preschool Program longitudinal effects study (APPLES): Interim report*. New Brunswick, NJ: National Institute for Early Education Research; interview with Ellen Frede, Senior Co-Director at the National Institute for Early Education Research and former Assistant to the New Jersey Commissioner of Education in the Office of Early Childhood Education at the New Jersey Department of Education (2019, July 29).

213. Ryan, S., & Ackerman, D. (2004). *Creating a qualified preschool teaching workforce part I—Getting qualified: A report on the efforts of preschool teachers in New Jersey's Abbott districts to improve their qualifications*. New Brunswick, NJ: National Institute for Early Education Research.

214. Ryan, S., Ackerman, D., & Song, H. (2005). *Getting qualified and becoming knowledgeable: Preschool teachers' perspectives on their professional preparation*. Unpublished manuscript. Rutgers University, New Brunswick, NJ.

215. Goffin, S. G., & Daga, E. (2017). *2017 Early Childhood Education Leadership Development Compendium*. Goffin Strategy Group. https://goffinstrategygroup.com/wp-content/uploads/2017/10/ECELeadershipDevelopmentCompendium3rdEd-Updated-Final.pdf; Austin, L. J. E., Whitebook, M., Kipnis, F., Sakai, L., Abbasi, F., & Amanta, F. (2015). *Teaching the teachers of our youngest children: The state of early childhood higher education in California, 2015.* Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. http://twb8-ca.net/wpcontent/uploads/2016/05/Teaching-the-Teachers-of-Our-Youngest-Children.pdf.

216. California, for example, has provided higher education capacity-building grants for the creation of 2- and 4-year college partnerships. Initial evaluations indicate that the time and funding for faculty to collaborate across institutions were important to their success.

217. Sakai, L., Kipnis, F., Whitebook, M., & Schaack, D. (2014). Yes they can: Supporting bachelor degree attainment for early childhood practitioners. *Early Childhood Research and Practice*, *16*(1), 1.

218. Whitebook, M., McLean, C., Austin, L. J. E., & Edwards, B. (2018). *Early childhood workforce index—2018*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. http://cscce.berkeley.edu/topic/early-childhood-workforce-index/2018/ (accessed 05/17/19).

219. Carver-Thomas, D. (2018). *Diversifying the teaching profession: How to recruit and retain teachers of color*. Palo Alto, CA: Learning Policy Institute; NAACP and Center for Responsible Lending. (2019). *Quicksand: Borrowers of color and the student debt crisis.* Washington, DC: Author. https://www.responsiblelending.org/sites/default/files/nodes/files/research-publication/crl-quicksand-student-debt-crisis-jul2019.pdf.

220. California's standards, for example, were updated in 2019. See: California Commission on Teacher Credentialing. (2019, April). *California standards for the teaching profession: Early childhood teacher standards and teaching performance expectations.* Sacramento, CA: Author. https://www.ctc.ca.gov/docs/default-source/commission/agendas/2019-02/2019-02-4b.pdf?sfvrsn=2.

221. Allen, L, & Kelly, B. B. (Eds.). (2015). *Transforming the Workforce for Children Birth Through Age 8: A Unifying Foundation*. Washington, DC: National Academies Press.

222. Whitebook, M., McLean, C., Austin, L. J. E., & Edwards, B. (2018). *Early childhood workforce index—2018*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley. http://cscce.berkeley.edu/topic/early-childhood-workforce-index/2018/ (accessed 05/17/19).

223. Carver-Thomas, D., & Darling-Hammond, L. (2017). *Teacher turnover: Why it matters and what we can do about it.* Palo Alto, CA: Learning Policy Institute. https://learningpolicyinstitute.org/sites/default/files/product-files/Teacher_Turnover_REPORT.pdf.

224. Darling-Hammond, L., Hammerness, K., Grossman, P., Rust, F., & Shulman, L. (2007). "The Design of Teacher Education Programs" in Darling-Hammond, L., & Bransford, J. (Eds.). *Preparing Teachers for a Changing World: What Teachers Should Learn and Be Able to Do* (pp. 390–441). San Francisco, CA: John Wiley & Sons; Allen, L. & Kelly, B. B. (Eds.). (2015). *Transforming the Workforce for Children Birth Through Age 8: A Unifying Foundation.* Washington, DC: National Academies Press.

225. Darling-Hammond, L., Hammerness, K., Grossman, P., Rust, F., & Shulman, L. (2007). "The Design of Teacher Education Programs" in Darling-Hammond, L., & Bransford, J. (Eds.). *Preparing Teachers for a Changing World: What Teachers Should Learn and Be Able to Do* (pp. 390–441). San Francisco, CA: John Wiley & Sons; Allen, L., & Kelly, B. B. (Eds.). (2015). *Transforming the Workforce for Children Birth Through Age 8: A Unifying Foundation.* Washington, DC: National Academies Press; Meloy, B., & Schachner, A. (2019). *Early childhood essentials: A framework for aligning child skills and educator competencies*. Palo Alto, CA: Learning Policy Institute.

226. Darling-Hammond, L., Hammerness, K., Grossman, P., Rust, F., & Shulman, L. (2007). "The Design of Teacher Education Programs" in Darling-Hammond, L., & Bransford, J. (Eds.). *Preparing Teachers for a Changing World: What Teachers Should Learn and Be Able to Do* (pp. 390–441). San Francisco, CA: John Wiley & Sons.

227. Landry, S. H., Anthony, J. L., Swank, P. R., & Monseque-Bailey, P. (2009). Effectiveness of comprehensive professional development for teachers of at-risk preschoolers. *Journal of Educational Psychology*, *101*(2), 448.

228. Kraft, M. A., Blazar, D., & Hogan, D. (2018). The effect of teacher coaching on instruction and achievement: A meta-analysis of the causal evidence. *Review of Educational Research*, *88*(4), 547–588; Aikens, N., & Akers, L. (2011). *Background review of existing literature on coaching: Final report.* Washington, DC: Mathematica Policy Research.

229. Carver-Thomas, D. (2018). *Diversifying the teaching profession: How to recruit and retain teachers of color*. Palo Alto, CA: Learning Policy Institute.

230. Bettinger, E. P., & Baker, R. B. (2014). The effects of student coaching: An evaluation of a randomized experiment in student advising. *Educational Evaluation and Policy Analysis*, *36*(1), 3–19; Kolenovic, Z., Linderman, D., & Karp, M. M. (2013). Improving student outcomes via comprehensive supports: Three-year outcomes from CUNY's Accelerated Study in Associate Programs (ASAP). *Community College Review*, *41*(4), 271–291; Linderman, D., & Kolenovic, Z. (2013). Moving the completion needle at community colleges: CUNY's Accelerated Study in Associate Programs (ASAP). *Change: The Magazine of Higher Learning*, *45*(5), 43–50.

231. Levin, H. M. & Garcia, E. (2013). *Benefit-cost analysis of the Accelerated Study in Associate Programs (ASAP) of the City University of New York (CUNY)*. New York, NY: Center for Cost Benefit Studies in Education, Teachers College, Columbia University. http://www1.cuny.edu/sites/asap/wp-content/uploads/sites/8/2014/06/Levin_ASAP_Benefit_Cost_Report_FINAL_05222013.pdf.

232. Stipek, D. (2018). *Getting down to facts II: Early childhood education in California.* Palo Alto, CA: Stanford University & Policy Analysis for California Education. https://www.gettingdowntofacts.com/sites/default/files/2018-09/GDTFII_Report_Stipek.pdf.

233. Cook, K. (2017). *Just the facts: Higher education funding in California*. San Francisco, CA: Public Policy Institute of California. https://www.ppic.org/publication/higher-education-funding-in-california/.

234. Cook, K. (2017). *Just the facts: Higher education funding in California*. San Francisco, CA: Public Policy Institute of California. https://www.ppic.org/publication/higher-education-funding-in-california/.

About the Authors

Madelyn Gardner is a former Researcher and Policy Advisor at the Learning Policy Institute (LPI) and a current doctoral student studying education at Harvard University. Her work at LPI focused on issues of access and quality in state early learning systems, and on strategies for effective educator preparation and development. Previously, Gardner worked at the Next Generation think tank, where she supported the development of evidence-based policies to support children and families in California. She also taught English as a foreign language at Payap University in Thailand. She holds an M.A. in International Education Policy from Stanford University and a B.A. with honors in Anthropology and Global Development Studies from Grinnell College.

Hanna Melnick is a Research Analyst and Policy Advisor at LPI, where she co-leads the Early Childhood Learning team. Her work is focused on increasing equitable access to high-quality early learning experiences for all children, especially in California. She is also a member of the Deeper Learning team, with a focus on school climate, social-emotional learning, assessment, and teacher preparation. Previously, she taught elementary school in the Bay Area. Melnick holds an M.P.P. from the Goldman School of Public Policy at UC Berkeley and a B.A. from Harvard University.

Beth Meloy is an early childhood policy consultant, currently supporting the Early Learning and Care Division at the California Department of Education (CDE). Her work with CDE involves supporting its efforts to rethink, streamline, and improve its quality improvement and assurance systems, and liaising across government agencies to support alignment that leads to a more coherent system of early learning and care for all of California's children. Previously, Dr. Meloy served as a Senior Researcher and Policy Analyst at LPI and co-led the Early Childhood Learning team. Dr. Meloy previously worked in the U.S. Senate as an Education Policy Advisor and in the Policy and Planning Division of the Office of Head Start. She received a Ph.D. in Developmental Psychology from Georgetown University, an M.P.P. from the McCourt School of Public Policy at Georgetown University, and a B.A. in Psychology from the University of North Carolina at Chapel Hill.

Jessica Barajas is a Research and Policy Associate at LPI. Previously, Barajas worked as an early childhood educator at the Stanford Bing Nursery School and at The Primary School in East Palo Alto. Both schools are dedicated to meeting the social, emotional, cognitive, physical, and academic needs of the child, using a play-based mixed-age environment and an integrated health and education model, respectively. Before becoming an educator, Barajas was a research assistant at Stanford's Understanding Language Initiative focused on meeting the needs of English learners. She also served as the Manager of the Hispanic Heritage Foundation's Leaders on Fast Track (LOFT) Program, which is dedicated to identifying, inspiring, and preparing emerging Latino/a students for leadership roles in different industries. Barajas holds an M.A. in Policy, Leadership, and Organizational Studies from the Stanford Graduate School of Education and a B.A. in Political Science and Education with a minor in Latin American Studies from Swarthmore College. Barajas also holds a California teacher certification in Child Development.

LEARNING POLICY INSTITUTE

The Learning Policy Institute conducts and communicates independent, high-quality research to improve education policy and practice. Working with policymakers, researchers, educators, community groups, and others, the Institute seeks to advance evidence-based policies that support empowering and equitable learning for each and every child. Nonprofit and nonpartisan, the Institute connects policymakers and stakeholders at the local, state, and federal levels with the evidence, ideas, and actions needed to strengthen the education system from preschool through college and career readiness.