



TEACHING THE TEACHERS OF OUR
YOUNGEST CHILDREN:
THE STATE OF EARLY CHILDHOOD HIGHER
EDUCATION IN CALIFORNIA, 2015

OCTOBER 2015

By Lea J.E. Austin, Marcy Whitebook, Fran Kipnis, Laura Sakai,
Ferheen Abbasi, and Felippa Amanta



CENTER FOR THE STUDY OF CHILD CARE EMPLOYMENT
UNIVERSITY OF CALIFORNIA, BERKELEY

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Center for the Study of Child Care Employment
Institute for Research on Labor and Employment
University of California, Berkeley
2521 Channing Way #5555
Berkeley, CA 94720
(510) 643-8293
www.irl.berkeley.edu/cscce

The Center for the Study of Child Care Employment (CSCCE) was founded in 1999 to focus on achieving comprehensive public investments which enable and reward the early childhood workforce to deliver high-quality care and education for all children. To achieve this goal, CSCCE conducts cutting-edge research and proposes policy solutions aimed at improving how our nation prepares, supports, and rewards the early care and education workforce to ensure young children’s optimal development.

Suggested Citation:

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.

Teaching the Teachers of Our Youngest Children was made possible through the generous support of the David & Lucile Packard Foundation and the Heising-Simons Foundation.

The views presented in this report are those of the primary authors only and do not reflect the opinions of the report’s funders.

Editor: **Dan Bellm**

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TABLE OF CONTENTS

Introduction.....	4
Part 1. Early Childhood Higher Education, Then and Now.....	9
Finding One: Program Offerings.....	9
Finding Two: Field-Based Learning Experiences.....	16
Finding Three: Portrait of Faculty.....	19
Finding Four: Supporting Student Success.....	25
Finding Five: Program Challenges.....	27
Part 2. Early Childhood Higher Education, An Evolving Landscape	29
Finding Six: Family Engagement.....	29
Finding Seven: Early Math.....	34
Finding Eight: Preparing Transitional Kindergarten Teachers.....	39
Discussion.....	43
Charting a Path for Change: Recommendations.....	47
Concluding Thoughts.....	50
References.....	51

LIST OF TABLES & FIGURES

Figure 1: Primary Goal of California’s Early Childhood Degree Programs, by Degree Program

Table 1: List of Domains and Topics of Course Content Included in the California Early Childhood Higher Education Inventory

Figure 2: Required Course Content in Early Childhood Degree Programs Participating in California Early Childhood Higher Education Inventory: Selected Teaching Topics

Figure 3: Teaching Literacy Skills to Children: Age Group Focus of Programs Participating in California Early Childhood Higher Education Inventory, Selected Topics

Figure 4: Field Experiences Required in California Early Childhood Higher Education Degree Programs and Multiple Subject Credential Programs

Table 2: Number and Mean Hours of Practica Required by Programs Participating in the California Early Childhood Higher Education Inventory

Figure 5: Race/Ethnicity of Faculty Participating in the California Early Childhood Higher Education Inventory, by Degree Program

Figure 6: Age of Faculty Participating in the California Early Childhood Higher Education Inventory, by Degree Program

Figure 7: Importance of Inclusion of Domains in Teacher Preparation Programs: Percentage of Faculty Reporting “Very Important” for Infants and Toddlers, by Degree Program

Table 3: List of Family Engagement Topics Included in the California Early Childhood Higher Education Inventory

Table 4: List of Required Early Mathematics Topics in the California Early Childhood Higher Education Inventory, by Degree Program and Multiple Subject Credential Program

Figure 8: Capability of Faculty to Prepare Teachers to Work with Infants and Toddlers: Children's Mathematical Understanding; Reported by Faculty Participating in the California Early Childhood Higher Education Inventory, by Degree Program

Figure 9: Challenges in Preparing Students to Work in Transitional Kindergarten, as Reported by California Multiple Subject Credential Programs

INTRODUCTION

Midway through the second decade of this century, the importance of early care and education (ECE) to children's lifelong learning and to our nation's economic well-being is recognized up to the highest levels of government, and in businesses, schools, and living rooms across the country. This understanding represents a dramatic shift from earlier decades, and carries with it heightened expectations for what teachers of young children should know and be able to do (Whitebook, Phillips, & Howes, 2014), in light of mounting evidence about inadequate and unequal educational quality, particularly for children of color and those living in low-income families. (Yoshikawa et al., 2013; Hernandez, 2011; Karoly, 2009).

In 2015, the Institute of Medicine and the National Research Council of the National Academy of Sciences issued several recommendations to strengthen professional preparation standards for early childhood practitioners and the institutions responsible for their preparation and ongoing learning. *Transforming the Workforce for Children Birth Through Age 8: A Unifying Foundation* (Institute of Medicine [IOM] & National Research Council [NRC], 2015), includes among its recommendations: 1) transitioning to a minimum requirement of a bachelor's degree, with specialized knowledge and competencies, for all lead teachers working with children from birth to age eight; and 2) the development and enhancement of interdisciplinary higher education programs for early care and education professionals, including practice-based and supervised learning opportunities.¹

In recent years, California and other states have committed many public and private resources toward multiple efforts to improve educational services and to ensure that teacher education degree and certification programs can better prepare their graduates to meet the complex needs of young children of all ages (Swartz & Johnson, 2010; Ray, Bowman, & Robbins, 2006; Hyson, Horm, & Winton, 2012). Nonetheless, concern remains about the capacity of California's institutions of higher education to meet the evolving and increasing demands identified as critical to improving developmental and learning outcomes for the state's ethnically, racially, linguistically, and economically diverse young child population.

A decade ago, the Center for the Study of Child Care Employment (CSCCE) issued *Time to Revamp and Expand: Early Childhood Teacher Preparation Programs in California's Institutions of Higher Education* (Whitebook, Bellm, Lee, & Sakai, 2005). The findings identified multiple areas in need of improvement in California that were also common to early childhood higher education programs in other states (Maxwell, Lim, & Early, 2006). Specifically, the report called for increased resources to enable California institutions of higher education to:

¹ Adapted from "Transforming the Workforce for Children Birth Through Age 8: A Unifying Foundation," by the Institute of Medicine and National Research Council, copyright 2015 by the National Academy of Sciences.

- expand programs, particularly at the upper-division and graduate levels;
- update their courses of study to reflect new knowledge about children’s development and learning;
- increase and improve opportunities for field-based learning experiences;
- hire more full-time and more diverse early childhood faculty members;
- provide more support services to enable students, many of whom were among the first generation in their families to attend college and were working full time, to help them achieve their educational goals; and
- improve articulation among institutions offering the same and different levels of degrees.

In light of the changing expectations for effective preparation recommended by the Institute of Medicine/National Research Council, now seemed the appropriate time to revisit the status of early childhood higher education offerings in California and to examine progress toward implementing the recommendations of the 2005 report. To undertake this assessment, we implemented the *Early Childhood Higher Education Inventory* (Kipnis, Ryan, Austin, Whitebook, & Sakai, 2012a), a research tool used to describe the landscape of a state’s early childhood degree program offerings at the associate, bachelor’s, master’s, and doctoral levels.² Although the Inventory addresses many of the same topics as *Time to Revamp and Expand* (Whitebook et al., 2005), it looks more closely at variations among programs at different degree levels with respect to the age-group focus of course content and field-based learning experiences. (See **Box 1** for a description of Inventory Methodology.)

The Early Childhood Higher Education Landscape in California Today

Today, as was true ten years ago, a vast network of public and private institutions of higher education offers a complex array of early childhood degree programs. Over the last decade, the number of institutions offering early childhood degree programs increased nine percent, from 136 in 2004-5 (Whitebook et al., 2005) to 145 during the 2013-2014 academic year. (See map.) This network includes 103 public community colleges offering 190 associate degree programs, and 42 public and private colleges and universities offering 50 bachelor’s and

² California is one of seven states (along with Indiana, Nebraska, New Hampshire, New Jersey, New York, and Rhode Island) that have participated to date in the Inventory.

29 master's degree programs in early childhood.³ There is only one doctoral program currently operating in the state, as was the case in 2005. Due to changes in early childhood policy over the last decade, as described below, the 79 institutions of higher education currently offering a multiple subject credential program now constitute a segment of California's early childhood higher education landscape.

Our Inventory findings are presented in two sections. The first section, *Early Childhood Higher Education, Then and Now*, examines changes over the last decade in the extent to which:

- California ECE higher education programs offer the knowledge, skills, and experiences associated with effective teaching practice and program leadership;
- California ECE higher education programs have a faculty workforce prepared to provide early childhood practitioners with the necessary knowledge and skills associated with effective teaching practice and program leadership; and
- California ECE higher education programs have the resources to support student and faculty success.

The second section of this report, *Early Childhood Higher Education, An Evolving Landscape*, examines how these institutions of higher education are adapting to emerging research and changes in the California policy environment. Specifically, the report explores the extent to which:

- California ECE higher education programs have incorporated recent findings related to the importance of promoting early mathematical understanding, and of engaging families for young children's optimal development, learning, and school success; and
- California ECE higher education programs have responded to the introduction of Transitional Kindergarten (TK),⁴ a new grade designed to serve four-year-old children, into the California public school system, in which TK teachers are required to have a multiple subject credential, as are teachers of children in kindergarten and higher grades.

³ Based on information provided by the programs that participated in the Inventory, it is estimated that during the 2012-2013 academic year, 8,553 students were registered in bachelor's degree programs (6,505 in public and 2,048 in private institutions), and 562 students were registered in master's degree programs (216 in public and 346 in private). Public institutions estimated that they conferred 1,520 bachelor's and 113 master's degrees; private colleges estimated that they conferred 396 bachelor's and 235 master's degrees. Cumulative totals for students enrolled and degrees conferred at the associate degree level are not available, as these data were reported only in ranges.

⁴ For more information about Transitional Kindergarten in California, see <http://www.cde.ca.gov/ci/gs/em/kinderfaq.asp>



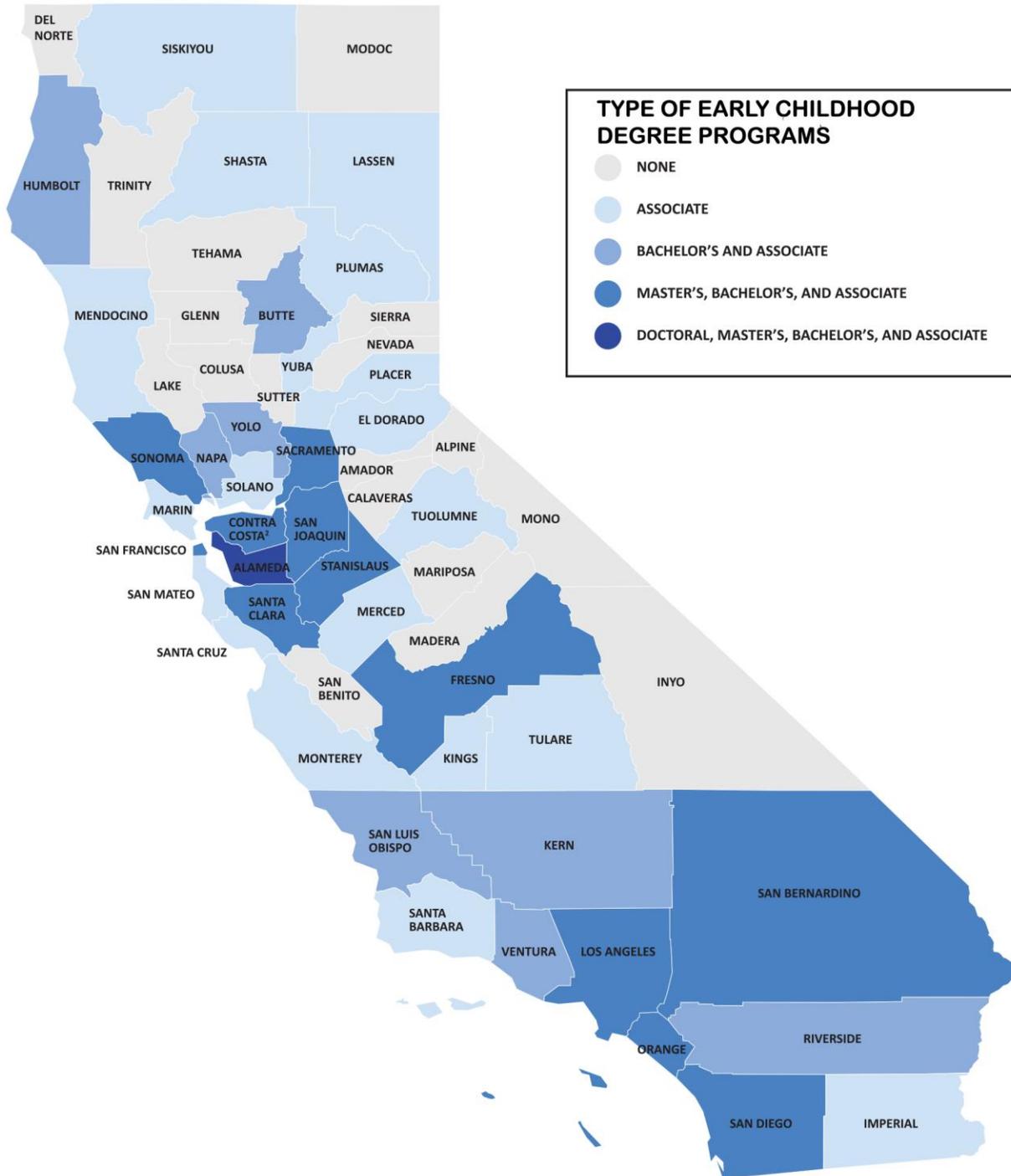
Box 1. Study Design

In the 2013-14 academic year, researchers from CSCCE implemented the Early Childhood Higher Education Inventory, which consists of three modules: a mapping of the population of higher education programs within a state; an online program survey completed by the degree/credential program leader (e.g., dean or coordinator); and an online faculty survey completed by individual faculty members. The program findings reported here are drawn from a final sample of 116 associate, 35 bachelor's, and 19 master's degree programs, and 47 multiple subject credential programs. With respect to multiple subject credential programs, the Inventory examined course content related to a limited number of topics and field-based learning experiences.

The faculty findings are drawn from a final sample of 255 community college faculty members, and 104 bachelor's and graduate degree faculty members. (Multiple subject credential faculty members were not surveyed.)

See the Technical Report for a detailed description of the methods of this study, including the sampling frame and selection, field procedures, response rate, survey questions, and detailed findings from the Inventory.

Distribution of California Institutions of Higher Education Offering Early Childhood Degree Programs¹



¹Population of degree programs based on data collected in the 2013-2014 academic year.

²Contra Costa county has associate and master's degree programs, but no bachelor's degree programs.

PART 1: EARLY CHILDHOOD HIGHER EDUCATION, THEN AND NOW

This section of the report examines changes over the last decade in program offerings, faculty characteristics, student supports, and institutional challenges.

FINDING ONE: PROGRAM OFFERINGS Goals, Course Content, and Age-Group Focus

Today, as was true a decade ago, titles ascribed to California early childhood degree programs do not represent a clear indication of their content. California early

childhood degree programs report differing goals for preparing students, with one-half or fewer identifying teacher and/or administrator preparation as their primary goal. These programs offer a range of topics related to child development and approaches to teaching, but content focused on infants and toddlers is notably underrepresented at the bachelor's and master's degree levels. Some progress has been made in the last decade with regard to incorporating content relevant to preparing educators to work with the linguistically diverse population of young children in California. Few programs offer in-depth focus on topics related to leadership and administration.



What we asked about goals, course content and age-group focus:

Program leaders participating in the Inventory (e.g., deans, coordinators) were asked to indicate the primary goal of their degree program(s) among four options:

1. to prepare students for teaching and/or administrative roles in early childhood education settings only;
2. to prepare students for teaching and/or administrative roles in early childhood and elementary education settings;
3. to prepare students for the roles of early interventionists or early childhood special educators; or
4. to prepare students for multiple roles involving young children, working in many types of settings.

Program leaders were also asked to identify course content topics for the degree related to:

1. child development and learning;
2. teaching (comprising three primary categories):
 - teaching diverse child populations,
 - teaching and curriculum,
 - teaching skills in early childhood settings
3. leadership and administration.



For child development and learning and teaching, respondents were asked to indicate whether a series of specific topics were required, and if so, the age-group or grade-level focus of each. For the leadership and administration domain, respondents were asked to identify course content topics offered to students in the degree program.⁵ (See **Table 1.**)

Program Goals

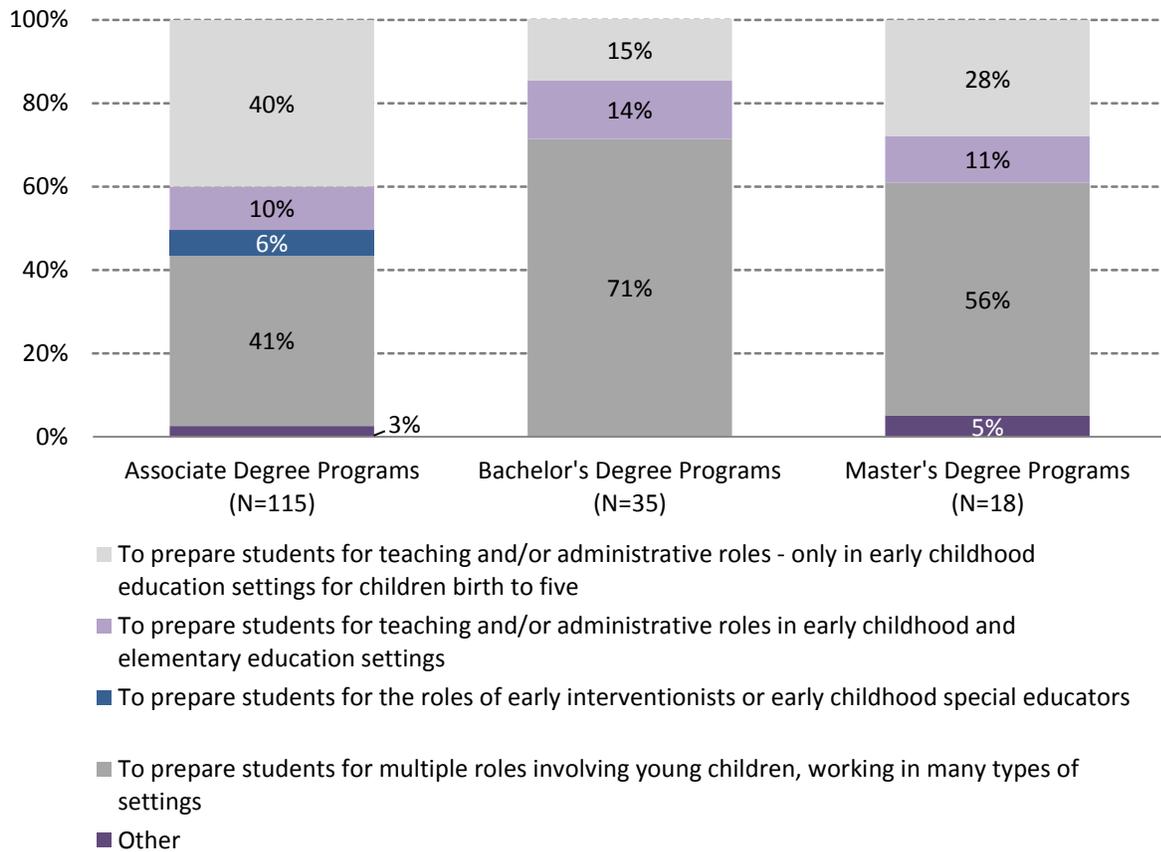
In California, any course of study within one of several disciplines related to early childhood, however tangentially, has historically been considered acceptable educational preparation for teaching in or administering a program serving children prior to kindergarten. In contrast, programs to prepare teachers and administrators working with children in kindergarten and the early primary grades reflect far greater uniformity and stringency related to specific teacher and principal preparation standards and certification requirements (California Commission on Teacher Credentialing, 2014). Despite progress in alignment of courses at the community college level since the 2005 study,⁶ there remains great variability among upper-division and graduate degree programs with regard to what constitutes a course of study for those who will teach children before kindergarten.

At the associate degree level, approximately one-half of degree programs identified teacher and administrator preparation as their primary goal. At the bachelor's degree level, slightly more than one-quarter (29 percent) of programs, and at the master's degree level, more than one-third (39 percent) identified preparing teachers and administrators as their primary goal. Bachelor's degree programs (71 percent) and master's degree programs (56 percent) were more likely than associate degree programs (41 percent) to report that their primary goal was to "prepare students to work in multiple roles involving young children working in many types of settings." (See **Figure 1.**) It is important to recognize that even if programs reported a primary goal other than teacher or administrator preparation, these degree programs may still be preparing students for teaching and administrative roles. In the current study, almost all associate degree programs, and approximately two-thirds of bachelor's degree programs, reported serving those already working in the early childhood field as well as more traditional pre-service students, and the majority of master's degree programs reported serving those already working in the early childhood field.

⁵ Multiple subject credential program leaders were only asked about the domains of child development and learning, as those programs are explicitly focused on teaching and leadership and administration issues are covered by a separate administrative services credential program.

⁶ The Curriculum Alignment Project (CAP) is a 24 unit lower-division program of study. As of this publication 86 community colleges were aligned with the CAP program. https://www.childdevelopment.org/cs/cdte/print/htdocs/services_cap.htm

Figure 1: Primary Goal of California's Early Childhood Higher Education Degree Programs, by Degree Program



Course Content

There is broad consensus that early childhood education degree programs should include course content that encompasses theories of development and learning, subject matter content (e.g., literacy), and methods of teaching (IOM & NRC, 2015). In addition, leadership preparation, program administration, and principles and practices related to adult learning are considered key content for creating high-quality experiences for children (IOM & NRC, 2015; Whitebook et al., 2012; Whitebook & Ryan, 2011). The 2005 report noted several gaps in program content related to the domains of child development and learning, teaching, and leadership, and underscored the dearth of attention to dual language learning. The report urged institutions to revamp their offerings in line with the latest developments in research and in response to the ever-increasing diversity of California’s young child population.

Table 1. List of Domains and Topics of Course Content Included in the California Early Childhood Higher Education Inventory

Domain	Topics
Child Development and Learning	Domains of development
	Effects of culture, gender, class, and race on development
	Effects of disability on development
	Development of children's understanding and skills
Teaching	Child development theory and its relationship to teaching
	<i>Teaching diverse child populations:</i> children who are living in poverty, are dual language learners, have special needs, and/or exhibit challenging behaviors, and children from diverse ethnic and cultural backgrounds
	<i>Teaching and curriculum:</i> using integrated curriculum and play in teaching, supporting social and physical development, and teaching art, literacy, science, and social studies
Leadership and Administration	<i>Teaching skills in early childhood settings:</i> using observation, assessment and documentation to inform teaching and learning, different teaching techniques, and classroom management
	<i>Supervision:</i> Building relationships with other teachers and/or early childhood professionals, guiding practitioners in implementing curriculum and appropriate teaching strategies, adult supervision, adult learning styles, and assessment and documentation to inform teaching and learning
	<i>Program operations:</i> Assessment and documentation to inform program quality, program planning, development, and operations (e.g., child enrollment, daily operations), using technology to maintain records and enhance program operations, managing and maintaining facilities, human resources/personnel policies, fiscal procedures and management, grant management and proposal writing, and organizational development and change
	<i>Policy and advocacy:</i> The early childhood system and public policy, effective advocacy, and policy analysis and development

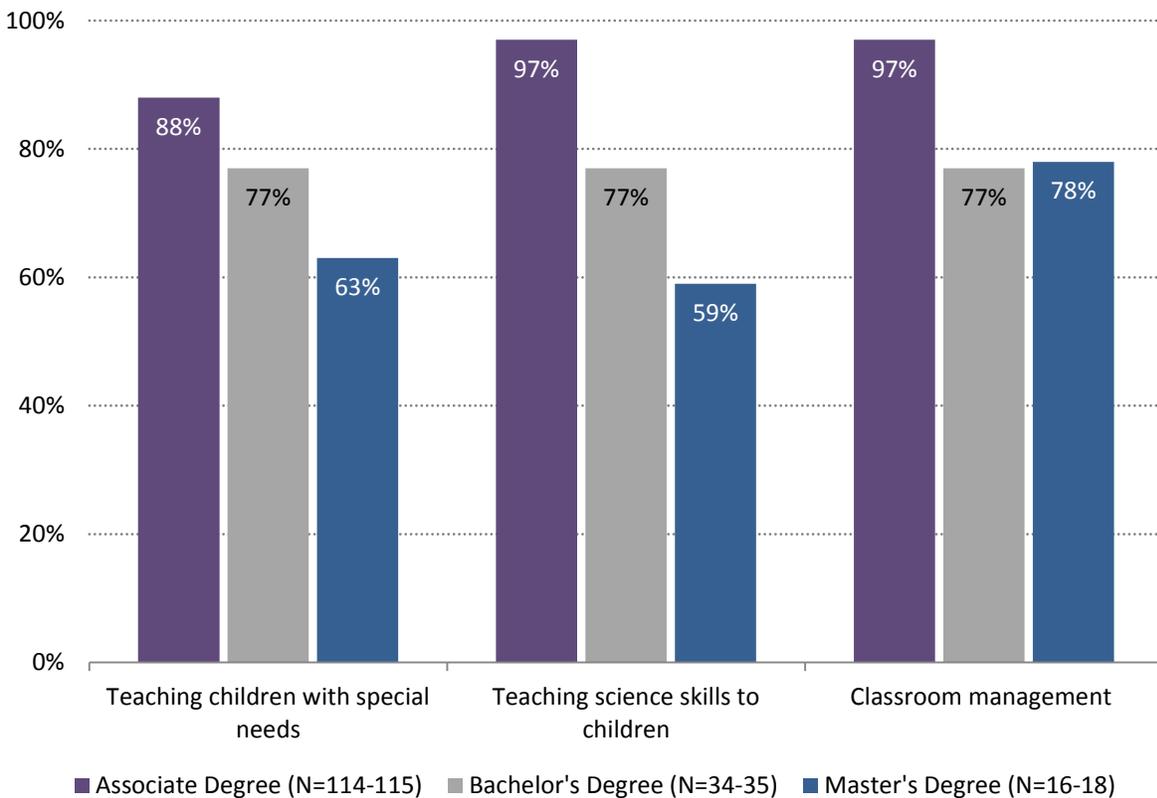
Child Development and Learning

Almost all degree programs at all levels, as well as the multiple subject credential programs, reported requiring a wide range of course content related to the domains of child development and learning. While the Inventory did not assess the depth of required content or the quality of teaching, it suggests that some progress has occurred with respect to providing relevant course content. The most frequently required topics were “understanding the effects of culture, gender, class, and race on child development” and “knowledge of children’s development in different domains (e.g., language development, cognitive development),” with each reported as being required by all (100 percent) bachelor’s degree and credential programs, and nearly all associate (99 percent) and master’s (94 percent) degree programs.

Teaching

The majority of programs across degree levels required coursework in each of the three dimensions of the teaching domain. Associate degree programs, however, were more likely than bachelor's and master's degree programs to require this coursework. In the area of teaching diverse child populations, in contrast to 2005, when limited course offerings focused on dual language learning, nearly all (94 percent) of associate degree programs reported requiring the topic of "teaching children who are dual language learners," compared to 80 percent of bachelor's and 75 percent of master's degree programs. In the area of teaching and curriculum, 97 percent of associate degree programs reported "teaching literacy skills to children" as a required content area, compared to 83 percent of bachelor's degree and 59 percent of master's degree programs. This pattern is consistent across the three dimensions of teaching, as shown in the examples in **Figure 2**.

Figure 2: Required Course Content in Early Childhood Degree Programs Participating in California Early Childhood Higher Education Inventory
Selected Topics: Teaching Domains



Administration and Leadership

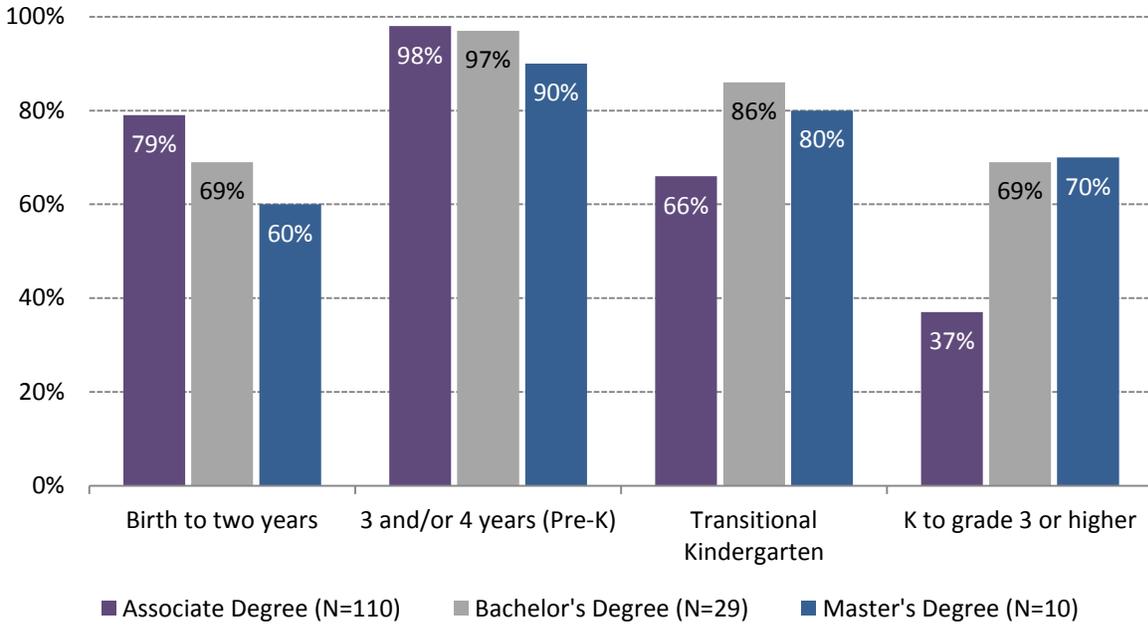
Course content was not consistently offered to prepare practitioners for early childhood supervisory, administrative, or other leadership roles. Overall, a smaller percentage of degree programs across all types reported offering coursework related to this domain than any others. In 2005, it appeared that degree programs were adequately covering issues related to leadership and administration, but a more nuanced assessment in the Inventory focused on additional administration and leadership topics. Only four of the 13 topics examined in the Inventory—assessment and documentation to inform program planning; building relationships with other teachers and/or early childhood professionals; guiding practitioners in implementing curriculum and appropriate teaching strategies; and effective advocacy, policy analysis and development—were offered by three-quarters or more of all programs, across degree levels. Generally, associate degree programs were more likely than bachelor’s or master’s degree programs to offer administration and leadership topics, with the exception of topics related to research and advocacy.

Age-Group Focus

Depending on the ages of children they serve and the setting in which they work, teachers of young children are often perceived as requiring different levels of skill and knowledge, and are expected to meet significantly more or less rigorous qualifications. These differing expectations contribute to long-standing variations in content and design among early childhood higher education programs (Whitebook et al., 2012). The Institute of Medicine and the National Research Council conclude that this variability is both inconsistent with the science of early development and learning, and unlikely to produce consistently effective preparation of teachers and administrators for early learning programs serving children from birth to age eight (IOM & NRC, 2015).

Thus, creating an integrated birth-to-age-eight early care and education system, inclusive of the institutions preparing the ECE workforce, has emerged as a major goal, as well as a metric by which to measure progress toward it. In contrast to the earlier study, which focused on programs serving children from birth to age four, the Inventory intentionally sought to compare differences among programs along the age continuum. When teaching topics were required, degree programs across all types consistently reported that these were focused on preschool-age children. (See **Figure 3**.) The focus on children in the younger and older age groups varied by topic and degree program. Associate degree programs consistently reported focusing many topics on infants and toddlers, whereas bachelor’s and master’s degree programs were less likely to report a focus on this population. Associate degree programs were the least likely of the degree programs to focus coursework on children in Transitional Kindergarten or in the early elementary grades.

**Figure 3: Teaching Literacy Skills to Children:
Age Group Focus of Programs Participating in California Early
Childhood Higher Education Inventory, Selected Topics**



FINDING TWO: FIELD-BASED LEARNING EXPERIENCES
Requirements and Age-Group Focus

Students earning a multiple subject credential are required to complete a student teaching experience, and typically participate in additional practica. In

contrast, the majority of students completing an early childhood degree participate only in practica, and there is little consistency as to the duration and frequency of the experiences. Compared to a decade ago, even fewer degree programs require field-based exposure to infants and toddlers.



What we asked about field-based experiences:

Program leaders were asked about two distinct types of field experiences: student teaching and practica. For each, respondents were asked to indicate whether the field-based experience was required in order to attain the degree or complete the credential program, and if it was, they were asked a series of questions pertaining to the field experience, including: 1) timing and duration; 2) age-group focus; and 3) differences in field experience structures for pre-service and experienced teachers.

There is widespread agreement that field-based learning experiences for teachers working with children of all ages are critically important to developing new teaching skills or improving upon existing ones (IOM & NRC, 2015; Whitebook et al., 2012; National Council for Accreditation of Teacher Education, 2010b). In the K-12 community, this recognition has led to efforts to increase the length of student teaching, introduce it earlier into a program of study, and strengthen student supervision during field experience (Whitebook et al., 2012). In early childhood, however, there is no widely implemented standard of field experience, such as student teaching (Whitebook, 2014; Whitebook & Ryan, 2011). This structural divide in educator preparation runs counter to the call by many experts, policy makers, and stakeholders for a more integrated birth-to-age-eight educational system (IOM & NRC, 2015).



Definition of Field-Based Experiences:

Inventory respondents were asked about two types of field-based learning experiences, and were provided the following definitions:

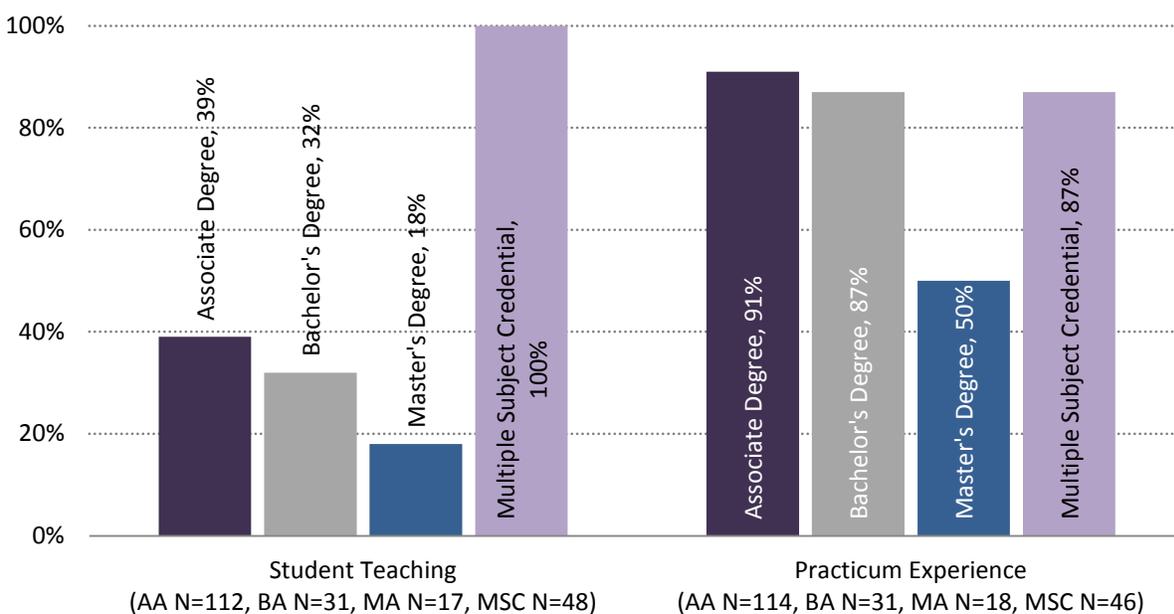
Student teaching: full-time immersion in a classroom, with increasing responsibility for curriculum planning and teaching, and supervision by cooperating teacher.

Practicum: an experience that is short in duration, associated with a course, often focused on a particular skill or population of children, and supervised by a faculty member and/or mentor.

Required Field-Based Experiences

Reflecting state standards for multiple subject credential programs, all credential programs (100 percent) required a student teaching experience, and most (87 percent) also required at least one practicum. In contrast, less than 40 percent of any of the degree programs required student teaching (see **Figure 4**), although nearly all associate (91 percent), most bachelor's (87 percent), and one-half of master's degree programs (50 percent) required at least one practicum. The associate (47 percent) and bachelor's degree (60 percent) programs that reported their primary goal as preparing students for teaching and/or administrative roles were significantly more likely to require a student teaching experience than were associate (32 percent) or bachelor's degree programs (19 percent) that identified a different primary goal, such as preparing students for working in a range of roles and settings with young children.

Figure 4: Field Experiences Required in California Early Childhood Higher Education Degree Programs and Multiple Subject Credential Programs



Number, Duration, and Timing of Practicum Experiences

Practica are the most common, and likely to be the only, type of field-based learning experience required in most California early childhood degree programs.⁷ The total number of practica and the total number or hours that students were engaged in a practicum are difficult to assess, however, as the number of on-site hours typically required to complete a practicum course ranged from a minimum of three to more than 150 hours per practicum. (See **Table 2**.)

⁷ Because practica were the primary strategy for field-based experiences required by degree programs, they are the focus of this section of the report. For details related to the number, duration, and timing of student teaching requirements, see the Technical Report.

Table 2. Number and Mean Hours of Practica Required by Programs Participating in the California Early Childhood Higher Education Inventory

Program Type	Only one practicum required	Two practica required	Three practica required	Four or more practica required	Mean number of hours typically required to complete a practicum course
Associate Degree (n=103)	49%	45%	5%	1%	80
Bachelor's Degree (n=26)	11%	35%	35%	19%	67
Master's Degree (n=8)	25%	38%	25%	12%	122
Multiple Subject Credential (n=40)	17%	25%	10%	48%	65

The first practicum experience occurred at different times for students at different degree levels. Bachelor's (74 percent) and master's degree programs (86 percent) were more likely than associate degree programs (45 percent) to require that the first practicum occur at the beginning or middle, rather than at the end, of the course of study. Most multiple subject credential programs (70 percent) required that the first practicum occur during the beginning of the course of study. Practicum experiences for early childhood students were relatively unlikely to reflect a student's status as either a novice or an experienced teacher. Only about one-third of degree programs at all levels reported structuring practicum experiences differently for novice and experienced teachers.

Age-Group Focus

An age-group focus was not required for practica by the majority of programs across degree levels. When it was required, it was more likely to be focused on preschoolers than on younger or older children, while in the multiple subject credential programs, the age-group requirements for practica were mostly with children from kindergarten through older grades. Across degree levels, the percentage of programs requiring a focus on infants and toddlers was not only lower than for older children, but this focus had declined by nearly one-half from a decade ago, with less than one-quarter of degree programs in the current study (16 percent of associate, 22 percent of bachelor's, and 11 percent of master's programs) reporting a required focus on infants and toddlers.

FINDING THREE: PORTRAIT OF FACULTY
Employment Status, Demographics,
Professional Background, and Professional
Development Needs.

California early childhood degree programs continue to rely heavily on part-time faculty, as they did a decade ago, and they do so at rates higher than other departments in their institutions.

California's early childhood faculty workforce reflects limited racial, ethnic, and linguistic diversity, although there has been some increase in racial and ethnic diversity over the last decade. Most faculty members report having had academic preparation specific to early childhood, and having worked in an array of ECE professional roles. Most faculty, however, have not had recent experience with teaching children, particularly infants and toddlers. California early childhood degree program faculty members are particularly interested in professional development related to utilizing technology in teaching and working with college students, children, and families from diverse racial, ethnic, linguistic and economic backgrounds.



What we asked about faculty members:

Program leaders were asked to provide information about the number of full- and part-time faculty members employed in their degree programs during the term in which the survey was administered.

Individual faculty members were asked to identify:

1. their demographic characteristics, including: a) age, b) race/ethnicity, and c) linguistic capacity;
2. their academic background;
3. the primary focus of their teaching and expertise related to children across the birth-to-age-eight spectrum;
4. professional experiences in addition to college-level teaching in the previous ten years; and
5. professional development in which they had participated, and topics on which they would find it helpful to gain additional knowledge and training.

Employment Status

The reliance on part-time faculty is endemic throughout institutions of higher education; they now constitute two-thirds or more of faculty in colleges and universities nationwide (Curtis & Thornton, 2014; Center for Community College Student Engagement, 2014), which can pose multiple challenges for both faculty and for students. Part-time faculty are often not integrated as members of the department in which they teach, or engaged in curriculum planning and professional development; further, they are typically paid to teach particular courses, and are

not paid for additional responsibilities such as student advising or program evaluation (Center for Community College Student Engagement, 2014). This can lead to full-time faculty taking on a greater share of administrative, institutional, and student advising responsibilities in addition to their teaching load (Center for Community College Student Engagement, 2014; Curtis & Thornton, 2014; Whitebook et al., 2005; Maxwell, Lim, & Early, 2006; Early & Winton, 2001).

A decade ago, in California, as in the rest of the nation, ECE departments were staffed with a higher proportion of part-time faculty than were other departments on campus (Whitebook et al., 2005; Maxwell et al., 2006). This condition persists today.⁸ Among the approximately 2,000 faculty members comprising the early childhood teacher education workforce in California, 77 percent of associate degree faculty, 70 percent of bachelor's degree faculty, and 61 percent of master's degree faculty were employed part-time.

Demographic Characteristics

The absence of racial and ethnic minorities among early childhood faculty, in stark contrast to early childhood student and child populations, is also well documented, with implications for the extent of focus on diversity in coursework and the availability of role models for students (Bornfreund, 2011; Johnson et al., 2010; Lim, Maxwell, Able-Boone, & Zimmer, 2009; Maxwell, Lim, & Early, 2006; Whitebook et al., 2005; Ray, Bowman, & Robbins, 2006; Early & Winton, 2001). The preponderance of older faculty, many of whom are likely to retire in the coming decade, raises further concern about the adequacy of the pipeline for future faculty (Kipnis et al., 2012a, 2012b, 2013).

Racial, Ethnic, and Linguistic Diversity

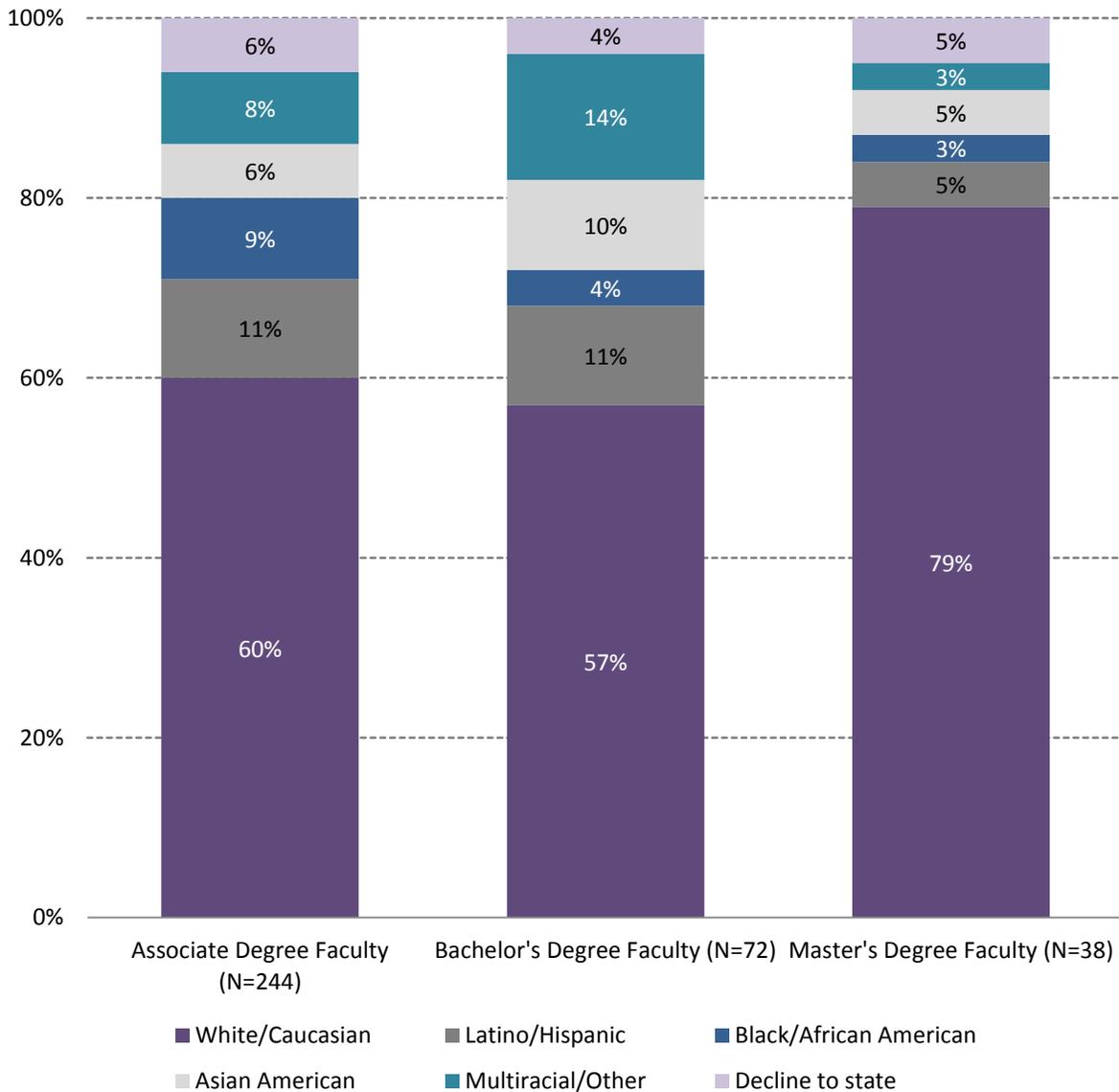
The 2005 report on early childhood teacher preparation programs in California's institutions of higher education (Whitebook et al., 2005) noted that faculty were much less diverse than the student population. Nearly one-half of all degree programs reported a 100-percent White, non-Hispanic full-time faculty, and one-quarter reported a 100-percent White, non-Hispanic part-time faculty. Overall, programs estimated that about 20 percent of faculty members were fluent in a language other than English.

Based on the sample of faculty participating in the Inventory, there appears to be some increase in the racial and ethnic diversity of the early childhood faculty workforce over the last decade, but across degree levels, most faculty members continue to identify as

⁸ In 2013, 70 percent of faculty across the California Community College system were part-time, compared to 77 percent of ECE faculty. One-half of faculty across the California State University (CSU) system held part-time status, compared to 70 percent of ECE faculty employed in CSU bachelor's programs and 61 percent employed in CSU master's programs (California Community Colleges Chancellor's Office, 2013; California State University Office of the Chancellor, 2013). Comparable data were not available for faculty in the University of California system, or across private institutions in California.

White/Caucasian and monolingual. (See **Figure 5.**) While more than 95 percent of faculty members at all degree levels reported fluency in English, less than 15 percent reported fluency in Spanish; no other language was identified by more than four percent of faculty. Nearly 90 percent of faculty members across all degree levels identified Spanish as a language they would like to know in order to communicate better with their students.

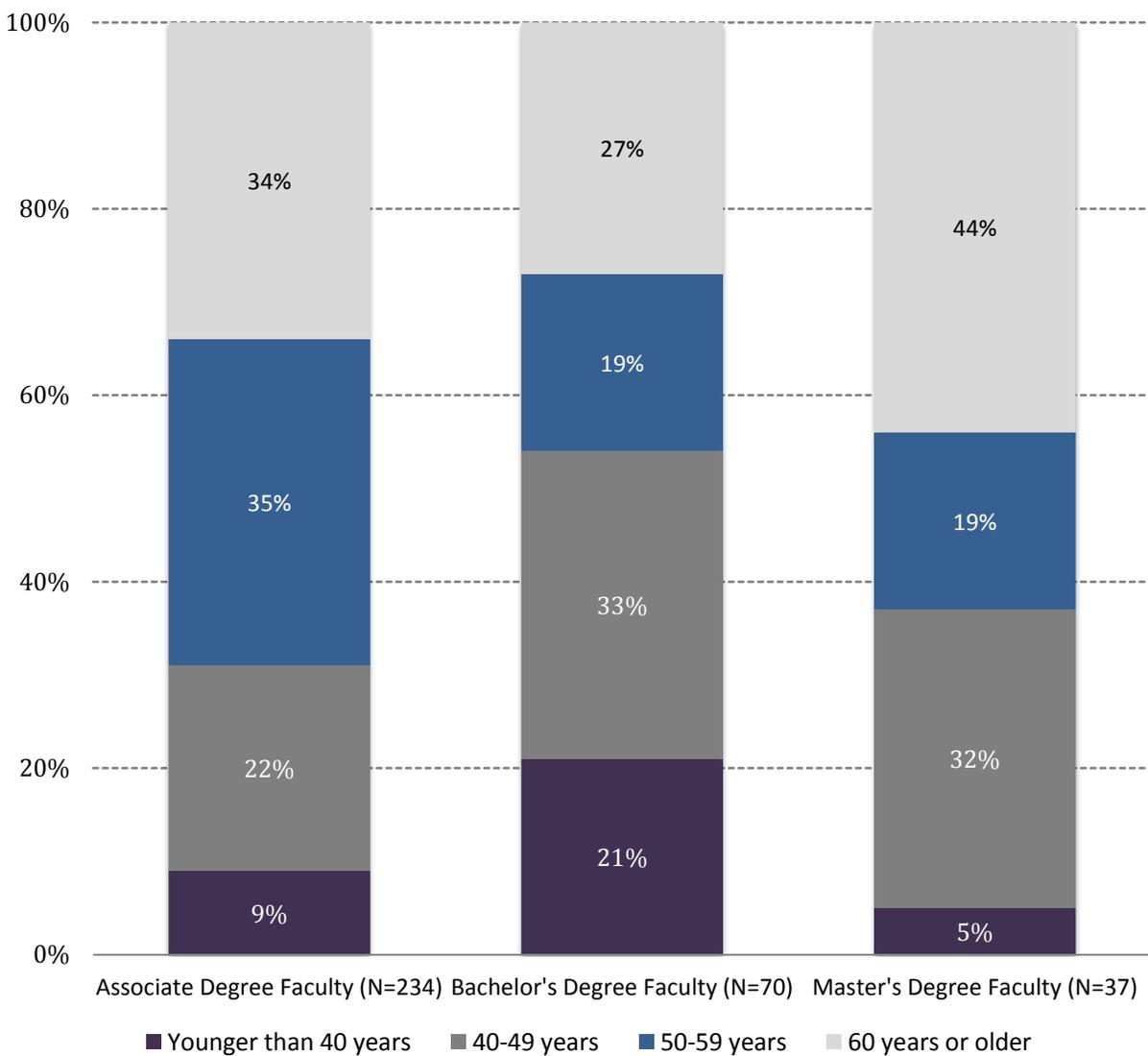
Figure 5: Race/Ethnicity of Faculty Participating in the California Early Childhood Higher Education Inventory, by Degree Program



Age

Age data were not collected in 2005. Currently, bachelor's degree faculty members were, on average, slightly younger than their colleagues teaching in associate and master's degree programs. The average age of associate and master's degree faculty members was 55 years, and the average age of bachelor's degree faculty was 49 years. Master's degree faculty were more likely to report being 60 years or older than were associate and bachelor's degree faculty members. (See **Figure 6.**)

Figure 6: Age of Faculty Participating in the California Early Childhood Higher Education Inventory, by Degree Program



Professional Background and Development Needs

Teachers of adults, like their counterparts who teach children, require appropriate preparation as well as ongoing opportunities to refine their knowledge and skills (Whitebook & Ryan, 2011). Based on a review of the extant research, the Institute of Medicine and National Research Council (2015) call for early childhood faculty to be versed in the foundational theories of child development and learning, subject matter content, and methods of pedagogy that comprise the basic competencies expected of ECE practitioners working with young children. Additionally, teacher educators themselves are increasingly called upon to be effective practitioners, preferably having had classroom experience with children within the last decade (National Council for Accreditation of Teacher Education, 2010a & 2010b).

Academic Preparation and Teaching Focus Related to Early Childhood

At least three-quarters of faculty members, at all levels, had earned at least a bachelor's degree in early childhood education or child development. While we did not ask faculty members about the primary focus of their own early childhood degrees, faculty were asked to indicate whether the primary focus of their teaching in the degree program was "child development and learning," "curriculum and teaching methods," or "both equally," and were asked about their expertise related to various age groups of children. Associate degree faculty members (71 percent) were more likely to report focusing on "curriculum and teaching methods" (either exclusively, or equally with child development and learning) than were bachelor's (44 percent) or master's (55 percent) degree faculty members. While nearly all faculty members across degree levels reported that their teaching expertise included preschool-age children, associate degree faculty members (72 percent) were also more likely to report that their teaching expertise included infants and toddlers than were bachelor's (58 percent) or master's (62 percent) degree faculty members.

Professional Teaching Experience

Across degree levels, early childhood faculty participating in the Inventory reflected an experienced and stable teacher educator workforce. Most faculty members reported that they had been teaching at the college or university level for more than ten years, and on average, had taught at their current college or university for eight to twelve years.

The majority of faculty members reported experience in other professional roles, which included "classroom teacher," "early childhood program director/administrator," and "early childhood professional development provider" (e.g., coach, mentor, or trainer) at some point during their careers.

Across degree levels, fewer faculty had worked as classroom teachers within the previous ten years as compared to other professional roles. Slightly less than one-half of associate and bachelor's degree (48 percent of each), and only one-quarter of master's degree faculty members (25 percent), reported that they had worked as a "classroom teacher" in the last decade. Among the associate and bachelor's degree faculty members who had worked as classroom teachers in the previous ten years, their experience was more likely to have occurred with preschool-age children (71 percent of associate and 57 percent of bachelor's degree faculty) than with infants and toddlers (33 and 35 percent, respectively), or with children in kindergarten to third grade (30 and 35 percent, respectively). Most master's degree faculty members (71 percent) who had worked as classroom teachers reported that they had worked in a K-3 setting, and less than one-third reported that they had worked in an infant and toddler or preschool classroom.⁹

Professional Development

The vast majority of faculty members at all degree levels reported participating in professional development opportunities during the last three years (97 percent of associate, 82 percent of bachelor's, and 93 percent of master's degree faculty members). The three most frequently reported professional development opportunities, participated in by at least 40 percent of faculty members at all degree levels, were on teaching practitioners to work with children from diverse cultural backgrounds; teaching practitioners to work with children with special needs; and strategies for engaging families in children's learning.

Faculty members at all degree levels indicated a number of areas in which it would be helpful to gain additional knowledge or training. The most commonly identified topics focused on teaching ethnically, linguistically, and economically diverse college students; children with special needs; children who are dual language learners; and using technology with children and adults.

⁹ Among those reporting other professional roles in the last decade, the role most frequently reported by associate (72 percent) and master's (57 percent) degree faculty members was "early childhood professional development provider" (e.g., coach, mentor, or trainer). Bachelor's degree faculty members reported having worked as an "early childhood professional development provider" at about the same rate (45 percent) as those who reported being a "classroom teacher."

FINDING FOUR: SUPPORTING STUDENTS
Services Offered, and Ongoing Challenges

Over the last decade, California early childhood degree programs have continued to offer multiple types of support services designed to help students

access resources and strengthen their academic skills. Coursework has become more accessible as programs have increased their offerings of courses online and during alternative hours such as evenings and weekends. Ongoing resources to sustain and expand these student services remain a challenge for many institutions trying to help students complete their degrees.

Resources needed to support students for whom English is a second language has increased for bachelor's degree programs over time.



What we asked about supporting student success:

Program leads were asked about three general categories of services offered to students in their programs:

1. counseling and cohort models;
2. access support; and
3. skill support.

Additionally, they were asked to identify student-related challenges facing their programs.

Typically, those employed in early childhood settings are classified as non-traditional students, because in addition to working full-time, they are frequently older than recent high school graduates, are among the first in their families to attend college, often represent linguistic and ethnic minorities, and may also be parents of school-age or younger children (Sakai, Kipnis, Whitebook, & Schaack, 2014). Programs that offer support designed specifically for the non-traditional early childhood student population are found to be associated with greater than average success in helping students achieve their educational goals in a timely fashion (e.g., transferring to a four-year institution or completing a degree) (Sakai et al., 2014; Whitebook, Schaack, Kipnis, Austin, & Sakai, 2013; Kipnis et al., 2012a; Chu, Martinez-Griego, & Cronin, 2010).

In 2005, nearly all programs across degree levels mentioned student-related challenges, including competing academic, work, and family responsibilities, and the lack of financial support to meet tuition and other school expenses. Additional challenges included students' insufficient academic preparation and skills, mentioned by more than three-quarters of associate and bachelor degree programs, and insufficient support for students learning English, mentioned by approximately two-thirds of community college programs (Whitebook et al., 2005). Most programs offered a range of support services to address these challenges.

Services Offered

As is customary among institutions of higher education, degree programs offered skill support around technology and a range of academic topics including reading, writing and math. Generally, these support services were offered to all students in the institution, not targeted specifically to students in early childhood degree programs.

Almost all associate (98 percent) and master's degree (94 percent) programs offered alternative class schedules for working adults at somewhat higher rates than did bachelor's degree programs (81 percent). Associate degree programs were the most likely to report offering classes off campus in community-based settings; approximately two-thirds (69 percent) did so, compared to 45 percent of bachelor's and 38 percent of master's degree programs. One-half of master's degree programs offered online courses, compared to almost all associate (95 percent) and bachelor's (90 percent) degree programs. Cohort programs were more likely to be offered by bachelor's (71 percent) or master's (81 percent) than associate (55 percent) degree programs.

Ongoing Student-Related Challenges

Among degree programs that reported experiencing at least one challenge, approximately one-quarter of programs across degree levels reported as one of their top ten challenges the lack of ability to help students complete their programs. Of particular interest, lack of academic support for students for whom English is a second language continued to be a challenge for community colleges (31 percent), but notably at half the rate reported a decade earlier. Also of interest is the increase over the same period of time in the percentage of bachelor's degree programs (from 13 percent in 2005 to 23 percent in 2013-14) mentioning as a challenge a lack of academic resources for students for whom English is a second language. Nearly all degree programs reported that academic assistance was available for students who are English language learners; such assistance is typically for the student body as a whole, and not targeted to ECE students.

FINDING FIVE: PROGRAM CHALLENGES
Faculty and Program Needs

California early childhood degree programs continue to experience challenges related to the shortage of full-time faculty, a lack of diversity among faculty, and a lack of

support more broadly for early childhood teacher preparation. Early childhood faculty members are in need of resources to support their ability to participate in professional development and program planning. Challenges related to articulation have dropped dramatically over the last decade, suggesting that significant improvements have been made in this area.

What we asked about program- and faculty-related challenges:

Program leads were asked to identify any challenges facing the degree program. Faculty members were asked to identify any resources needed in order to improve the early childhood degree program.



Faculty-Related Challenges

Two major faculty-related challenges—the shortage of full-time faculty positions, and the difficulty of attracting and retaining a diverse faculty—were identified as challenges in the 2005 report. Findings from the Inventory suggest that these challenges persist today.

Employment Status

Among faculty members who reported a need for additional resources, more than one-half across all degree levels identified needing resources for additional full-time faculty. Among the three-quarters or more of program leaders across degree levels reporting challenges, the most commonly identified challenge was faculty administrative responsibilities that interfered with time for students. Other identified needs related to staffing levels included resources for additional faculty to assist with student advising, and additional part-time faculty.

Faculty Diversity and Expertise

Among faculty who reported a need for more resources to improve their programs, one-third of associate and master’s and one-quarter of bachelor’s degree faculty members identified resources to “increase racial/ethnic diversity among faculty” as a need, and one-quarter of associate and master’s degree faculty members also identified needing resources to increase the linguistic diversity of faculty. At the associate degree level, approximately one-quarter of program leaders who reported that their programs faced challenges identified a lack of faculty expertise in teaching young children who are dual language learners. Resources for faculty professional development and for program planning and development were also

common issues, among those faculty who identified the need for more resources to improve their early childhood degree programs.

Program-Related Challenges

Two major program-related challenges—lack of support for early childhood teacher preparation, and articulation among and across degree levels—were identified in the 2005 report. Findings from the Inventory suggest that a lack of support for programs remains, but that progress has been made with regard to articulation.

Lack of Support for Early Childhood Teacher Preparation

In the 2005 study, lack of support from the college or university for early childhood teacher preparation was viewed as a challenge by slightly less than one-half of survey participants in community colleges and in public four-year institutions of higher education. A decade later, program leaders, across degree levels identified “lack of recognition of the value of early childhood from within the department or school,” and “inequitable distribution of resources compared to other programs in the institution” as two of the three top challenges they faced, and at rates similar to those in 2005.

A decade ago, more than three-quarters of early childhood higher education program leaders identified the persistence of low wages in the early care and education field as the greatest community-related challenge facing their programs. Program leaders and faculty members participating in the Inventory were not asked explicitly to identify challenges stemming from issues beyond their institutions, but a number of respondents volunteered that low wages in the field posed a challenge for them, or that more financial resources were needed for supporting low-income students. As one program leader noted, “Students are typically working in the ECE field and receive a low wage. Relative to the wage, college is expensive.”

Articulation

In 2013-14, approximately one-quarter of associate degree programs (29 percent), and less than ten percent of bachelor’s degree programs, reported lack of articulation between two- and four-year programs as a major challenge. This represents a 50 percent decrease from a decade ago in the number of programs reporting this challenge, suggesting a positive impact from efforts to address this issue. This may also reflect the changing requirement for community colleges to offer the Associate of Science for Transfer in Early Childhood Education by fall 2014, and that the Curriculum Alignment Project (CAP) Lower Division 8 courses have been accepted as the required coursework for this degree.

PART 2: EARLY CHILDHOOD HIGHER EDUCATION, AN EVOLVING LANDSCAPE

This section of the report examines how institutions of higher education are adapting to emerging research related to the importance of family engagement and early mathematics to young children’s development and learning, and to changes in the California policy environment, specifically the implementation of Transitional Kindergarten.

FINDING SIX: FAMILY ENGAGEMENT
Faculty Attitudes, Required Offerings,
Teaching Experience, and Professional
Development Interests

Faculty consider the inclusion of family engagement to be very important in the preparation of early childhood teachers, and rank its importance on a par with the domains of socio-emotional and motor development. Multiple topics related to

family engagement are embedded in all levels of degree programs as well as multiple subject credential programs, with some variation in age-group focus by degree level and topic. Most faculty reported having taught content related to family engagement in the last two years, and many expressed interest in professional development in this topic area.



What we asked about family engagement:

We asked faculty about:

1. attitudes/beliefs about the importance of inclusion of family engagement relative to other domains;
2. experience in teaching specific family engagement course content in the last two years; and
3. level of interest in professional development focused on topics related to family engagement.

Program leaders were asked to identify course content topics required for the degree related to family engagement.

The family engagement learning domain focuses on the environment of young children’s relationships, and the knowledge and skills necessary for early childhood educators to have, in order to facilitate how other adults in children’s lives support their development and learning. Over the last two decades, mounting evidence has demonstrated how family involvement in children’s learning at home and school contributes to school success (Dearing & Tang, 2010; Reynolds & Shlafer, 2012). As a consequence, the importance of including family engagement in teacher preparation has gained traction, particularly in light of research suggesting limited

attention in teacher education programs to building student competence in this arena (Nathan & Radcliffe, 1994; Shartrand, Weiss, Kreider, & Lopez, 1997; Epstein, Sanders, & Clark, 1999).

Faculty Attitudes about the Importance of Family Engagement in Teacher Preparation Degree Programs

The importance of understanding and implementing integrated strategies to engage families to support children’s development and learning was considered “very important” by the vast majority of faculty across degree levels, and ranked on a par with the domains of socio-emotional and motor development. (See **Box 2** for how this assessment was conducted.) Nearly 80 percent or more of faculty members at each degree level considered it “very important” to include family engagement, as well as socio-emotional in courses for teachers of all age groups of children, including infants and toddlers. Faculty ranked the inclusion of family engagement content in higher education programs as more important than literacy and mathematical development for those preparing to work with young children. (See **Figure 7**.)

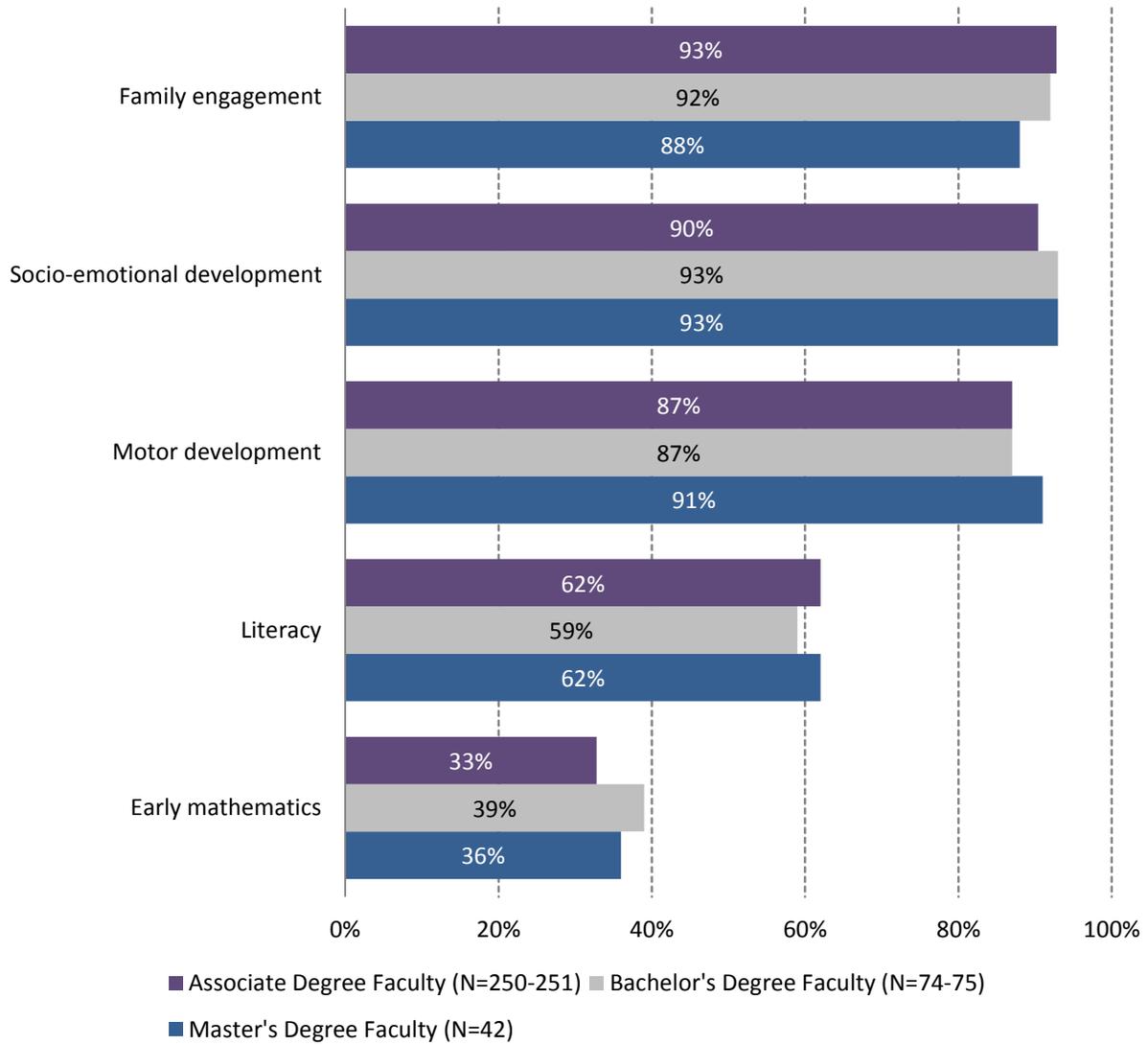
Box 2. Tapping Faculty Attitudes about the Inclusion of Various Domains of Development and Learning in Teacher Preparation Programs



The Inventory assessed faculty attitudes about the relative importance of various domains of development and learning in teacher preparation programs. Faculty member were asked to use a Likert scale of 1 to 4, with 1 meaning “not important” and 4 meaning “very important,” to indicate their views on including various domains for different age groups of children in these degree programs. The domains were:

- Family engagement: Understanding and implementing an integrated strategy to engage families in ongoing and reciprocal partnerships, and the relationship of such partnerships to outcomes for children.
- Early mathematics: Understanding the domains and sequence of mathematical knowledge in young children, and how to promote children’s mathematical understanding and ability to solve problems.
- Literacy: Understanding the components and sequence of literacy development in young children, and how to promote children’s skills related to oral and written language.
- Social-emotional development: Understanding socio-emotional development and its relationship to learning, and how to support children’s socio-emotional skills.
- Motor development: Understanding normal and atypical motor development in young children and its relationship to learning, and how to support the development of children’s motor skills.

Figure 7: Importance of Inclusion of Domains in Teacher Preparation Programs: Percentage of Faculty Reporting "Very Important" for Infants and Toddlers, by Degree Program



Required Family Engagement Topics in Degree and Multiple Subject Credential Programs

Program leaders were asked about required course content and age-group focus related to 13 topics of family engagement (see **Table 3**). Three-quarters or more of multiple subject credential programs reported requiring all 13 topics, focusing these topics primarily on children in the early elementary grades. Seventy percent or more of degree programs at all levels reported requiring 12 of the 13 topics. Most associate and bachelor’s degree programs included all 13 topics for teachers working with infants and toddlers, as well as for those working with preschoolers. Associate degree programs were less likely than bachelor’s and master’s degree programs to focus on TK or the early elementary grades, but the majority of associate degree programs did so.¹⁰ Master’s degree programs were marginally less likely to focus on infants and toddlers than on preschoolers.

Table 3. List of Family Engagement Topics Included in the California Early Childhood Higher Education Inventory

Theories of family engagement
Working with various family structures
Working with families of children with special needs
Working with families of various ethnic, racial, and linguistic backgrounds
Engaging families in classroom, program, and/or school activities
Effective communication strategies with families
Utilizing technology to communicate with families
Working with families to help them enhance their children’s learning at home
Using knowledge about children’s families in curriculum planning
Negotiating conflicts and differences between families and teachers
Building community partnerships
Child referrals to community resources
Utilizing community resources

¹⁰ Approximately 70 percent of associate degree programs reported content focused on TK across all topics, and about one-half reported inclusion of content for the early elementary grades.

Faculty Experience in Teaching Family Engagement, and Interest in Professional Development on this Topic

Two-thirds or more of faculty members at each degree level reported teaching 12 of the 13 family engagement topics included in the Inventory in the last two years.

Using a Likert scale of 1 to 4, with 1 being “least interested” and 4 being “most interested,” faculty were asked to rate their interest levels in 12 topics related to family engagement. Faculty interest was high for all topics across all degree levels, although associate degree faculty expressed slightly less interest than their counterparts in bachelor’s and master’s programs.

Approximately 40 percent of faculty members at each degree level reported being “most interested” in professional development related to four topics:

- Strategies to interact with linguistically, economically, and culturally diverse families;
- Negotiating conflict with families;
- Working with families to extend children’s learning at home; and
- Using community resources to support families.

FINDING SEVEN: EARLY MATHEMATICS

Faculty Attitudes, Required Offerings, Faculty Self-assessment, Teaching Experience, and Professional Development Interests

Faculty consider the inclusion of early mathematics to be less important than other domains in the preparation of teachers. Multiple topics of early mathematics content are embedded in all levels of degree and multiple subject

credential programs, with variation among degree levels by topic and by age-group focus. The least required content focus was reported for infants and toddlers and for supporting English language learners in the development of mathematical knowledge. Many faculty members do not consider themselves prepared to teach early math content, yet, as a group, faculty report only moderate interest in ongoing math-related professional development.



What we asked about early math:

We asked faculty about:

1. attitudes/beliefs about the importance of inclusion of early math relative to other domains;
2. experience in teaching specific early math course content in the last two years;
3. level of interest in professional development focused on topics related to early math; and
4. capacity to teacher students about specific math-related topics.

Program leaders were asked to identify course content topics required for the degree related to early math.

The early mathematics domain addresses key areas of children’s cognitive development, and important foundational knowledge and intellectual skills associated with school success.

The link between school success and math competency in young children has been documented in recent research, yet there is concern that teachers of our youngest children are not adequately prepared by institutions of higher education to assess or facilitate children’s mathematical understanding and skills, so critical to their later reading ability and math achievement (Ryan, Whitebook, & Cassidy, 2014).

Faculty Attitudes About the Importance of Early Math in Teacher Preparation Degree Programs

Faculty members at all degree levels were less likely to consider it “very important” to include the early mathematics domain than they were for other domains in teacher preparation programs for practitioners working with younger than school-age children, particularly infants and toddlers. Only about one-third of faculty members, across degree levels, considered it “very important” to include the math domain for teachers of infants and toddlers, and about

two-thirds considered it “very important” for teachers working with preschool age children. In contrast, about 60 percent of faculty members, across degree levels, considered it “very important” to include the literacy domain for teachers of infants and toddlers, and at least 80 percent or more of faculty members considered the literacy domain “very important” for teachers working with children ages three and older. At least 80 percent of faculty, across degree levels, considered the inclusion of early math “very important” for those teaching in TK or higher grades, a rate similar to that for the literacy domain.

Required Offerings

Program leaders were asked about required course content and age-group focus related to 13 topics of early math (see **Table 4**). All 13 topics related to early mathematics were required by all of the multiple subject credential programs, and the focus of required early math content was primarily on children in kindergarten and higher grades.

All 13 early math topics were required by at least three-quarters of associate degree programs, whereas only four of the topics were required by three-quarters or more of bachelor’s degree programs, and only two were required by three-quarters or more of master’s degree programs. Bachelor’s and master’s degree programs were less likely to require topics within the math domain than those within the family engagement or child development and learning domains. The math topic least likely to be required by associate (79 percent) and bachelor’s (55 percent) degree programs was “supporting English language learners in developing mathematical knowledge as they concurrently acquire English;” master’s degree programs required this topic at a similar rate (69 percent) to other early math topics. In associate and bachelor’s degree programs, when an early mathematics topic was required, it was much more likely to be focused on preschoolers than on younger or older children, and in master’s degree programs, the topics were more likely to be focused on preschoolers and TK students than on younger or older children.

Table 4. List of Required Early Mathematics Topics in the California Early Childhood Higher Education Inventory, by Degree Program and Multiple Subject Credential Program

Topic	Topic Required by 75% or More of Degree Programs			
	Associate Degree	Bachelor's Degree	Master's Degree	Multiple Subject Credential
Number sense for children	✓			✓
Operations and algebraic thinking for children	✓			✓
Measurement skills for children	✓			✓
Geometry skills for children	✓			✓
Children's mathematical reasoning/practices	✓	✓		✓
Building on children's natural interest in mathematics and their intuitive and informal mathematical knowledge	✓	✓		✓
Encouraging children's inquiry and exploration to foster problem solving and mathematical reasoning	✓	✓	✓	✓
Using everyday activities as natural vehicles for developing children's mathematical knowledge	✓	✓	✓	✓
Introducing explicit mathematical concepts through planned experiences	✓			✓
Creating a mathematically rich environment	✓			✓
Supporting English learners in developing mathematical knowledge as they concurrently acquire English	✓			✓
Developing children's mathematical vocabulary	✓			✓
Assessing children's mathematical development	✓			✓

Preparedness to Teach Early Math Coursework

The Inventory asked faculty members to assess their capacity to prepare practitioners to promote children’s mathematical understanding and teach math skills. For each of the 13 topics (See **Table 4**), faculty members were asked to identify whether they:

1. Had limited familiarity
2. Were knowledgeable but not prepared to teach others
3. Were capable of preparing teachers working with children in each of the following age groups:
 - Birth through 2 years;
 - 3 and/or 4 years (Pre-K);
 - Transitional Kindergarten;
 - Kindergarten to Grade 3.

At least one-half of faculty members across all degree levels reported being capable of preparing teachers working with preschool-age children for each of the topics. Fewer faculty members reported being capable of teaching the topics for practitioners working with infants and toddlers, with associate degree faculty members being most likely to assess themselves as capable. (See **Figure 8**.) Associate and bachelor’s degree faculty members were less likely to report being capable of teaching each of the topics for practitioners working with children in TK or older, than with preschool-age children.

Mirroring the findings related to early math course content required by degree programs, faculty members were least likely to report the capacity to teach practitioners, across age groups, on the topic, “supporting English learners in developing mathematical knowledge as they concurrently acquire English.”

Faculty Experience in Teaching Early Math, and Interest in Professional Development on This Domain

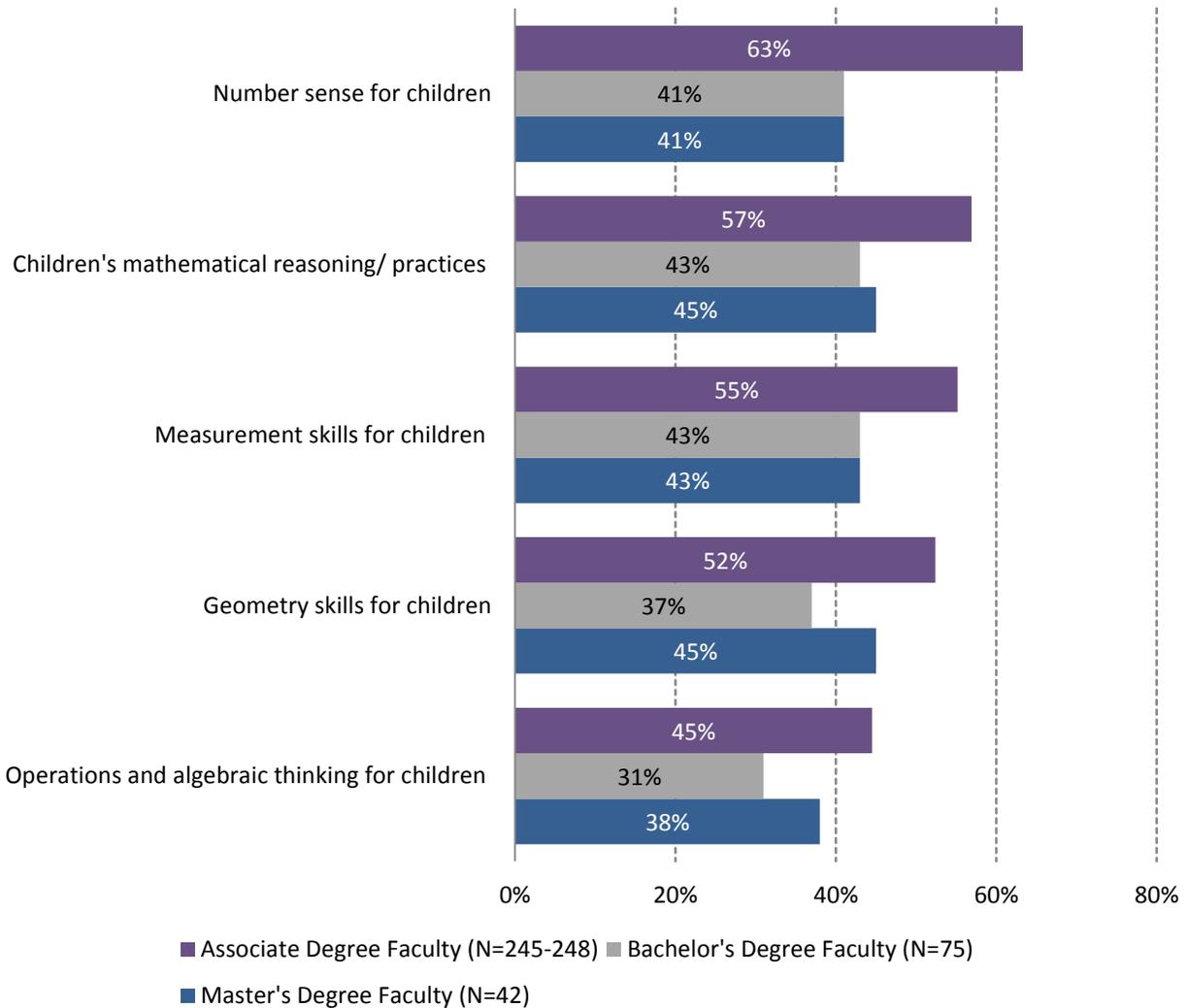
Faculty members were asked whether they had taught early math content related to eight topics in the past two years. Among bachelor’s and master’s degree faculty, approximately one-third to two-thirds reported teaching each of the eight topics; among associate degree faculty members, approximately one-half to three-quarters reported having done so.

Using a Likert scale of 1 to 4, with 1 being “least interested” and 4 being “most interested,” faculty members were asked to rate their interest levels in nine topics related to early math. Faculty interest varied by topics across all degree levels, and was lower for early math topics than for family engagement topics.

Between 30 to approximately 40 percent of faculty members at each degree level reported being “most interested” in professional development related to four topics:

- integrating mathematical understanding into children’s daily activities;
- creating a mathematically rich learning environment;
- integrating mathematical understanding and skills in all aspects of curriculum; and
- assessing children’s mathematical understanding.

Figure 8: Capability of Faculty to Prepare Teachers to Work with Infants and Toddlers: Children's Mathematical Understanding; Reported by Faculty Participating in the California Early Childhood Higher Education Inventory, by Degree Program



FINDING EIGHT: PREPARING TRANSITIONAL KINDERGARTEN TEACHERS

Course Offerings, Field Experience, and Credential Program Challenges

California early childhood degree programs and multiple subject credential programs report uneven requirements for course content focused on transitional kindergarten. Early childhood degree programs and multiple subject credential

programs report limited requirements and opportunities for field-based learning focused on transitional kindergarten; student teaching in a transitional kindergarten setting was required by only one multiple subject credential program, was an option in only 32 percent of programs, and was unavailable in 44 percent of programs. Multiple subject credential programs face challenges in preparing students to work in transitional kindergarten classrooms.



What we asked about Transitional Kindergarten:

For course content topics and field-based experiences that program leads indicated were required, we asked whether transitional kindergarten was a required age-group focus. Multiple subject credential program leaders were also asked to identify any challenges they faced in preparing credential students to work in TK classrooms.

Teachers in Transitional Kindergarten (TK), a voluntary new grade prior to kindergarten that began in the 2012-2013 school year, are required to hold a California teaching credential. Although this credential allows teachers to teach in classrooms for preschoolers through adults, it does not currently include children prior to kindergarten in the program standards. In 2014, a provision was added to the TK law that requires all teachers who are first assigned to a TK classroom after July 1, 2015 to meet *one* of the following requirements by August 1, 2020:

- At least 24 units in early childhood education, or childhood development, or both;
- As determined by the local education agency employing the teacher, professional experience in a classroom setting with preschool-age children that is comparable to the 24 units of education described above;
- A child development teacher permit issued by the California Commission on Teacher Credentialing (California Department of Education, 2015).

It should be noted, however, that there has been no further guidance to date that specifies the content areas of the 24-unit requirement (e.g., child development and learning, literacy, math); whether such units should be lower- or upper-division; or what, if any, field-based experiences, with particular ages of children or in particular settings, are required.

The Act further stipulates that “it is the intent of the Legislature that transitional kindergarten curriculum be aligned to the California Preschool Learning Foundations” (California Department of Education, 2015), thereby acknowledging that children in TK require

developmentally appropriate instruction and content designed for preschool-age rather than for elementary school-age children.

Teaching in a TK classroom may be very different from teaching in a preschool classroom. Reflecting California licensing standards, preschool teachers are typically working in a classroom with at least one other teacher or assistant teacher, as the teacher-child ratio is 1:12. The ratio of teachers to children in TK classrooms is left to the discretion of the local school district; one TK teacher may be in a classroom with 20 or more children. According to a 2014 report, a sizable proportion of TK classrooms were staffed by one teacher, and those with assistants did not necessarily have additional support for the length of the program day (Quick et al., 2014). Teaching in such a setting, even with knowledge of child development and pedagogy for young children, requires a different set of skills than does teaching in other California preschool classrooms. For these reasons, the Inventory explored the extent to which required course content and clinical experiences included a focus on children in TK, distinct from preschool, kindergarten, and early elementary school children, and whether credential programs identified any challenges to preparing students to teach in TK classrooms.

Course Offerings

In comparison to content for children in kindergarten or higher grades, TK is not fully integrated into the required course content for multiple subject credential programs in the domains of child development and learning, family engagement, and early mathematics. Required content in math for the TK age group ranged from slightly more than one-third to no greater than one-half of these programs. Programs focused somewhat more on this age group in the domains of child development and learning, and family engagement, ranging from slightly more than one-third to two-thirds of programs. Generally, there is more focus on TK in the degree programs than in the multiple subject credential programs, although we noted variations by degree level, as described below.

Among degree programs, in addition to the domains of child development and learning, family engagement, and early mathematics, we also examined domains focused on teaching skills. Master's degree programs across all domains consistently required a focus on children in TK on a par with three- and four-year-olds. Bachelor's degree programs required a similar focus on content related to child development and learning, as well as family engagement, for children in preschool and TK. Although most bachelor's degree programs required TK-focused content related to early mathematics and across the teaching topics (teaching diverse child population, teaching and curriculum, and teaching skills in early childhood settings), they did so at lower rates than for preschool-age children. In comparison to other degree levels, associate degree programs were less likely to report required course content focused on TK than on younger children, including infants and toddlers, across all domains, with the exception of early mathematics. With regard to early math, associate degree programs required course content

related to TK at rates similar to those for infants and toddlers, but less than for preschool-age children.

Field Experience

As noted earlier in this report, nearly every multiple subject credential program required students to complete a student teaching experience as well as one or more field-based practica, but these required experiences were almost exclusively focused on children in kindergarten and higher grades. Student teaching in a transitional kindergarten setting was required by only one multiple subject credential program, was an option in only one-third of programs (32 percent), and was unavailable in 44 percent of programs. Similarly, practica offered limited experiences focused on transitional kindergarten. Opportunities for field-based experiences with preschool-age children before TK were even more limited, with the great majority of programs offering no student teaching (85 percent) or practica (80 percent) in preschool settings.

Degree programs, although they required fewer field-based experiences for students than did the credential programs, were more likely to require or offer practicum experiences focused on children in TK. Fifteen percent of bachelor's programs and 33 percent of master's programs, for example, required a practicum experience related to TK.¹¹

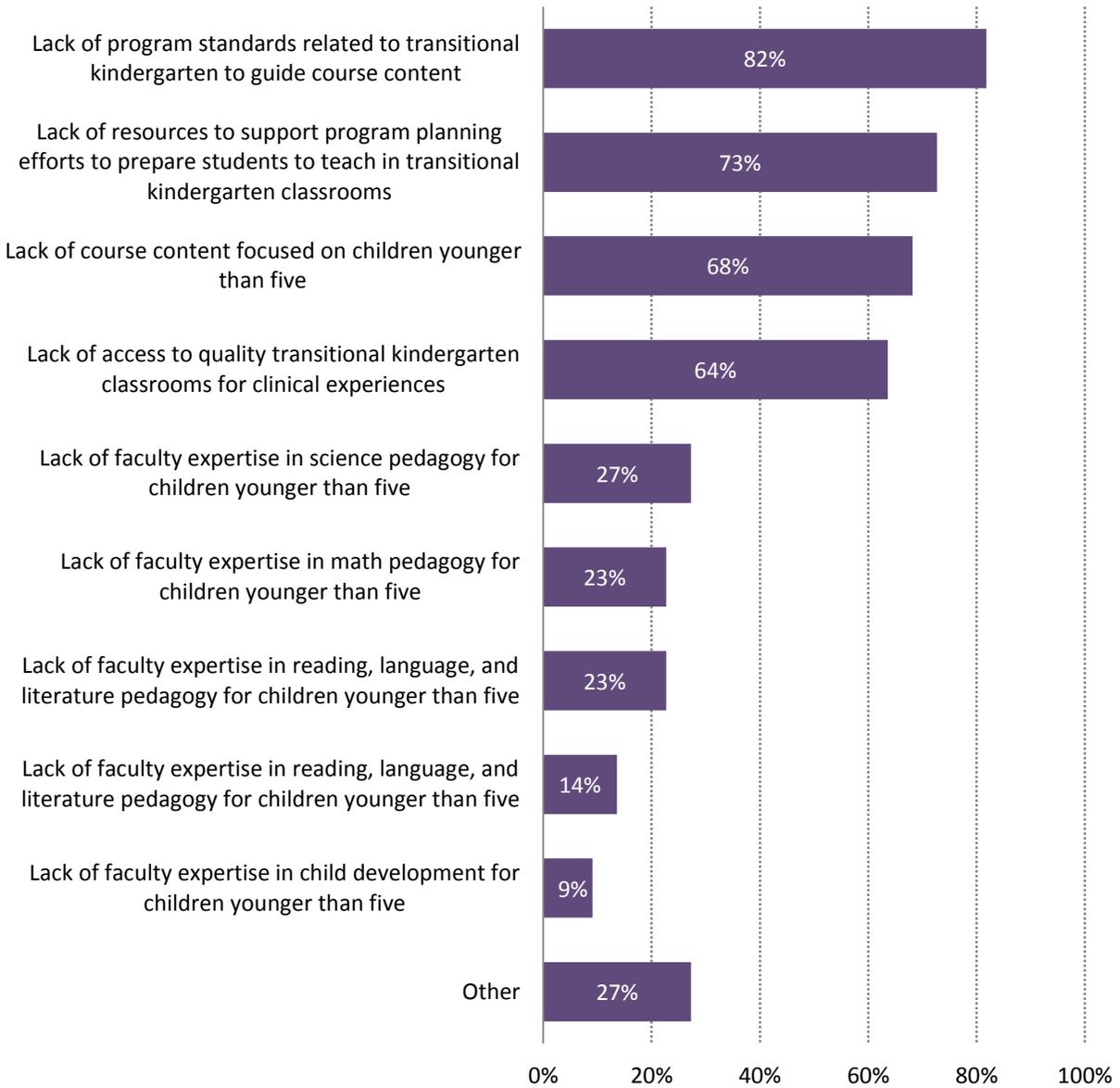
Challenges for Multiple Subject Credential Programs

We asked multiple subject credential program leaders to identify challenges, if any, that their programs faced in preparing students to work in TK classrooms. One-half of multiple subject credential programs reported that they faced one or more such challenges; perhaps reflecting the status of TK as a new grade in the public school system, nearly one-quarter of programs (23 percent) reported that they did not know whether there were challenges. Among the credential programs that did report challenges (see **Figure 9**), most programs reported the following four:

- lack of program standards related to transitional kindergarten to guide course content;
- lack of resources to support program planning efforts for preparing students to teach in transitional kindergarten classrooms;
- lack of course content focused on children younger than five; and
- lack of access to quality transitional kindergarten classrooms for clinical experiences.

¹¹ The associate degree programs were not asked whether TK was a required or optional age group for field-based experiences.

Figure 9: Challenges in Preparing Students to Work in Transitional Kindergarten, as Reported by California Multiple Subject Credential Programs (N=22)



DISCUSSION

Time to Revamp and Expand: Early Childhood Teacher Preparation Programs in California's Institutions of Higher Education (Whitebook et al., 2005) was released a decade ago when California was embarking on efforts to expand publicly supported preschool, and policymakers and other stakeholders were assessing the capacity of higher education programs to meet a demand for more early childhood teachers with four-year degrees. The report called for an investment of resources to update course content, increase opportunities for field-based learning, hire more full-time and more diverse faculty, and provide more support services to help students attain their educational goals.

The current report provides a portrait of California's early childhood higher education landscape amidst the integration of a new grade (Transitional Kindergarten) designed to serve four-year-olds in the public school system, the implementation of regional Quality Rating and Improvement Systems (QRIS) which promote degree attainment for teaching staff, and multiple initiatives to strengthen and coordinate early childhood workforce development efforts. As was true a decade ago, a strong preparation system for California's early childhood teachers and administrators remains a linchpin for multiple efforts aimed at ensuring that all young children in California have access to effective early learning experiences.

Changes over the last ten years include:

- the expansion of the number of institutions offering degree programs;
- improved articulation across institutions offering similar and different levels of degrees;
- some diversification in the racial and ethnic composition of faculty; and
- updates in program content, particularly related to children who are dual language learners.

These changes notwithstanding, pressing issues identified in the earlier report remain. The array of higher education offerings in California continues to mirror the complexity of the early childhood delivery system, which is characterized by multiple, often conflicting, expectations about teacher preparation, depending on the ages of children and the standards and funding assigned to different programs in which teachers work.

This report calls attention to five persistent features of early childhood higher education programs in California that require a new policy approach, namely:

1. an unwieldy system of programs with varied primary goals;
2. inconsistent alignment of the science about early childhood development and effective teacher preparation, with program structures and offerings;
3. an uneven focus on children across the birth-through-age-eight spectrum;
4. the absence of a leadership preparation pipeline; and

5. insufficient funding to allow for adequate program staffing.

An Unwieldy System of Programs with Varied Primary Goals

One-half of associate degree programs identified their primary goal as preparing early childhood teachers and administrators, while the remainder, as well as the majority of bachelor's and master's degree programs, indicated that their primary goal was to prepare students for a variety of roles related to early childhood. The titles ascribed to degree programs do not present a clear indication of the purpose of a program. Programs that share the same moniker (e.g., early childhood education) may not share the same primary goal, and programs with such disparate monikers as family and consumer studies and child development may share similar primary goals.

The fact that there are early childhood degree programs with different primary goals, preparing students for a variety of roles related to early childhood, is a positive one. But the lack of consistent and clear labeling of programs according to their purpose poses multiple challenges. When students enroll in degree programs, particularly at the associate and bachelor's degree levels, in order to meet teacher education or director requirements (e.g., Head Start teachers and assistant teachers, public preschool teachers, and TK teachers), it should be clear that the course of study is intended to prepare them for the demands of teaching young children and leading an ECE program. Employers, too, would benefit from this clarity. The efforts of policymakers and other stakeholders who invest in workforce education and assess staffing capacity would be better served by a greater differentiation among degree offerings, allowing more informed choices about the types of preparation programs available to current and future ECE practitioners.

Findings from Inventories conducted in other states suggest that when a state intentionally redesigns its certification system for early childhood educators, the higher education system adjusts by making changes in required course content, age-group focus, and field-based practice as appropriate. In the absence of well-articulated certification standards that apply to early childhood teachers and administrators across the state, regardless of the auspice of the ECE programs in which students are or will be employed, California institutions of higher education have been left to add on to existing courses of study, or build out new programs, in response to changes that affect only certain segments of the workforce.

Inconsistent Alignment of the Science about Early Childhood Development and Effective Teacher Preparation with Program Structures and Offerings

Many ECE stakeholders emphasize the importance of relying on evidence to guide ECE policy and practice, yet our findings suggest an uneven application of such evidence across early childhood higher education offerings. Degree and credential programs vary in their

requirements of course content related to the science of early development and learning across multiple domains for children, from infancy through the early elementary grades. Similarly, methods of teaching and pedagogy were inconsistently required across programs.

Despite evidence pointing to the critical role of field-based experiences in developing effective teachers, there is no agreed-upon standard in California for these experiences in programs preparing early childhood teachers. Requirements among and across degree levels and multiple subject credential programs were markedly varied in terms of timing, frequency, and duration. And while the dearth of student teaching and the preponderance of practicum requirements may be a reflection of programs serving a mix of pre- and in-service students, few programs differentiated between practicum experiences for pre-service students and those for students already working in the field and trying to hone their practice.

An Uneven Focus on Children across the Birth-Through-Age-Eight Spectrum

Undergirding the challenges identified above are the inequities that privilege preparation for teachers who will work with older children in the birth to age eight spectrum. Across all degree levels, programs did not typically include a focus on children across the full age span. Infants and toddlers were most likely to be disadvantaged, with fewer California early childhood degree programs requiring the inclusion of the youngest children in the course content and field-based experiences compared to preschool age-children. Among degree programs, the associate degree programs were most likely to include a focus on infant and toddlers. Among programs offering credentials necessary for TK teachers, required course content and field-based experiences focused on children in the TK age range were almost non-existent, while such experiences focused on kindergarten through grade 3 were universal.

An Undefined Leadership Preparation Pipeline

In California, K-12 principals are required to have teaching experience and to develop their leadership skills by earning an administrative credential. In ECE, by contrast, the state sets qualifications for directors or administrators that vary by program standards. In most ECE programs, director qualifications are limited to one or two lower-division courses, while no ECE-specific education or training is required of leaders with responsibility for TK programs. Mentors and coaches in K-12 are typically drawn from the ranks of teachers, and receive specific training (Isner et al., 2011), while for mentors and coaches working with teachers of younger children, there are no widely applied standards for appropriate qualifications. In light of these inconsistent and ill-defined expectations for ECE leadership positions, it is not surprising that across degree levels, course content was not routinely offered for preparing practitioners for early childhood supervisory, administrative, or other leadership roles.

Additionally, there is a limited pipeline for teacher educators with ECE-specific backgrounds, due to a dearth of ECE doctoral programs. This is particularly troubling in light of the demographics of the current faculty workforce, and the need to provide a pathway for incoming faculty and to ensure their diversity.

Insufficient Funding to Allow for Adequate Program Staffing

Early childhood degree programs are sorely under-resourced. Degree programs rely heavily on part-time faculty, a circumstance which carries with it a host of complications, including the inability to adequately support the needs of students, and limited opportunities for faculty to engage in program assessment, planning, and modification. The combined effect of a lack of resources and the reliance on part-time staff is a strong constraint on the ability of faculty members to engage in professional development, in response to new developments in the field and to the changing populations they serve.

CHARTING A PATH FOR CHANGE: RECOMMENDATIONS

We outline below an approach to reconfiguring and strengthening early childhood workforce development in California, with an emphasis on higher education. We identify four discrete elements, which together constitute a comprehensive strategy for aligning our current system with the 21st-century expectations that are placed on teachers of young children. The success of this approach requires ensuring that its various components be implemented in unison, as well as developing a research agenda to measure progress and challenges over time, and to learn more about the depth of instruction delivered in higher education programs. Our approach is predicated on the identification of new resources from state, federal, and philanthropic sources, as well as the reallocation of a portion of existing revenues for quality improvement and workforce system development.

We call upon policymakers, philanthropists, higher education faculty and program leaders, advocates, teachers, and other stakeholders across the state to advance the following:

1. Rationalize early childhood workforce preparation.

Erasing the divisions in professional expectations and preparation across and within age groups in the birth-to-age-eight spectrum, in line with recommendations from the Institute of Medicine, as well as clarifying the purpose of early childhood higher education programs, will require a major overhaul of California's current system for certifying teachers, administrators, and other practitioners (IOM & NRC, 2015). To initiate this process:

- Integrate the currently unaligned efforts to review and revise the Child Development Permit and the multiple subject credential, in order to establish a coordinated and comprehensive approach to early childhood certification, for teachers and administrators across settings and with similar levels of education;
- Identify the educational standards and approved course of study that will qualify students for the appropriate type and level of teacher or administrative certification, upon successful completion of their studies; and
- Amend the current requirement of 24 ECE units for multiple subject credential holders teaching in TK, to ensure that it includes the appropriate content and rigor, and develop specific recommendations to enable those with bachelor's or higher degrees in ECE to access TK positions by obtaining the equivalent of a multiple subject teaching credential, based on their prior knowledge, skills, and experience.

2. Strengthen program content and equity across the age span.

To strengthen required content to align with child development and teacher preparation research, and to equalize required content for all children across the birth-to-age-eight spectrum:

- Engage faculty groups representing different degree levels and types of institutions, as well as other experts, to develop program content standards and/or faculty professional development, beginning in the following areas:
 - children’s mathematical understanding from infancy through early elementary grades, with a focus on children who are dual language learners;
 - methods of teaching for children of different ages;
 - infant development and learning across multiple domains; and
 - working with children and adults from diverse linguistic, racial/ethnic, and economic backgrounds.

To strengthen the application of field-based learning experiences:

- Engage faculty groups representing different degree levels and types of institutions to develop degree program standards for the timing, frequency, and duration of field-based experiences, with opportunities that are focused on children from infancy through TK, and that offer differentiated experiences for pre-service and in-service students; and
- Identify strategies for multiple subject credential programs to include field-based learning experiences focused on children in TK.

3. Build a leadership pipeline.

To create a defined leadership pipeline:

- Establish a process to identify the specific skills and knowledge needed for common leadership roles in ECE (teacher leaders, coaches, site administrators, program/quality improvement managers, and teacher educators). This process should build upon the broad leadership competencies that have been articulated in the California Early Childhood Educator Competencies;
- Identify the appropriate course of study and degree level (lower-division, upper-division, graduate) for each leadership role, based on the specific skills and knowledge identified above; and
- Identify options to create leadership options and/or programs at the graduate level, particularly at the doctoral level, to meet the demand for incoming faculty.

4. Increase faculty support.

To decrease the reliance on part-time faculty in ECE degree programs:

- Identify the number of full-time faculty positions necessary, at a minimum, to align ECE degree program staffing configurations with those of other departments, and to allow for adequate advising of and time with students;
- Calculate the costs associated with a proposed increase in full-time ECE faculty positions; and
- Propose strategies for securing potential sources of public and private funds to address the faculty shortage.

To increase the diversity of ECE faculty:

- Investigate strategies used in a variety of disciplines (e.g., health, education, social welfare) to develop a minority faculty development program, such as a fellowship, to increase minority representation among faculty.

To facilitate improvements in program offerings, and enable degree programs to engage in revamping or restructuring:

- Establish an ongoing fund, with well-articulated expectations for honoraria for individual faculty professional development and for program improvement grants.

To measure progress on increasing the number of full-time faculty, supporting faculty in engaging in their own professional development, and building a more diverse teacher educator workforce:

- Provide resources to the California ECE Workforce Registry to ensure the inclusion of faculty in the Registry.¹²

¹² The California ECE Workforce Registry is a data system designed to track and promote the education, training, and experience of the early care and education workforce, for the purpose of improving professionalism and workforce quality for the benefit of young children. <https://www.caregistry.org/>

CONCLUDING THOUGHTS

Calls for an integrated system of early learning for all young children rest upon an understanding of the importance of the early years, which begin at birth and extend through the first years of elementary school. But the infrastructure of the early childhood service system, of which higher education is a cornerstone, is poorly integrated, ascribing differing expectations for teacher preparation and assigning different resources to teachers across this age spectrum.

Further delay in addressing long-standing but fixable limitations in ECE higher education, identified in this and previous reports, will continue to hamper efforts to build a skilled and stable early childhood workforce in California, which is necessary for meeting the needs of the state's diverse population of young children. At the same time, the sobering reality that ECE majors currently face the lowest lifetime earnings among all college graduates suggests that delivering the promise of high-quality early learning opportunities will also require identifying and mobilizing a sustainable, dedicated source of public funding to upgrade the compensation of those who care for and educate California's young children.

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