Teaching the Teachers of Our Youngest Children

The State of Early Childhood Higher Education in Oregon

Narrative Report

2018

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CSCCE

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The Center for the Study of Child Care Employment (CSCCE) was founded in 1999 to focus on achieving comprehensive public investments that 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.

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Introduction

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), especially in light of mounting evidence about inadequate and unequal educational quality for many children, particularly those of color and those living in low-income families (Hernandez, 2011; Karoly, 2009; Yoshikawa et al., 2013).

Early educators play a central and critical role in the development and learning of infants, toddlers, and preschool-age children. In 2015, the Institute of Medicine and the National Research Council of the National Academies of Sciences, Engineering, and Medicine asserted that teaching young children requires as complex knowledge and skills as teaching older children and 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) emphasizes how critical it is that all ECE teachers – regardless of role – possess foundational knowledge of child development and developmentally appropriate teaching practices. Furthermore, the report details the training and qualifications necessary for all lead teachers working with children from birth to age eight, which include a minimum of a bachelor's degree in early childhood education or a related field, as well as specialized knowledge and competencies. The report offers further considerations for strengthening early educator competencies in multiple domains, including mathematics, family engagement, and support for dual language learners (IOM & NRC, 2015).

Oregon is home to more than 275,000 children under the age of six (U.S. Census Bureau, 2015); about 166,500 of these children have all available parents in the workforce, and, thus potentially need child care (Child Care Aware of America, 2017). Like many states in recent years, Oregon has committed public and private resources toward multiple efforts to improve early care and education services, including early education degree and certification programs, in order to improve the preparation of their graduates to meet the complex needs of young children (Hyson, Horm, & Winton, 2012; Ray, Bowman, & Robbins, 2006; Swartz & Johnson, 2010). Critical to these efforts is the establishment of a well-coordinated, comprehensive professional preparation and development system that can prepare and support an incoming generation of educators, while also strengthening the skills of the existing early education workforce. Institutions of higher education are crucial to meeting the evolving and increasing demands identified as improving developmental and learning outcomes for the state's young child population.

Teacher preparation in the field of ECE has historically included a variety of higher education degree programs in various child-related disciplines, all of which have generally been considered equally acceptable. Too often, these highly diverse degree programs are assumed to produce equivalent results (Maxwell, Lim, & Early, 2006; Whitebook et al., 2012). In contrast, programs to prepare teachers and administrators to work with older children reflect far greater uniformity and stringency related to specific preparation standards and certification requirements. In recent years, however, rising expectations about the knowledge and skills that early childhood practitioners need to work effectively with young children before kindergarten, along with the introduction of new ECE programs and standards, have led many

stakeholders to question whether the current wide array of ECE-related degree programs can be assumed to produce equivalent results.

To address the great variability in ECE degree programs and in light of the recognition of the complex and challenging nature of delivering early care and education, as well as the changing expectations for effective teacher preparation recommended by the Institute of Medicine and National Research Council, it seemed the appropriate time to examine the status of early childhood higher education offerings in Oregon in order to allow policymakers, institutions of higher education, and other stakeholders to assess the capacity of the state's higher education system and to inform policy, practice, and investment. To undertake this assessment, the Center for the Study of Child Care Employment (CSCCE) implemented the *Early Childhood Higher Education Inventory II* (CSCCE, 2016), a research tool used to describe the landscape of a state's early childhood degree program offerings at the associate, bachelor's, and graduate degree levels and to provide a portrait of early childhood higher education faculty members.[1] The *Inventory* describes early childhood degree programs offered in the state, focusing on variations in program content, age-group focus, student field-based learning, and faculty characteristics. (See **Box 1** for a description of *Inventory* methodology.)

In addition, the IOM/NRC report documented the need to strengthen early educator competencies along multiple dimensions, including mathematics, family engagement, and support for dual language learners (IOM & NRC, 2015). While the link between young children's math competency and later school success has been demonstrated in recent research, there is concern that institutions of higher education are not adequately preparing teachers of young children to assess or facilitate children's mathematical understanding and skills (Ryan, Whitebook, & Cassidy, 2014). Additionally, given research evidence that family involvement in children's learning at home and at school contributes to school success (Dearing & Tang, 2010; Reynolds & Shlafer, 2010), we were interested in learning the extent to which ECE higher education programs are addressing the topic of engaging with families to enhance children's learning. A series of questions developed for the *Inventory* focuses specifically on these issues, with particular attention to program content and faculty attitudes. Finally, while many teachers of young children are monolingual (speaking only English), census data indicate that, nationally, more than one-quarter of children under age six speak more than one language (Capps, Fix, Ost, Reardon-Anderson, & Passel, 2004). In light of this reality, the *Inventory* examines the capacity of higher education programs to prepare their students to teach dual language learners. The totality of the data collected through the *Inventory* allows stakeholders to identify gaps and opportunities in the available offerings and to assess the capacity of the state's higher education system over time.

The *Inventory* (CSCCE, 2016) was implemented in Oregon during the 2016-2017 academic year. This report summarizes major findings and provides recommendations for policy changes that could lead to more effective teacher practices to support children's learning. An accompanying technical report presents more detailed findings.

[1] Oregon is one of nine states (along with California, Florida, Indiana, Nebraska, New Hampshire, New Jersey, New York, and Rhode Island) in which the *Inventory* has been completed at the time of publication of this report.

The Early Childhood Higher Education Landscape in Oregon

A network of 14 community colleges and 12 public and private universities offers a complex array of early childhood degree programs, serving prospective and current early childhood practitioners across the state.[2] This network includes 14 community colleges that offer 19 associate degree programs. It also includes 12 public and private universities that offer 15 bachelor's degree programs,10 master's degree programs, and two doctoral program in early childhood. In the current study, 86 percent of associate degree programs, 73 percent of bachelor's degree programs, and a majority of graduate degree programs reported serving a mix of those already working in the early childhood field as well as more traditional pre-service students.

The *Inventory* findings are presented in two sections. The first section, "Early Childhood Higher Education, Mapping the Scene," examines the extent to which Oregon ECE higher education programs:

- Offer the knowledge, skills, and experiences associated with effective teaching practice and program leadership;
- 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
- 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 knowledge about children's learning and development. Specifically, the report explores the extent to which Oregon ECE higher education programs have incorporated recent findings related to the importance of:

- Promoting early mathematical understanding;
- Engaging families to support young children's optimal development, learning, and school success; and
- Teaching young dual language learners.

[2] The colleges and universities that participated in the *Inventory* estimated that during the 2015-2016 academic year, 816 students were registered in associate degree programs, and 829 students were registered in bachelor's degree programs. These same colleges and universities estimated that during this same time period, they conferred 100 associate degrees and 197 bachelor's degrees.

Box 1. Study Design

During the 2016-2017 academic year, researchers from CSCCE implemented the *Early Childhood Higher Education Inventory II*, 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 program lead (e.g., dean, chair, or coordinator); and an online faculty survey completed by individual faculty members. The program findings reported here are drawn from a final sample of 14 associate and 11 bachelor's degree programs.[3]

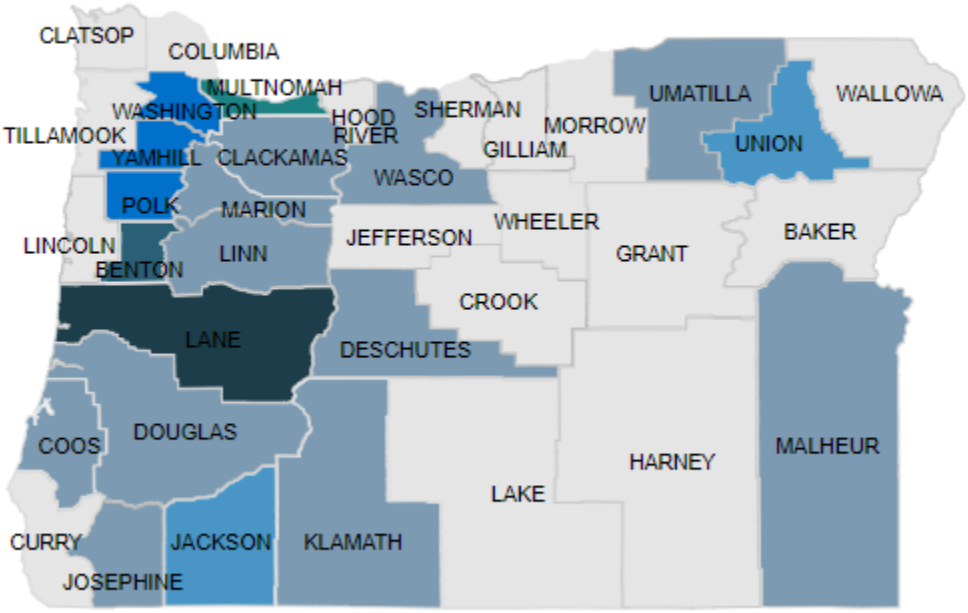
The faculty findings are drawn from a final sample of 36 community college faculty members and 39 bachelor's and graduate degree[4] faculty members.

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

[3] Data were also collected from six master's degree programs and two doctoral degree programs in Oregon specifically identified as early childhood education. As data for these graduate programs cannot be de-identified, program data collected for these programs are not included in this report.

[4] Faculty members teaching in graduate programs may also teach in bachelor's degree programs and, rarely, in associate degree programs.

Distribution of Oregon Early Childhood Degree Programs



Legend:

- None
- Associate
- Bachelor's
- Bachelor's and Master's
- Associate, Bachelor's, and Master's
- Bachelor's, Master's, and Doctoral
- Associate, Bachelor's, Master's, and Doctoral

Note: In addition to the degree programs noted above, some areas of the state receive community college services through contracts with institutions in neighboring counties. These areas include Grant County, Lake County and the city of Burns in north central Harney County.

Part 1: Early Childhood Higher Education, Mapping the Scene

This section of the report examines program offerings, faculty characteristics, student supports, and institutional challenges.

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

Program leads participating in the *Inventory* (e.g., deans, coordinators) were asked to indicate the primary goal of their degree program(s) from among five 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 role of early interventionist or early childhood special educator;
4. To prepare students for multiple roles involving young children, working in many types of settings; or
5. To prepare students for a career as a researcher or a college-level faculty member.

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

1. Child development and learning;
2. Teaching, with three primary categories:
    - Teaching diverse child populations;
    - Teaching and curriculum; and
    - Teaching skills in early childhood settings; and
3. Administration and leadership.

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

Program leads were also asked what standards or competencies degree programs incorporated into their coursework.

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

Most Oregon early childhood degree programs identify their primary goal as preparing students to work in multiple roles involving young children, working in many types of settings. While these programs offer a range of topics related to child development and approaches to teaching — a reflection of their program goals — both associate and bachelor's degree programs tend to require more content focused on preschool-age children than children birth through age two or school-age children. Across degree levels, the availability of content related to administration and leadership is inconsistent.

Like most states across the country, education requirements in Oregon for those administering or teaching in early care and education programs vary and depend more on the program's funding source than children's developmental needs (Whitebook, McLean, & Austin, 2016). In Oregon, there are different requirements for those teaching in certified family child care homes, those teaching in certified child care centers, and those teaching in state and federally sponsored preschools (see **Appendix Table 1**).[5] These requirements vary from no formal education requirements for teachers in private settings to a bachelor's degree in early childhood education or a related field for lead teachers working in Preschool Promise, Oregon's pilot preschool program serving children living at or below 200 percent of the federal poverty level (Oregon Department of Education, Early Learning Division, 2017a; Oregon Department of Education, Early Learning Division, 2017b; Oregon Higher Education Coordinating Commission, Office of Student Access and Completion, n.d.). Such divergent qualifications disadvantages educators across Oregon's ECE field as well as children who may have teachers with vastly different experience and qualifications depending on the setting in which they receive care and education services.

It is likely, however, that many early childhood teaching staff in Oregon mirror their counterparts nationally and possess higher levels of education and training than may be required (Whitebook et al., 2016). Additionally, other initiatives encourage and support many professionals in the ECE workforce to pursue further college-level education. Spark, Oregon's statewide Quality Rating and Improvement System (QRIS), requires higher levels of staff education to achieve higher ratings. For example, in order for center-based programs to be eligible for a three-star rating, at least 50 percent of teachers and head teachers must attain Step 7 or higher in the Oregon registry.[6] In addition, the Oregon Statewide Scholarship Program provides funds for training and education for ECE providers (Portland State University, n.d.).

Program Goals

Not all early childhood higher education degree programs are alike, nor should they be. However, it is important to distinguish between programs that have an intent to prepare teachers and administrators and those that identify other goals related to early childhood. Reflecting the inconsistent qualifications required of early educators, across the country there has been a default acceptance of "early childhood-related" programs as acceptable for preparing early educators (Whitebook et al., 2012). This reality has resulted

[5] Director and staff requirements were retrieved from the Oregon Department of Education's Early Learning Division requirements for certified centers and certified family child care homes.

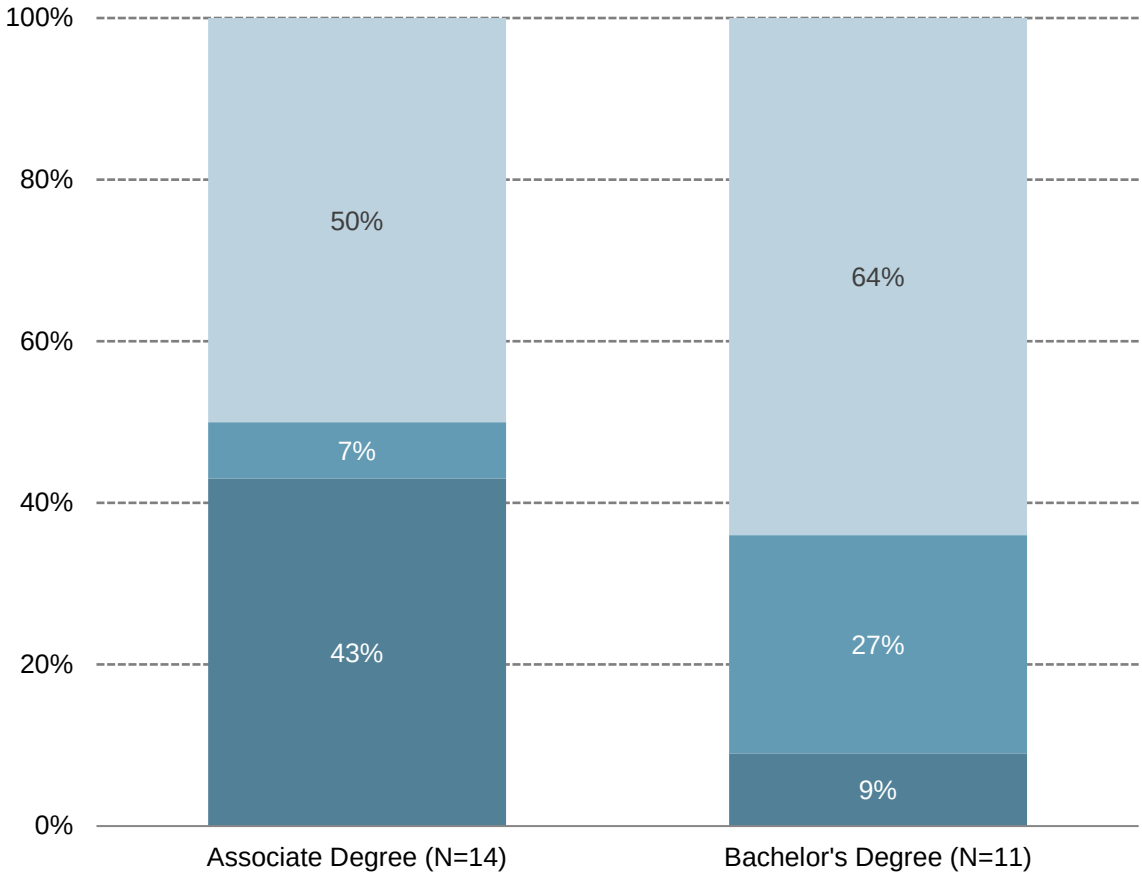
[6] To attain Step 7, teachers must hold a CDA, *or* have 12 college course quarter credits in two categories of the Core Body of Knowledge for Oregon's Childhood Care and Education Profession, *or* have 120 hours of community-based training, including 10 hours in each Core Body of Knowledge category.

in wide variation in the goals and content of programs, though graduates of these different programs are often held to the same expectation of what they should know and be able to do upon degree completion (Whitebook & Ryan, 2011).

The majority of early childhood higher education degree programs in Oregon are not primarily focused on teacher preparation. One-half (50 percent) of associate degree programs and nearly two-thirds (64 percent) of bachelor's degree programs reported that their primary goal is to prepare students to work in multiple roles involving young children in many types of settings (see **Figure 1**). The second-most common primary goal identified by both associate and bachelor's degree programs is teacher and administrator preparation. Associate degree programs were more likely to report preparing educators for roles in ECE settings, while bachelor's degree programs were more likely to report preparing educators for roles in ECE *and* elementary settings. Although none of the programs participating in the *Inventory* listed their primary goal as preparing early interventionists or early special education teachers, these programs may offer degrees and certificates in early intervention and early childhood special education. 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.[7]

[7] In addition, none of the associate or bachelor's degree program leads participating in the *Inventory* reported that the primary goal of the program was "to prepare students for a career as a researcher or college-level faculty member."

Figure 1: Primary Goal of Oregon Early Childhood Higher Education Degree Programs, by Degree Level



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 and pedagogy (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).

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

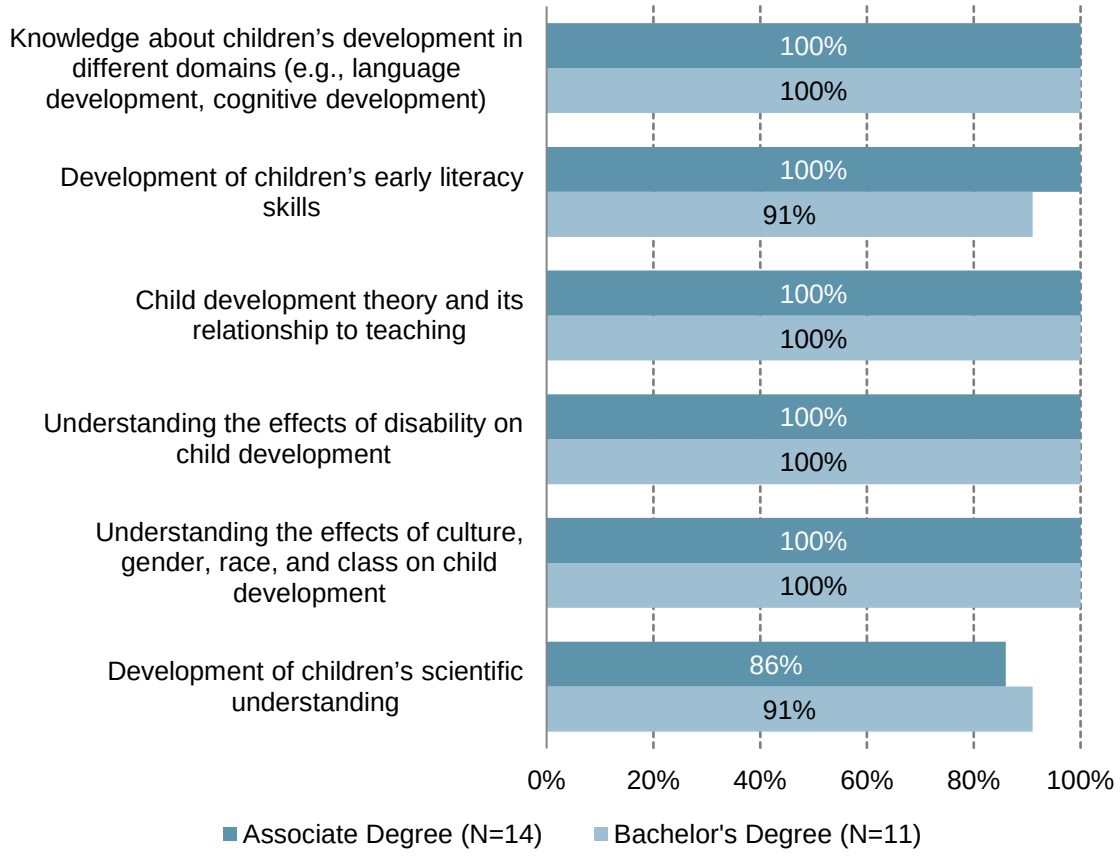
Domains	Topics
Child Development and Learning	Domains of development
	Effects of culture, gender, race, and class on development
	Effects of disability on development
	Development of children's early literacy skills
	Child development theory and its relationship to teaching
	Development of children's scientific understanding
Teaching	*Teaching Diverse Child Populations*: Teaching children who are living in poverty, who have special needs, who exhibit challenging behaviors, or who have experienced trauma
	Teaching and Curriculum: Using integrated curriculum and play in teaching; implementing inclusion strategies; supporting social and physical development; and teaching art, literacy, science, and social studies
	Teaching Skills in Early Childhood Settings: Using observation, assessment, and documentation to inform teaching and learning; different teaching techniques; and classroom management
Leadership and Administration	*Supervision and Operations*: Building relationships with other teachers and/or early childhood professionals; guiding practitioners in implementing curriculum and appropriate teaching strategies; adult supervision; strategies to support adult learning; assessment and documentation to inform teaching and learning; assessment and documentation to inform program quality; program planning, development, and operations; and preparation to provide professional development services
	Organization and Systems: Human resources/personnel policies; fiscal procedures and management; grant management and proposal writing; organizational development and change; the early childhood system and public policy; effective advocacy, policy analysis, and development; and building community partnerships and developing familiarity with community resources for children and families

Child Development and Learning: Content Knowledge and Teaching

The vast majority of associate and bachelor's degree programs reported requiring all six of the course content topics related to the domain of child development and learning, with few exceptions (see **Figure**

2). However, while programs were likely to require content knowledge of child development and learning, they were more varied in course requirements for pedagogy related to these topics. For example, in the "teaching diverse child populations" domain, 79 percent of associate degree programs require students to take coursework on "teaching children experiencing poverty." Sixty-four percent of associate degree and 82 percent of bachelor's degree programs require content addressing "children who have experienced trauma." In the domain of teaching and curriculum, 79 percent of associate programs required students to take coursework on "teaching children science skills," and 64 percent of associate degree programs required content on "teaching children social studies."

Figure 2: Required Coursework Related to Child Development and Learning, by Degree Level



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 reported offering coursework related to this domain than any other domain. Associate degree programs were more likely than bachelor's degree programs to offer this coursework. In fact, 40 percent of bachelor's programs reported that they did not offer any of the topics listed in this section of the *Inventory* (see **Table 1**).

The topics most often offered in associate degree programs were “building relationships with other teachers and/or early childhood professionals,” “assessment and documentation to inform teaching and learning,” and “guiding practitioners in implementing curriculum and appropriate teaching strategies,” each of which was offered by at least 64 percent of associate degree programs. At the bachelor’s degree level, the most commonly offered topics were “building community partnerships and developing familiarity with resources for children and families,” “building relationships with other teachers and/or early childhood professionals,” “guiding practitioners in implementing curriculum and appropriate teaching strategies,“ and “assessment and documentation to inform program quality,” each of which was offered by at least 55 percent of programs.

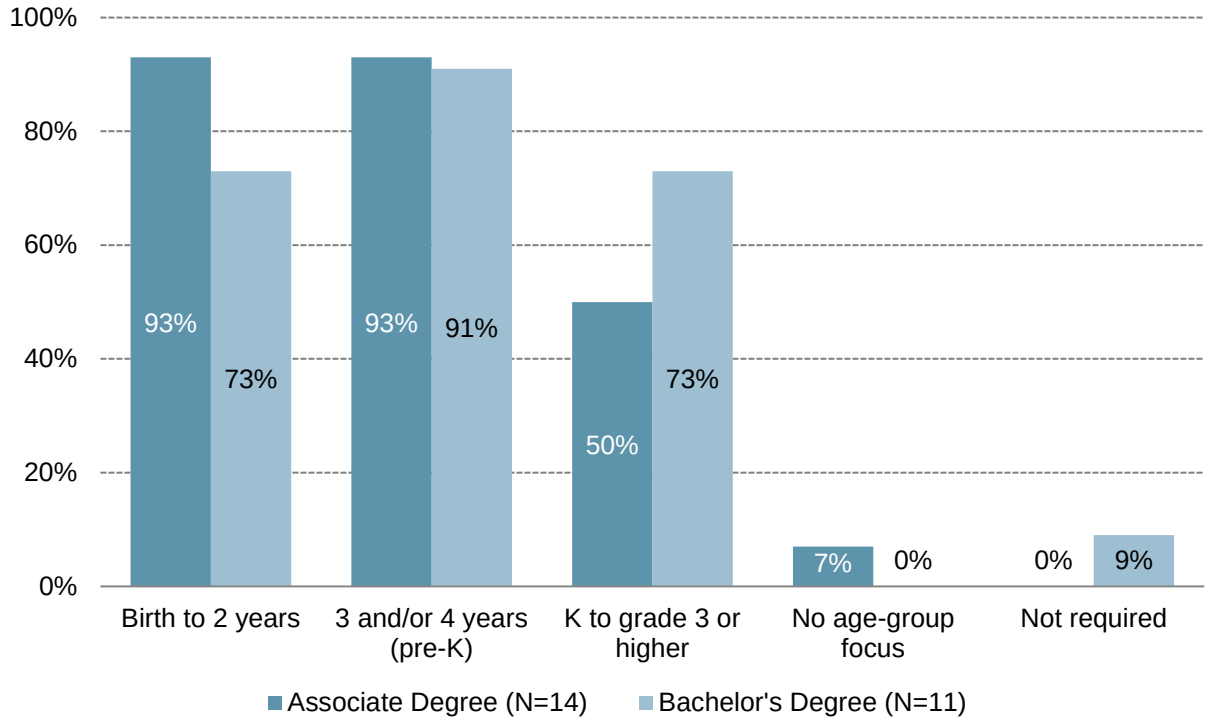
In addition, the *Inventory* asked if programs offered coursework designed to prepare students to provide professional development services (e.g., mentoring, coaching, or training other ECE professionals). Fewer than 10 percent of associate degree and about one-third (36 percent) of bachelor’s degree programs reported offering courses related to the provision of professional development services.

Age-Group Focus

Depending on the ages of the 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; Whitebook & McLean, 2017). The Institute of Medicine and the National Research Council conclude that educators working with children at any age from birth to eight require equivalent levels of education and training, and this variability in preparation 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 in this age span (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 and as a metric by which to measure progress toward it. The *Inventory* intentionally sought to examine differences among programs in preparing students to work with children of different ages. For child development and learning and teaching topics, both associate and bachelor’s degree programs were most likely to require an age-group focus on preschool-age children (see **Figure 3** for an example). A greater percentage of bachelor’s degree programs required a focus on school-age children for every topic, compared to associate degree programs. The focus on infants and toddlers varied widely by topic and degree program.

Figure 3: Understanding the Effects of Culture, Gender, Race, and Class on Child Development: Required Age-Group Focus of Programs Participating in Oregon Early Childhood Higher Education Inventory, by Degree Level



Integration of Standards and Competencies Into Coursework

In recent years, growing attention to the importance of early childhood development has led to the development of standards and core competencies outlining what early educators should know and be able to do to meet children's developmental needs (Whitebook et al., 2016). However, despite increasing agreement on the value of these standards and competencies for ensuring professionalism of the ECE workforce, in Oregon many higher education degree programs do not consistently require coursework aligning to them.

The Oregon Early Learning Standards, the Core Body of Knowledge for Oregon's Childhood Care and Education Profession, and Spark (Oregon's QRIS) were the most commonly reported standards that early childhood degree programs integrated into coursework. More than one-half (57 percent) of associate degree programs and nearly two-thirds (64 percent) of bachelor's degree programs reported integrating the Oregon Early Learning Standards into coursework. More than one-half (57 percent) of associate degree programs and nearly one-third (27 percent) of bachelor's degree programs reported incorporating the Core Body of Knowledge into program content. One-half of associate degree programs and about one-fifth (18 percent) of bachelor's degree programs integrated Spark into their coursework.

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

All students earning either associate or bachelor's degrees in early childhood are required to complete a practicum experience, though there is little consistency as to the duration and frequency of these field-based experiences. In contrast, students in both associate and bachelor's degree programs are far less likely to be required to complete a student teaching experience.

What we asked about field-based experiences:

Program leads were asked about two distinct types of field experiences: student teaching and practica. By student teaching, we mean full-time immersion in a classroom, with increasing responsibility for curriculum planning and teaching and supervision by a faculty member, *and/or* cooperating teacher, *and/or* mentor. By practicum, we mean an experience, associated with a course, which is short in duration, often focused on a particular skill or population, and includes supervision by a faculty member, *and/or* cooperating teacher, *and/or* mentor. For each, respondents were asked to indicate whether the field experience was required in order to attain the degree, and if so, they were asked a series of questions pertaining to the field experience, including timing, duration, and differences in field experience structures for pre-service and experienced teachers.

Program leads were also asked whether students in student teaching and practica were required to work with specific age groups of children, children with particular characteristics (e.g., children who are dual language learners, children with special needs), or families.

Finally, program leads were asked to identify practices that students were required to incorporate during student teaching and practica, including the following:

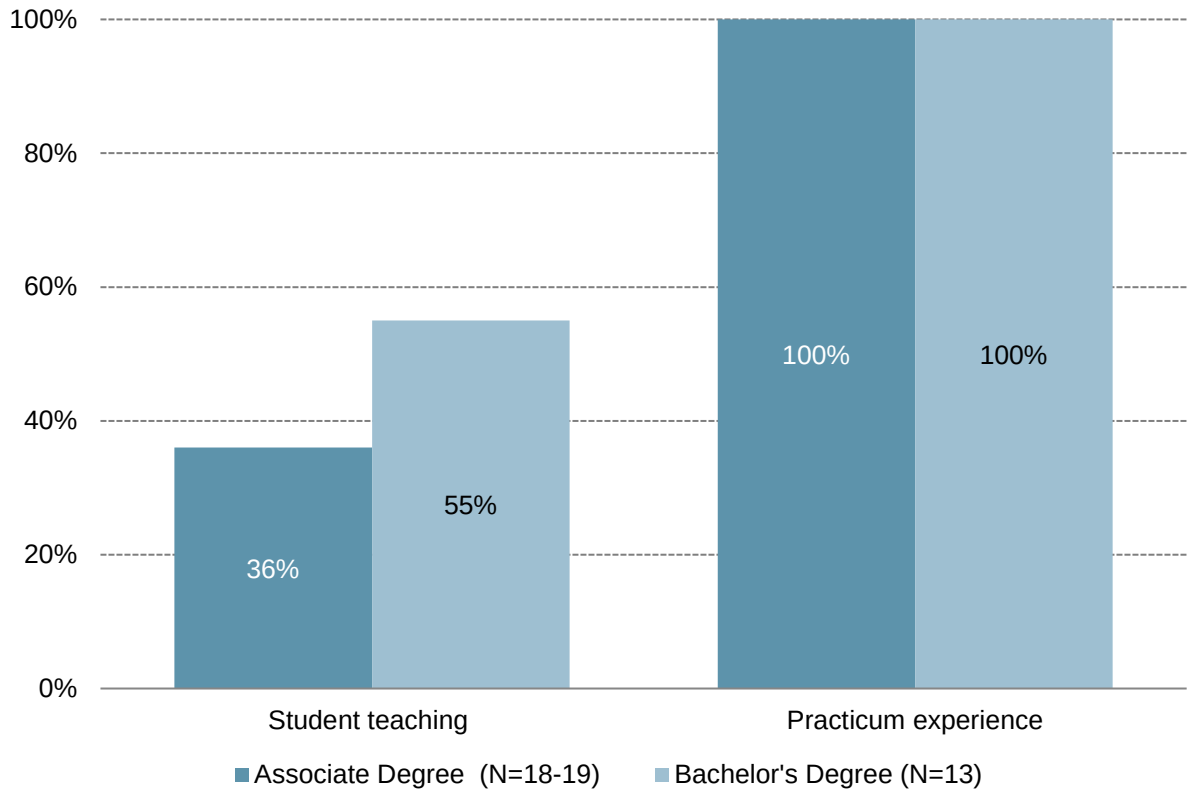
- Scaffolding children's mathematical development and promoting their ability to solve problems;
- Scaffolding children's literacy development and promoting their oral and written skills;
- Supporting children's socioemotional development and skills;
- Facilitating the developmental course of motor development in young children;
- Integrating families in partnerships to support children's learning;
- Utilizing assessment effectively to inform and individualize instruction; and
- Collaborating with community organizations to support children and families.

There is widespread agreement that field-based learning experiences for teachers working with children of all ages are critically important for developing new teaching skills or improving existing ones (IOM & NRC, 2015; NCATE, 2010b; Whitebook et al., 2012). 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 experiences (CSCCE, 2017; 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 ECE experts, policymakers, and other stakeholders for a more integrated birth-to-age-eight educational system (IOM & NRC, 2015).

Required Field Experiences

All associate degree and bachelor's degree programs require students to participate in at least one practicum course. In contrast, both associate degree and bachelor's degree students have limited opportunities to participate in student teaching experiences. Only about one-third (36 percent) of associate degree and about one-half (55 percent) of bachelor's degree programs require student teaching (see **Figure 4**).

Figure 4: Field Experiences Required in Oregon Early Childhood Higher Education Degree Programs, by Degree Level



Number, Duration, and Timing of Practica

Practica are the most common (and for many students, the only) type of field experience required across Oregon early childhood degree programs.[8] The total number of practica and total hours that students were engaged in practica is difficult to assess; the number of experiences varied, as did the number of hours per practicum (see **Table 2**).

[8]Because practica were the primary strategy for field experiences required by degree programs and due to small sample sizes of programs requiring student teaching, practica are the focus of this section of the report.

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

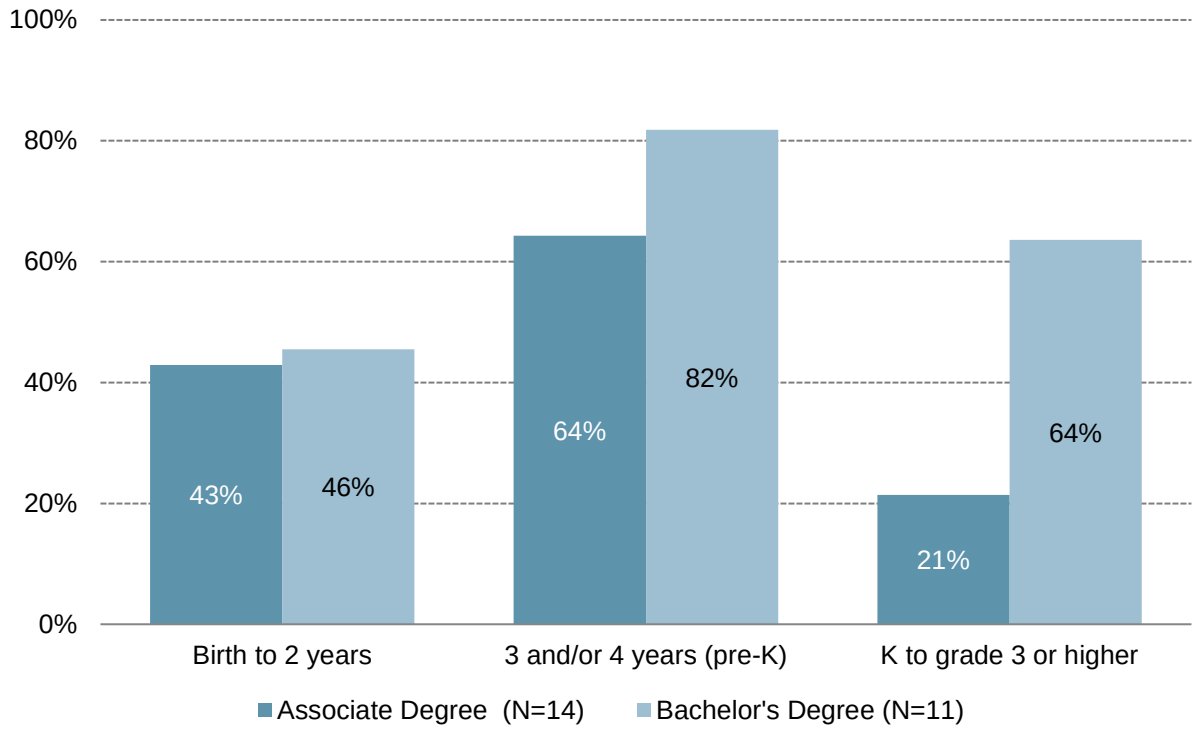
Degree Level	One practicum required	Two practica required	Three practica required	Four or more practica required	Mean number of hours typically required to complete a practicum course
Associate Degree (n=14)	7%	21%	29%	43%	96
Bachelor's Degree (n=11)	9%	27%	9%	55%	108

Perhaps reflecting the differences in the total number of practica required, the first practicum experience occurred at different times for students at different degree levels. Associate degree programs were more likely than bachelor's degree programs to require that the first practicum occur at the beginning of the course of study (93 percent compared to 55 percent). About one-half of associate degree and bachelor's degree programs structured practica differently for novice and experienced teachers (50 percent and 55 percent, respectively).

Requirements of Practicum Experiences

Within the practicum experience, both associate and bachelor's degree programs were more likely to require an age-group focus on preschool-age children than infants and toddlers or school-age children. About two-thirds (64 percent) of associate degree programs and more than three-quarters (82 percent) of bachelor's degree programs required a focus on preschool-age children. About two-fifths (43 percent) of associate degree programs required a focus on infants and toddlers, and about one-fifth (21 percent) required students to work with children in elementary grades. About two-thirds (64 percent) of bachelor's degree programs required a focus on children in early elementary grades, while nearly one-half (46 percent) required a focus on infants and toddlers (see **Figure 5**).

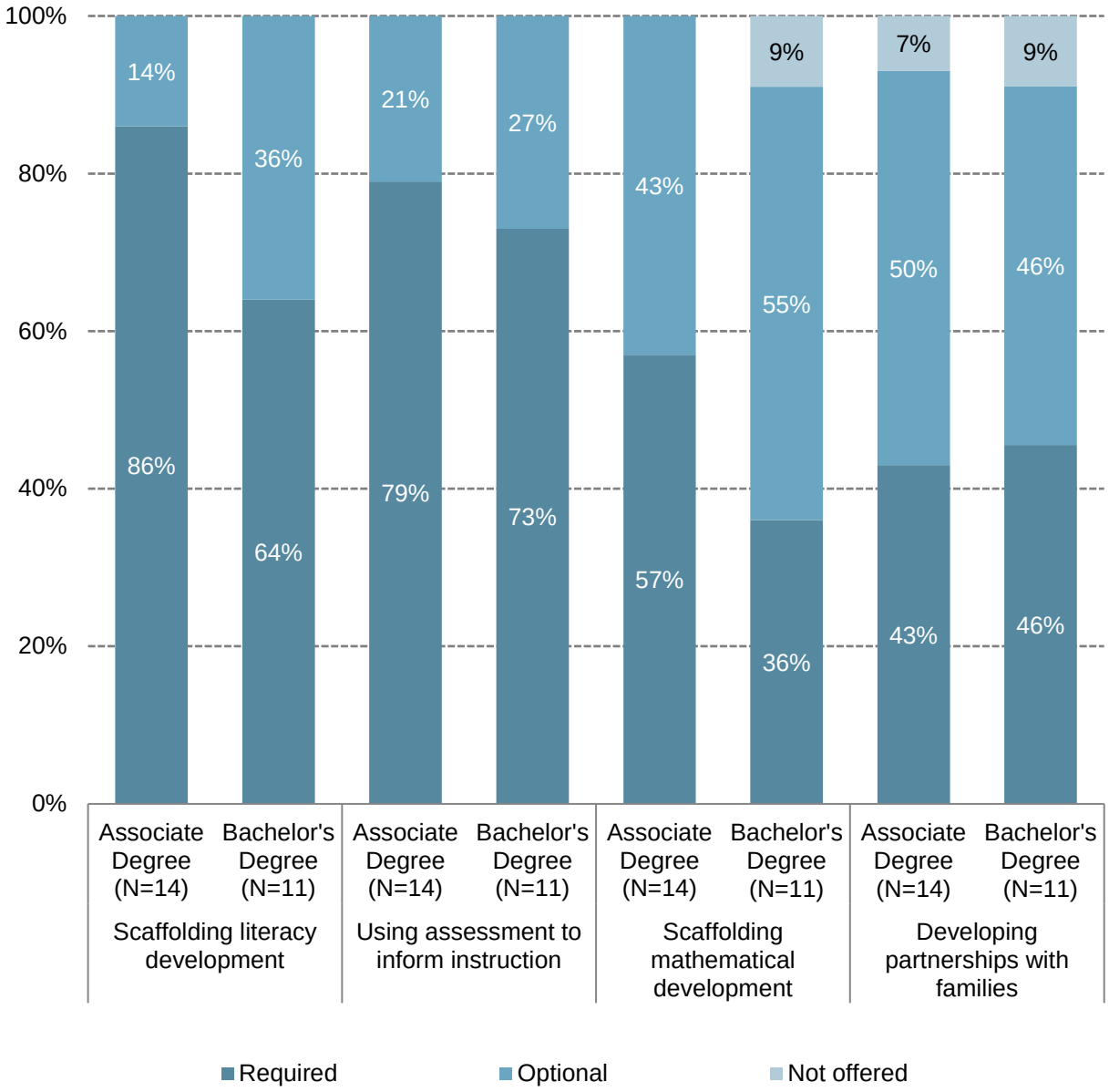
Figure 5: Required Age-Group Focus in Practicum Experiences, by Degree Level



Nearly one-half (46 percent) of bachelor's degree programs reported requiring students to complete practica that involved working with children who are dual language learners, working with children who have disabilities, and working with families during their practicum experiences. Fewer associate degree programs required these elements; fewer than one-third of associate degree programs required working with dual language learners and children with disabilities, and slightly more than one-third required working with families.

The *Inventory* also asked about specific practices that students may be required to incorporate into their practica (see **Figure 6** for select practices). The practices most likely to be required by associate degree programs were supporting socioemotional development (93 percent) and scaffolding children's literacy development (86 percent). The practice most likely to be required for bachelor's degree programs was utilizing assessment to inform and individualize instruction (73 percent).

Figure 6: Select Practices Required for Students in Their Practica, by Degree Level



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

Oregon early childhood degree programs are staffed with a mix of part- and full-time faculty. Faculty members are primarily women, white/Caucasian, monolingual English-speaking, and are less diverse than Oregon's early childhood workforce and the child population in the state. Most faculty members reported having had academic preparation specific to early childhood and also having worked in an array of ECE professional roles in the past decade.

What we asked about and of faculty members:

Program leads 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 employment status;
2. Their demographic characteristics, including: a) age; b) race/ethnicity; and c) linguistic capacity;
3. Their academic background;
4. The primary focus of their teaching and expertise related to children across the birth-to-age-eight continuum; and
5. Their professional experiences, in addition to college-level teaching, over the previous 10 years;

The faculty findings discussed below are drawn from a final sample of 75 faculty members out of 135 faculty members who received the *Inventory*.[9] Thirty-four of these faculty members teach in associate degree programs, 26 teach in bachelor's degree programs, and another 26 teach in graduate programs.[10,11]

Employment Status

Part-time faculty members constitute two-thirds or more of faculty in colleges and universities nationwide (Center for Community College Student Engagement [CCCSE], 2014; Curtis & Thornton, 2014), and this reality can pose multiple challenges for both faculty and students. Part-time faculty members are often not as integrated into the department in which they teach and not engaged in curriculum planning; furthermore, they are typically paid to teach particular courses and are not paid for additional responsibilities, such as student advising or program evaluation (CCCSE, 2014). This situation can lead

[9]The faculty members included in the *Inventory* represent a portion of faculty currently teaching in early childhood degree programs in Oregon. Nonetheless, these findings can provide insight into the experiences and needs of the wider population of early childhood faculty in the state.

[10]Faculty members who teach at multiple degree levels are counted in each degree level.

[11]We were able to include findings on faculty members who teach in graduate degree programs in the *Inventory,* even though we were not able to include graduate degree *program* level data due to small sample sizes.

to full-time faculty taking on a greater share of administrative, institutional, and student-advising responsibilities in addition to their teaching load (CCCSE, 2014; Curtis & Thornton, 2014; Early & Winton, 2001; Maxwell, Lim, & Early, 2006; Whitebook, Bellm, Lee, & Sakai, 2005).

Among those who participated in the *Inventory*, 68 percent of faculty members teaching in associate degree programs and 50 percent of faculty members teaching in graduate degree programs identified themselves as adjunct faculty or part-time lecturers. In contrast, only 35 percent of faculty members teaching in bachelor's degree programs identified themselves as adjunct faculty or part-time lecturers. As discussed in more detail below, challenges related to insufficient staffing were cited by program leads and faculty members alike.

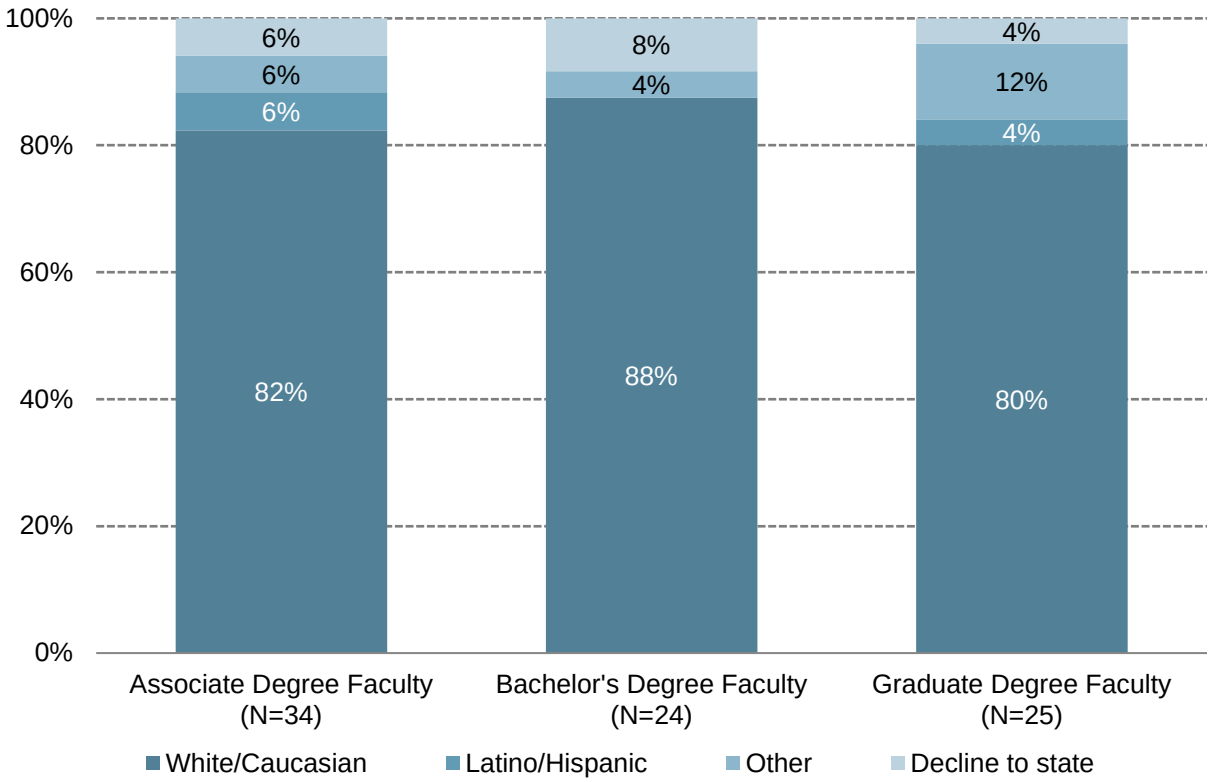
Demographic Characteristics

The well-documented absence of racial and ethnic minorities among early childhood higher education faculty — in contrast to their students and the child populations that these ECE professionals will serve — has implications for the degree of focus on diversity in coursework and the availability of role models for students (Bornfreund, 2011; Early & Winton, 2001; Johnson, Fiene, McKinnon, & Bahu, 2010; Lim, Maxwell, Able-Boone, & Zimmer, 2009; Maxwell, Lim, & Early, 2006; Ray, Bowman, & Robbins, 2006; Whitebook, Bellm, Lee, & Sakai, 2005). Evidence suggests that a racially and ethnically diverse faculty is more likely to recognize the need to respond to a diverse student body and child population and more likely to address issues of diversity in course curriculum (Lim, Maxwell, Able-Boone, & Zimmer, 2009).

Racial, Ethnic, and Linguistic Diversity

Most faculty members participating in the *Inventory* identified as female, white/Caucasian (see **Figure 7**), and monolingual. In general, faculty members were less diverse than the early childhood teaching workforce in Oregon: in 2016, 74 percent of ECE teachers in the state identified as white, 15 percent as Hispanic/Latino, 4 percent as Asian, and 3 percent as African American (Oregon Center for Career Development in Childhood Care and Education & Oregon Child Care Research Partnership, 2016). Similarly, census data point to an increasingly diverse population in the state, with the child population under the age of five being 63 percent white (non-Hispanic), 22 percent Hispanic or Latino, 7 percent multiracial, and 4 percent Asian (Annie E. Casey Foundation, 2016).

Figure 7: Race/Ethnicity of Faculty Members Participating in the Oregon Early Childhood Higher Education Inventory, by Degree Level*



*Other racial/ethnic categories have been included in "other" where percentages were not large enough to protect confidentiality.

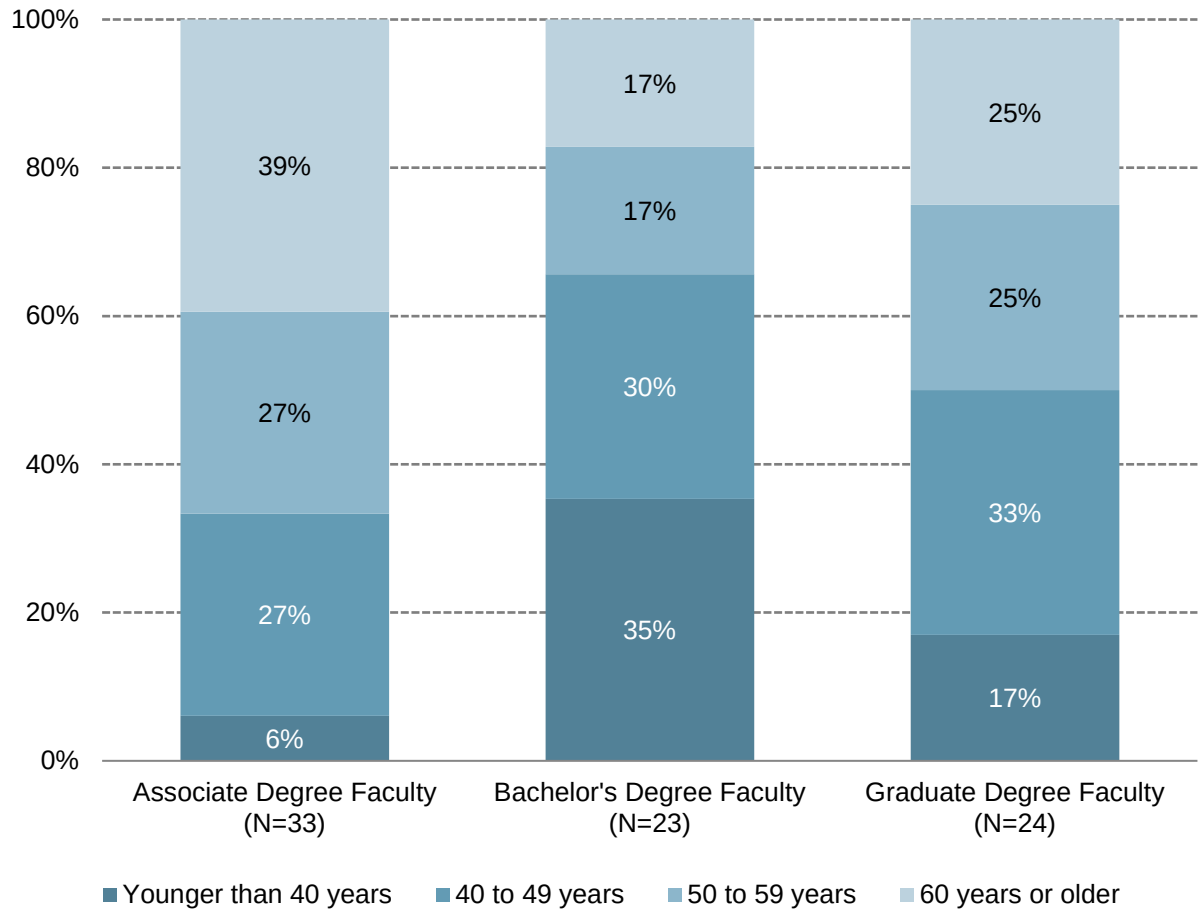
While all faculty members at all degree levels reported fluency in English, fewer reported fluency in another language. While fewer than one-fifth of faculty members teaching at the associate and bachelor's degree levels reported fluency in another language (15 percent and 12 percent, respectively), almost one-quarter (24 percent) of faculty members teaching at the graduate degree level did so. However, 70 percent or more of faculty members across degree levels reported that it would be helpful to know another language, primarily Spanish, in order to communicate better with their students. Overall, about 90 percent of faculty members who would like to know another language identified Spanish as a language of interest. About one-quarter of faculty members at the bachelor's degree level and one-fifth of faculty members at the graduate degree level also identified Cantonese/Mandarin as languages they would like to know. Of note, Oregon's dual language learner child population has grown 32 percent since 2000; experiencing a growth rate higher than the national average. Twenty-eight percent of children in Oregon under the age of eight are dual language learners (Park, O'Toole, & Katsiaficas, 2017)

Age

Faculty members teaching in bachelor's degree programs were, on average, slightly younger than their colleagues teaching in other programs. The average age of faculty members teaching in associate

degree programs was 55 years; for faculty members teaching in graduate degree programs, it was 51 years; and for faculty teaching in bachelor's degree programs, it was 48 years. Faculty teaching in associate degree programs were more likely to report being 60 years or older (thus, potentially close to retirement) than bachelor's and graduate degree program faculty members (see **Figure 8**).

Figure 8: Age of Faculty Members Participating in the Oregon Early Childhood Higher Education Inventory, by Degree Level



Academic and Professional Background

Teachers of adults, like those 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) have called for early childhood higher education faculty to be versed in the foundational theories of 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 past decade (National Council for Accreditation of Teacher Education [NCATE], 2010a & 2010b).

Academic Preparation and Teaching Focus Related to Early Childhood

Two-thirds (67 percent) of faculty members teaching in bachelor's degree programs and nearly three-quarters of faculty members teaching in associate and graduate degree programs (73 percent and 72 percent, respectively) had earned at least a bachelor's degree in early childhood education or child development. While we did not ask about the primary focus of their own early childhood degrees, faculty members 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." They were also asked about their expertise related to various age groups of children.

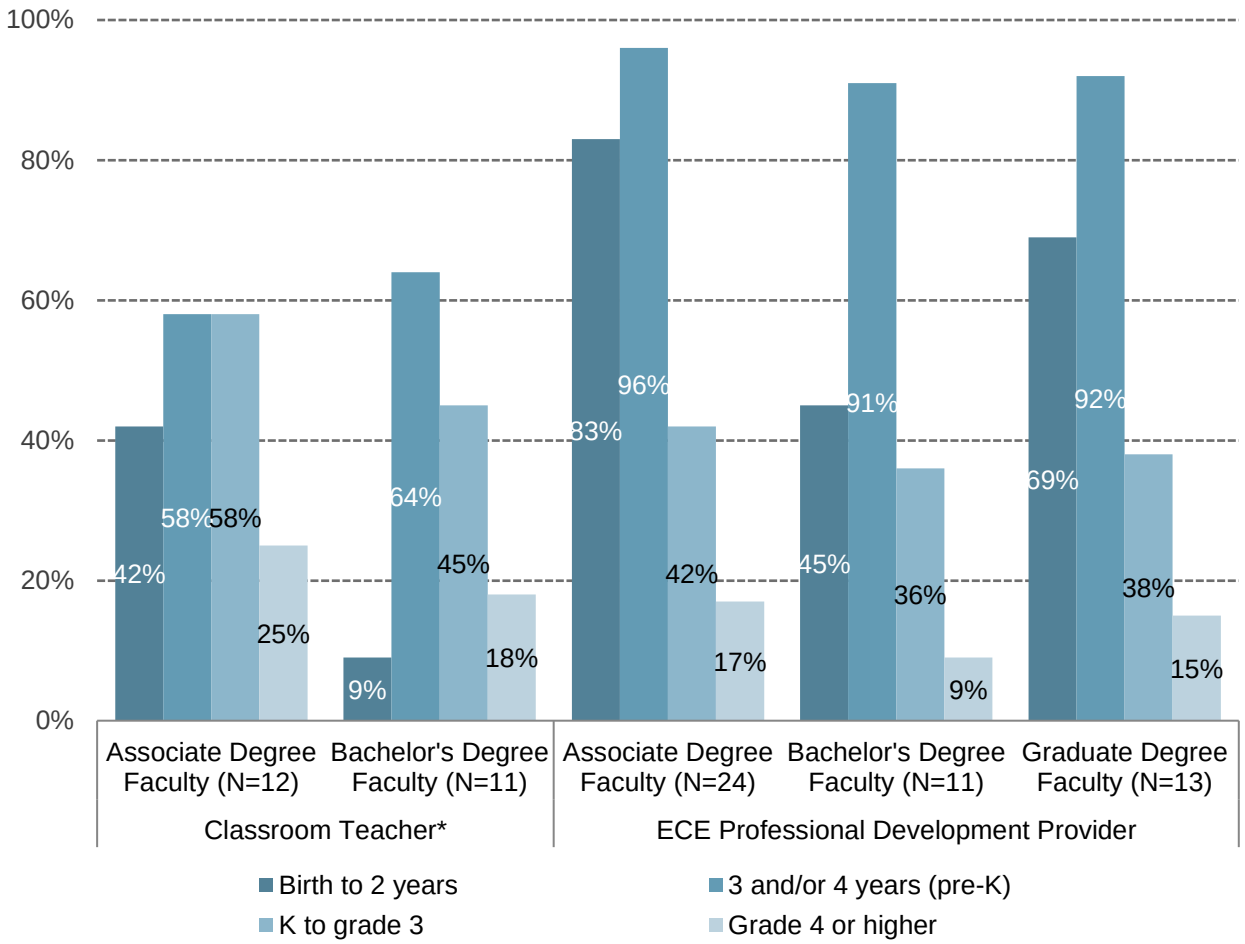
Most faculty members teaching in associate and bachelor's degree programs reported focusing on both "curriculum and teaching methods" and "child development and learning." Faculty members teaching in graduate degree programs were less likely to focus on child development and learning and more likely to report focusing on other areas. Faculty members teaching in bachelor's and graduate degree programs were more likely to report that their primary expertise was on children birth through before kindergarten, while faculty members teaching in associate degree programs were more likely to report expertise on children birth through grade 3 or higher. Few faculty at any level considered infants and toddlers to be their primary area of expertise; fewer than 5 percent of faculty teaching in associate degree programs and no faculty members teaching in bachelor's or graduate degree programs identified this age group as their primary expertise.

Professional Teaching and Administrative Experience

The majority (80 percent or more) of faculty members across degree levels reported experience in other professional roles over the past 10 years. Of those faculty members who reported having worked in other roles, the majority (more than 58 percent across degree levels) had worked as ECE professional development providers (e.g., coach, mentor, trainer, consultant). Additionally, 41 percent or more of faculty members across degree levels had worked as classroom teachers, and 43 percent of faculty members teaching in associate degree programs reported having worked as early childhood administrators.

Professional development provider experience and classroom teaching experience were most likely to have occurred with children of preschool age or those in kindergarten through grade 3 (see **Figure 9**). Of the faculty members teaching in associate degree programs who reported working as classroom teachers, 42 percent had worked with infants and toddlers, while fewer than 15 percent of faculty members teaching in bachelor's and graduate degree programs had worked with infants and toddlers.

Figure 9: Age-Group Focus of Select Job Roles in Past 10 Years, by Degree Level



*Sample size too small to report on graduate degree faculty.

FINDING FOUR: FACULTY PERSPECTIVES AND EXPERTISE

Faculty Perspectives on Course Content, Teaching Experience and Capacity, Professional Development Background, and Professional Development Interests

Oregon early childhood degree faculty were more likely to consider the inclusion of socioemotional development important, compared to other course content. In general, faculty members reported feeling most capable of preparing teachers to work with preschool-age children. Across content areas, faculty members reported feeling least capable of preparing teachers to support dual language learners. Oregon early childhood degree program faculty are particularly interested in professional development related to working with children who have experienced trauma, children from diverse cultural backgrounds, children with special needs, and working with families exposed to trauma.

What we asked faculty members:

Individual faculty members were asked to indicate:

1. Their perspectives on including various domains of development and learning in teacher preparation programs (see **Box 3**).

Faculty members were also asked about:

2. Their capacity to teach certain content;
3. Recent teaching experiences; and
4. Professional development in which they had participated and topics in which they are interested in gaining additional knowledge.

Faculty members' perspectives on the importance of including particular domains of development and assessment of their own teaching capacity are likely to affect faculty intent to include specific content in coursework (Hyson et al., 2012). Knowledge about faculty members' capacity to teach certain content areas and their own learning needs can further help inform professional development opportunities for faculty members.

Perspectives on Program Content

We asked faculty members their opinions about the importance of including particular domains of development and learning in early childhood degree programs for infants and toddlers, preschool-age children, and school-age children (see **Box 3** for a description of how we gathered this information). The domain of socioemotional development was rated as "very important" by the highest percentage of faculty members (see **Figure 10**). Almost all faculty members (96 percent or more) rated this domain as "very important" for all three age groups. Content related to supporting the development of young dual language learners and working with diverse families was also rated as "very important" by almost all faculty members. In general, faculty members responded similarly regarding the importance of including various topics across the three age groups, with a few exceptions. Faculty were less likely to consider it "very important" to include coursework on early mathematical development and literacy development for infants and toddlers as compared to preschool-age children and school-age children. Conversely, faculty

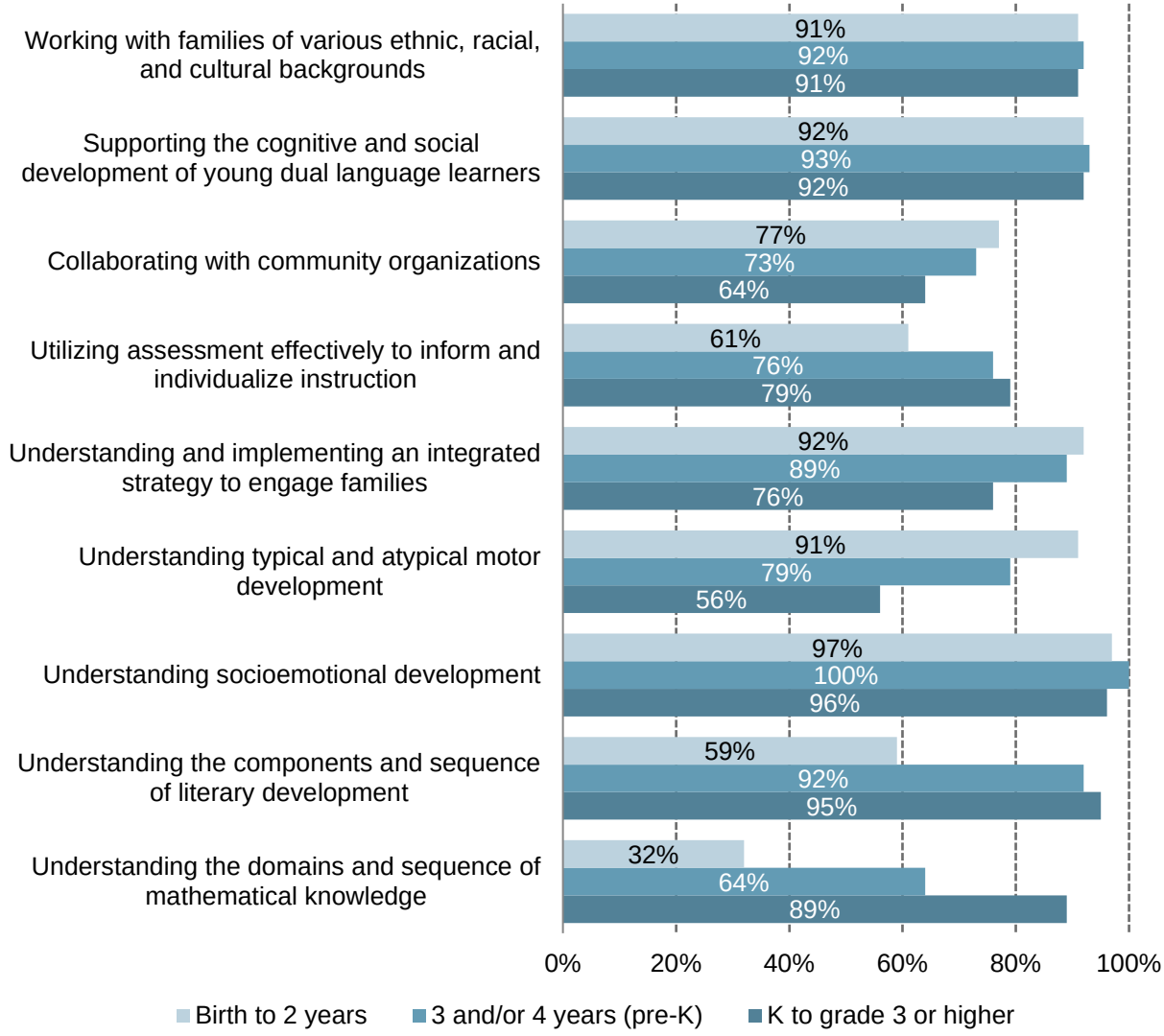
members were more likely to consider the inclusion of content on physical and motor development "very important" for very young children as compared to older children.

Box 3. Faculty Perspectives on Including Various Domains of Development and Learning in Teacher Preparation Programs

The *Inventory* assessed faculty members' perspectives on the relative importance of various domains of development and learning in teacher preparation programs. Faculty members 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. The domains were:

- Literacy Development: Understanding the components and sequence of literacy development in young children and how to promote children's skills related to oral and written language;
- Socioemotional Development: Understanding socioemotional development, its relationship to learning, and how to support children's socioemotional skills;
- Motor Development: Understanding normal and atypical motor development in young children, its relationship to learning, and how to support the development of children's motor skills;
- Assessment: Utilizing assessment effectively to inform and individualize instruction;
- Collaboration: Collaborating with community organizations to support children and families;
- Diverse Families: Working with families of various ethnic, racial, and cultural backgrounds;
- 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; and
- Dual Language Learners: Supporting the cognitive and social development of young dual language learners.

Figure 10: Importance of Including Domains in Teacher Preparation Programs: Percentage of Faculty Reporting "Very Important," by Age Group (N=75)



Capacity to Teach Content

The *Inventory* asked faculty members to assess their capacity to prepare early educators to promote children's development and learning on the following topics:

- Children's literacy development;
- Children's socioemotional development;
- Facilitation of motor development in young children;
- Utilizing assessment;

- Collaborating with community organizations to support children and families;
- Working with families of various ethnic, racial, and cultural backgrounds;
- Integrating families in partnerships to support children's learning;
- Children's mathematical development; and
- Supporting the cognitive and social development of young dual language learners.

For each of the nine topics (see **Box 3**), faculty members were asked to identify whether they:

1. Had limited familiarity;
2. Were knowledgeable but not prepared to teach others; or
3. Were capable of preparing teachers to work with children in each of the following age groups:

    - Birth to two years;
    - Three to four years (pre-K); and
    - Kindergarten to grade 3 or higher.

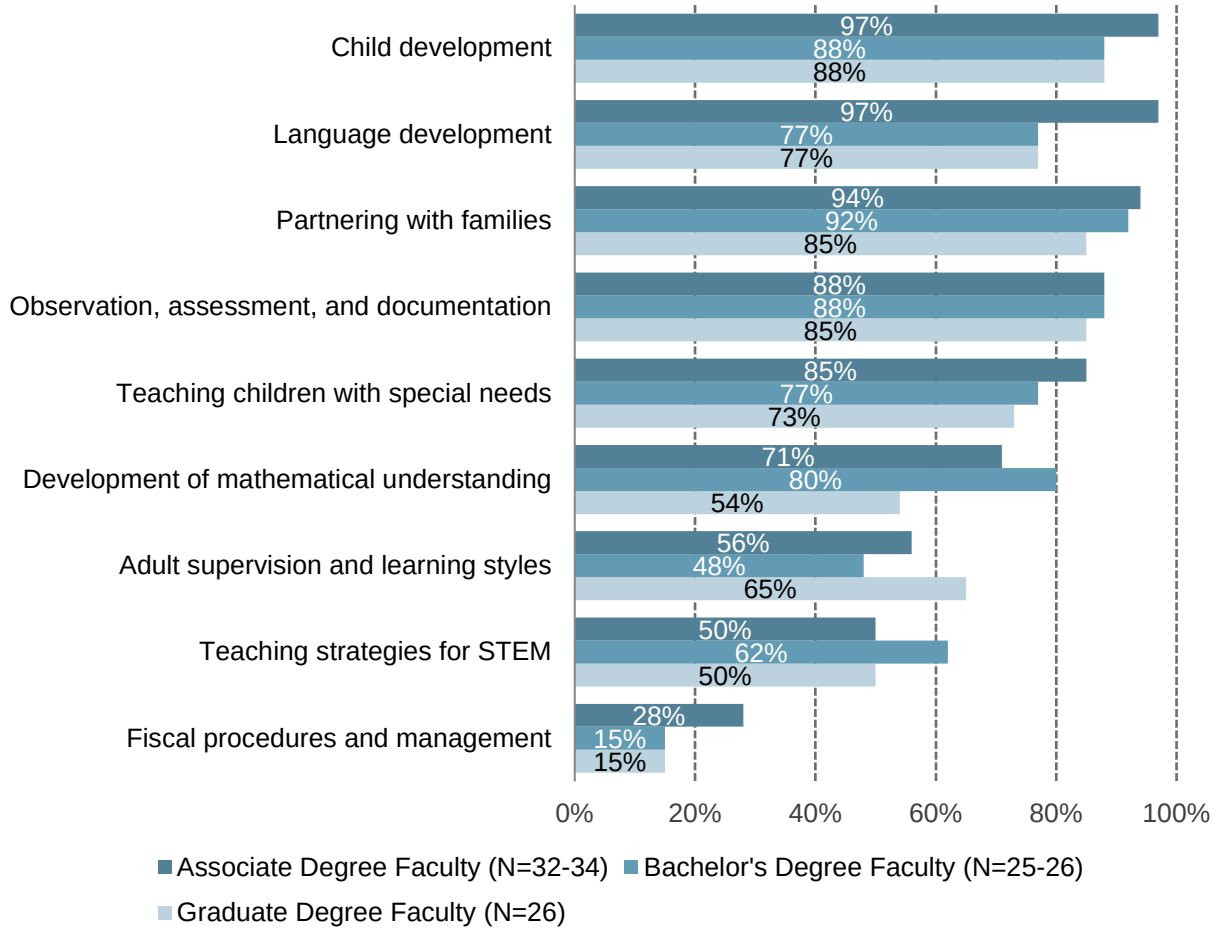
For each topic, at least 76 percent of faculty members across degree levels reported feeling capable of teaching content to students.[12] In general, faculty members reported feeling most capable of preparing teachers to work with preschool-age children. Faculty members teaching in bachelor's degree programs were more likely to feel capable of preparing teachers to work with school-age children than infants and toddlers, while faculty members teaching in graduate degree programs were more likely to feel capable of preparing teachers to work with infants and toddlers than school-age children. The topics that faculty across degree levels felt the least capable of teaching were "supporting the cognitive and social development of young dual language learners," "facilitating the developmental course of motor development in young children," and "scaffolding children's mathematical development and promoting their ability to solve problems."

Recent Teaching Experience

Faculty members were asked about their experience teaching a variety of topics during the past two academic years and whether they taught the following content areas either as a separate course, embedded within a broader course, or both. Nearly all the faculty members participating in the *Inventory* reported teaching content related to "general domains of child development," "partnering with families to enhance children's learning in school and at home," and "observation, assessment, and documentation to inform teaching and learning" (see **Figure 11**). Faculty members were least likely to report having taught courses related to "fiscal procedures and management" and teaching strategies for science, technology, engineering, and math (STEM) content. Also of note, about one-quarter of faculty members teaching in bachelor's and graduate degree programs had not taught content related to teaching children with special needs. Faculty members reported that topics listed in the *Inventory* were most likely taught within a broader course or within a broader course *and* as a separate course (rather than *only* as a separate course).

[12] Capacity to teach topics related to family engagement, early mathematical development, and working with dual language learners is described in detail in Part 2 of this report.

Figure 11: Recent Teaching Experience: Percentage of Faculty Members Reporting Having Taught Content Area in Past Two Years, by Degree Level



Professional Development Participation and Interest

Professional Development

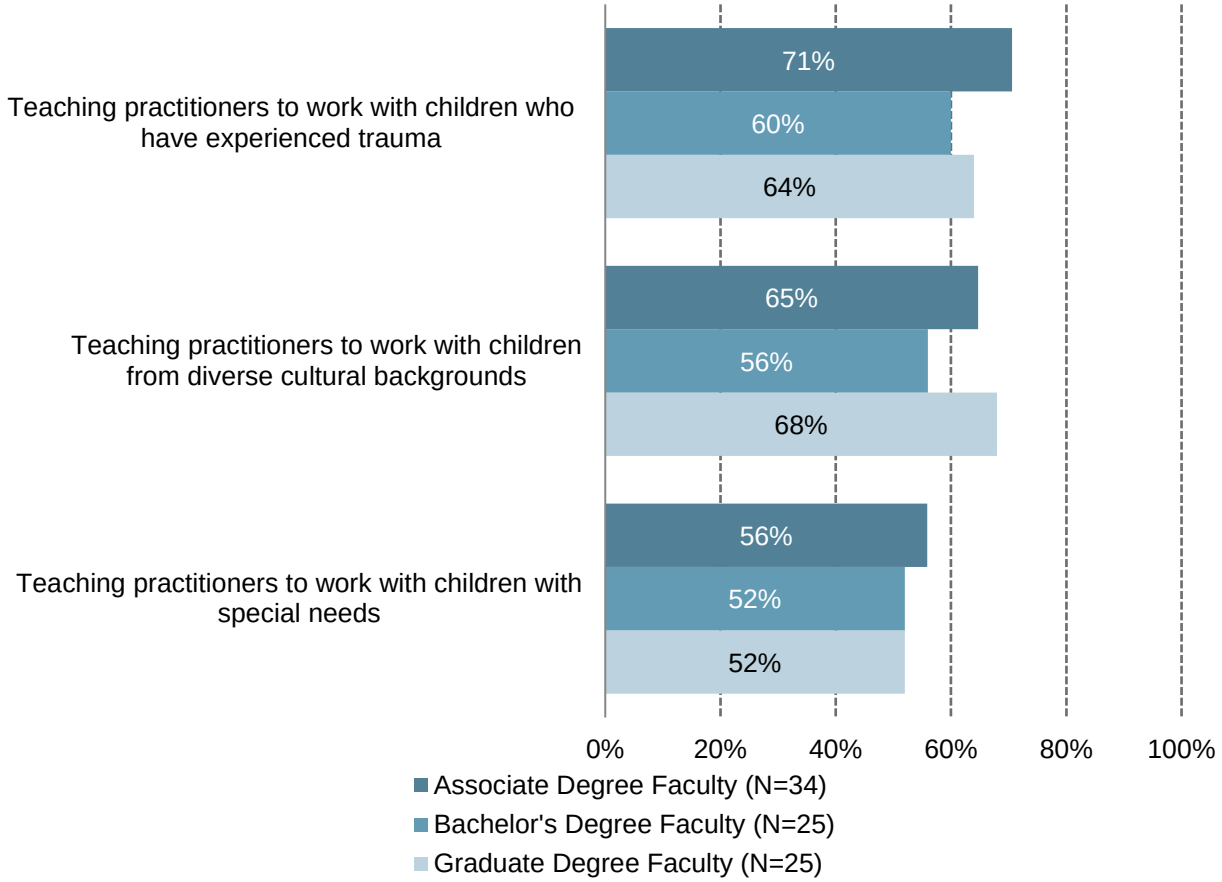
The vast majority of faculty members across degree levels reported participating in professional development during the past three years.[13] The most frequently reported professional development experiences, participated in by 50 percent or more of faculty members at all degree levels, included "teaching practitioners to work with children from diverse cultural backgrounds," "strategies and techniques for mentoring/coaching of adult students," "evidence-based research on the importance and

[13] Professional development focused on family engagement, early mathematical development, and working with dual language learners is described in detail in Part 2 of this report.

value of building respectful and trusting relationships with families," and "working with families exposed to trauma." Faculty members were least likely to have participated in professional development related to administration and leadership; 42 percent or more of faculty members across degree levels had not participated in professional development on any of the topics related to administration and leadership in the past three years.

Faculty members at all degree levels indicated a number of areas in which they were interested in gaining additional knowledge or training (see **Figure 12** for an example). The most commonly identified topics focused on teaching practitioners to work with particular groups of children (e.g., children from diverse backgrounds, children who have experienced trauma, children with special needs, and dual language learners), teaching practitioners to work with diverse families, offering strategies for mentoring and coaching adult learners, and teaching ethnically, culturally, and economically diverse college students. Across degree levels, interest in professional development topics related to teaching skills and assessment and administration and leadership was low.

Figure 12: Interest in Professional Development Related to Diverse Child Populations Reported by Faculty Members Participating in the Oregon Early Childhood Higher Education Inventory: Percentage Reporting "Very Interested," by Degree Level



FINDING FIVE: SUPPORTING STUDENTS
Services Offered and Program Articulation

Oregon early childhood degree programs offer multiple types of support services specifically tailored to help ECE students access resources and strengthen their academic skills. Associate degree programs are more likely to offer blended programs (combining online and in-person courses), but both associate and bachelor's degree programs offer few alternative class schedules or classes in community locations. Across degree levels, programs offer little academic support in math or for adult English-language learners. Inconsistent articulation was reported as a challenge by associate degree programs, and articulation agreements appear to be limited to select colleges and universities.

Typically, higher education students who work 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, may be among the first in their families to attend college, often represent linguistic and/or ethnic minorities, and may also be parents of children who are school age or younger (Sakai, Kipnis, Whitebook, & Schaack, 2014). In addition, increasing numbers of students are entering the higher education system as community college students with the intent to transfer to four-year colleges or universities, making the issue of articulation between associate and bachelor's degree programs ever more important (T.E.A.C.H. Early Childhood National Center, 2015). As states and locales seek to align with *Transforming the Workforce* recommendations, it is critical to attend to student services and infrastructure — such as articulation — that support student success. Programs that offer support specifically designed for non-traditional early childhood students are 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) (Chu, Martinez-Griego, & Cronin, 2010; Kipnis, Whitebook, Almaraz, Sakai, & Austin, 2012; Sakai, Kipnis, Whitebook, & Schaack, 2014; Whitebook, Schaack, Kipnis, Austin, & Sakai, 2013).

What we asked about services offered to students:

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

1. Skill support;
2. Counseling and cohort models; and
3. Access support.

Services Offered

Program leads were asked whether a range of services were *specifically* tailored to ECE students in the degree program or department. For example, while colleges and universities typically offer academic counseling to all students, we were interested in learning whether ECE students had access to dedicated academic counseling to help them plan a course of study that met specific ECE certification/licensing requirements. The services offered by degree programs ranged by type of services and degree level.

Skill Support

One-half (50 percent) of associate degree programs offered academic tutoring tailored for ECE students in reading and writing, while only about one-third (36 percent) of bachelor's degree programs reported offering this service. Nearly one-half (45 percent) of bachelor's degree programs offered tutoring in computers and technology training, while fewer than one-fifth (15 percent) of associate degree programs did so. About one-third of associate degree and bachelor's degree programs offered assistance for students who are English-language learners (36 percent and 27 percent, respectively). About one-third (36 percent) of associate degree programs and fewer than one-fifth (18 percent) of bachelor's degree programs offered academic tutoring in math.

Counseling and Cohort Models

Nearly two-thirds (64 percent) of bachelor's degree programs reported offering cohort programs tailored to students in the degree program, while only about one-fifth (21 percent) of associate degree programs reported that this service was available. A majority of programs across degree levels reported offering tailored academic counseling: nearly three-quarters (71 percent) of associate degree and nearly two-thirds (64 percent) of bachelor's degree programs did so. Fewer programs offered financial aid counseling: about one-third (36 percent) of associate degree and fewer than one-fifth (18 percent) of bachelor's degree programs offered financial aid counseling specifically dedicated to their ECE students.

Access Support

Associate degree programs were more likely to offer formats other than (or in addition to) traditional/on-campus programs. More than three-quarters (86 percent) of associate degree programs offered a "blended" program (combining online and in-person courses), compared to about one-half (55 percent) of bachelor's degree programs. About one-fifth (21 percent) of associate degree programs offered the degree as an "online/distance learning" program, compared to more than one-quarter (27 percent) of bachelor's degree programs.

More than one-half (57 percent) of associate degree and more than one-third (36 percent) of bachelor's degree programs offered financial assistance other than federal financial aid to ECE students. Only about one-third of associate and bachelor's degree programs (36 percent for both) offered alternative class schedules for working adults. Degree programs were also not likely to offer classes off campus in community-based settings: only one-quarter (21 percent) of associate degree and fewer than 10 percent of bachelor's degree programs reported doing so.

Articulation

What we asked about articulation:

The *Inventory* asked program leads whether their degree programs had formal articulation agreements with other degree programs.

Respondents were then asked what challenges students face in transferring their associate degree credits into bachelor's degree programs.

More than one-third (36 percent) of Oregon bachelor's degree programs reported that most of their incoming students entered as transfer students, and another 27 percent reported an even mix of freshman and transfer students. More than three-quarters (85 percent) of associate degree programs participating in the *Inventory* reported articulation agreements with early childhood bachelor's degree programs, but one-half of associate degree programs reported that inconsistent articulation was a program challenge. Furthermore, just over one-half (55 percent) of bachelor's degree programs reported articulation agreements with associate degree programs, indicating that agreements are limited to select colleges and universities.

The *Inventory* asked program leads what challenges students faced in transferring their associate degree credits into bachelor's degree programs. Nearly two-thirds (62 percent) of associate degree programs reported that lower division ECE courses did not transfer into bachelor's degree programs. Bachelor's degree programs most often reported that general education courses did not transfer into the college.

To support matriculation and student success, some states and institutions across the country are employing the strategy of "stackable credentials." Stackable credentials are a sequence of ascending credentials that can be earned over time, allowing students to move along a career pathway and progress to higher education degrees. If they are portable, these credentials are also verified and can be transferred from one institution to another (Austin, Mellow, Rosin, & Seltzer, 2012).

In Oregon, early childhood associate degree programs are far more likely than bachelor's degree programs to offer and accept these credentials/certificates, allowing students to move into and through the community college system. Ninety-one percent of associate degree programs both offer these certificates and accept certificates that students have earned elsewhere. Fewer than 10 percent of bachelor's degree programs either offer or accept these certificates, and almost one-half (46 percent) reported they have no plans to do so in the future.

FINDING SIX: PROGRAM CHALLENGES
Faculty and Program Needs

Oregon early childhood degree programs experience challenges related to time and resources required to fulfill faculty responsibilities, as well as the need for faculty members with specific expertise and who represent diverse racial and ethnic backgrounds. Inconsistent articulation was also a challenge reported by the majority of associate degree program leads. Early childhood faculty members are also in need of resources to support their ability to participate in professional development and program planning.

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

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

Faculty-Related Challenges

Three major faculty-related challenges were identified: lack of support for faculty; a shortage of faculty members with specific expertise; and the need for increased diversity among faculty members.

Support for Faculty

More than one-half of associate degree and bachelor's degree programs identified "faculty administrative responsibilities interfere with student time" as a challenge (57 percent and 60 percent, respectively). One-half or more of associate and bachelor's degree program leads noted an insufficient number of full-time faculty as a challenge. Among faculty members, the most commonly identified challenges were the need for resources for faculty professional development and the need for resources for program planning and improvement, reported by 55 percent or more of faculty members across degree levels. About one-half of faculty members teaching in associate and bachelor's degree programs (45 percent and 56 percent, respectively), and more than one-third (39 percent) of faculty members teaching in graduate degree programs also reported a need for more full-time faculty.

Faculty Expertise

One-half of associate degree programs identified the "need for additional faculty expertise in working with college students who are English-language learners" as a challenge, while no bachelor's degree programs identified this need as a challenge. However, nearly one-half (44 percent) of bachelor's degree programs identified the "need for additional faculty experience in working with diverse populations of college students." About one-third of associate degree and bachelor's degree programs identified the need for additional faculty expertise in math pedagogy (29 percent and 33 percent, respectively). More than one-third (36 percent) of associate degree programs identified the need for additional faculty expertise in working with dual language learners and in science pedagogy. More than one-third (36

percent) of associate degree and nearly one-half (44 percent) of bachelor's degree programs reported facing none of the challenges listed related to additional faculty expertise.

Faculty Diversity

A large percentage of faculty members across degree levels identified the need for increased racial/ethnic and linguistic diversity among faculty. More than one-half of faculty members across degree levels identified increased linguistic diversity as a need. Seventy percent of faculty members teaching in graduate programs, 58 percent of faculty members teaching in bachelor's degree programs, and 48 percent of faculty members teaching in associate degree programs reported the need for increased racial/ethnic diversity among faculty.

Program-Related Challenges

The most frequently reported challenge among associate degree programs was "difficulty recruiting and retaining students related to the low pay of the ECE field," identified by 86 percent of associate degree programs. In comparison, just 30 percent of bachelor's degree programs identified this difficulty as a challenge. Fifty-seven percent of associate degree programs reported that "inconsistent articulation between two- and four-year college early childhood degree programs" was a challenge, compared to just 20 percent of bachelor's degree programs. One-half of associate degree programs and one-fifth (20 percent) of bachelor's degree programs reported that "lack of time or resources to sufficiently support students for whom English is a second language" is a challenge.

Among faculty members, about two-thirds or more of faculty members across degree program levels identified "increased financial resources for students" as a need. This concern was the most frequently reported need for faculty members teaching in associate and bachelor's degree programs, and the second-most reported need for faculty members teaching in graduate degree programs. More than one-half of faculty members across degree levels also identified "resources for program planning and improvement" as a need. As one faculty member expressed, "There is [not] enough support for building and maintaining high-quality [ECE] programs. Programs are being cut or reduced, and there seems to be no long-term vision regarding the importance of these programs."

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 three key domains: family engagement, early mathematics, and dual language learners.

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

Faculty members consider the inclusion of family engagement to be important in the preparation of early childhood teachers. Multiple topics related to family engagement are embedded in all levels of degree programs, with some variation in age-group focus by degree level and topic. Faculty members expressed varied levels of interest in professional development in this topic area.

What we asked about family engagement:

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

We asked faculty members about:

1. Attitudes/beliefs about the importance of including family engagement;
2. Capacity to teach students about specific family engagement topics;
3. Experience with teaching specific family engagement content in the past two years; and
4. Participation and interest in professional development focused on topics related to family engagement.

The family engagement learning domain focuses on the environment of young children's relationships and the knowledge and skills that early childhood educators need in order to help families support children's development and learning. Over the past 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, 2010). 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 area (Epstein, Sanders, & Clark, 1999; Nathan & Radcliffe, 1994; Shartrand, Weiss, Kreider, & Lopez, 1997).

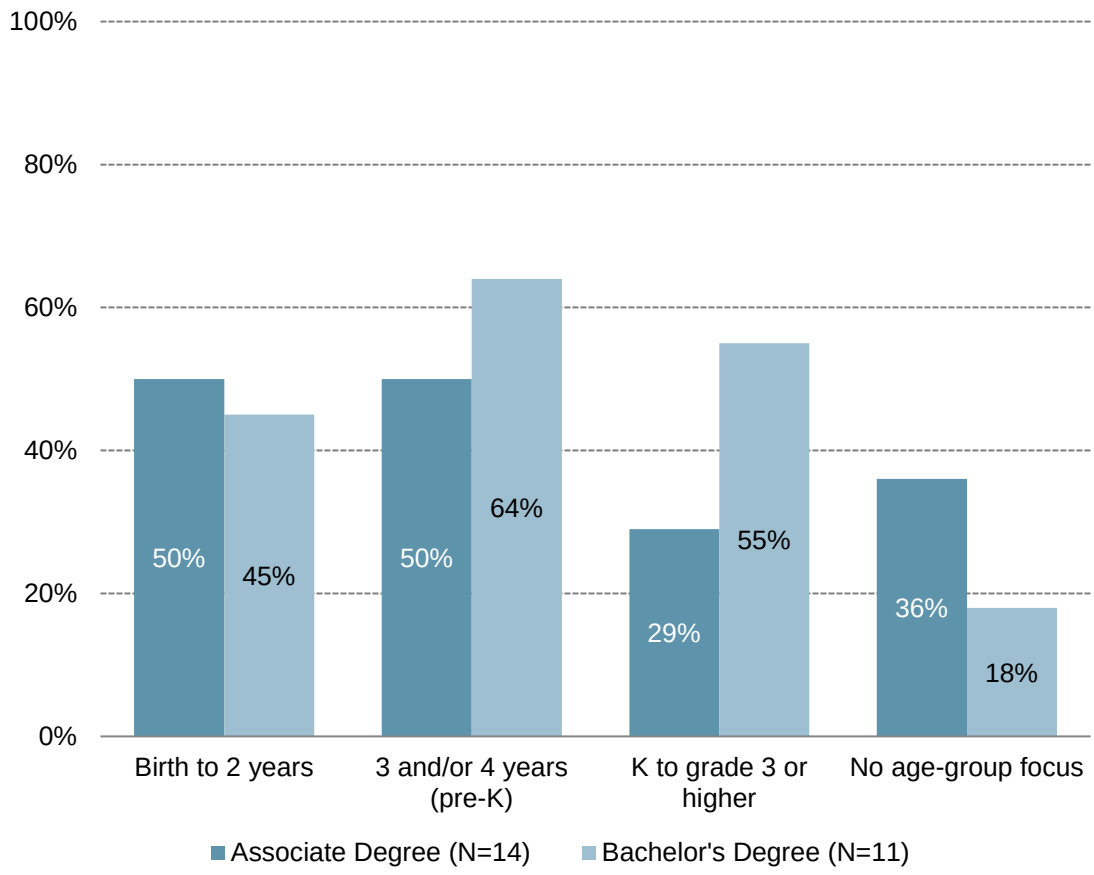
Required Family Engagement Topics in Degree Programs

Program leads were asked about required course content and age-group focus related to eight topics of family engagement (see **Table 3** for the list of topics). Across the eight topics, at least 82 percent of both associate and bachelor's degree programs reported requiring the topic, with one exception: "working with families of children exposed to trauma" was required by just 57 percent of associate degree programs. Age-group and grade focus for these content areas was highly variable, depending on topic and degree level (see **Figure 13** for an example). When a certain age level was required in associate degree programs, it was most often for preschool-age children and, to a slightly lesser extent, infants and toddlers. More bachelor's degree programs required a focus on preschoolers and, to a slightly lesser extent, children in grades K-3 or higher.

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

Topic
Evidence-based research on the importance and value of building respectful and trusting relationships with families
Considering family structure when working with children and families
Working with families of children with special needs
Working with families exposed to trauma
Working with families to help them enhance their children's learning at home
Techniques for engaging families in classroom, program, and/or school activities
Strategies to effectively communicate with families
Techniques for gathering and using knowledge about children's families in curriculum planning

Figure 13: Working With Families to Enhance Children's Learning at Home: Required Age-Group Focus of Programs Participating in the Oregon Early Childhood Higher Education Inventory, by Degree Level



Faculty Attitudes About the Importance of Family Engagement in 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 three-quarters (77 percent) or more of faculty members teaching in associate and bachelor's degree programs across age groups and by two-thirds (65 percent) or more of faculty members teaching in graduate degree programs across age groups (see **Box 3** for how this assessment was conducted). Faculty rated the inclusion of family engagement content in higher education programs as relatively important and about on par with supporting dual language learners. Faculty were more likely to rate the inclusion of family engagement content as "very important" than content for early mathematics or literacy and less likely to rate it "very important" than content on socioemotional development for those preparing teachers to work with very young learners. Faculty members at all degree levels were more likely to consider the inclusion of family

engagement to be very important for teachers working with infants and toddlers or preschool-age children than for teachers working with school-age children.

Teaching Capacity and Experience Teaching Coursework on Family Engagement

In addition to noting the importance of family engagement, faculty members across degree levels reported feeling capable of teaching content related to engaging with families. Nearly every faculty member (94 to 100 percent of faculty members across degree levels) noted that they felt capable of preparing teachers to "integrate families in partnerships to support children's learning."

When asked about their current and recent experience teaching courses related to family engagement, nearly all faculty members across degree levels (85 percent or more) reported that they had taught coursework related to "partnering with families to enhance children's learning in school and at home" during the past two years. Most often, faculty reported teaching this content embedded within a broader course, rather than as a separate course.

Faculty Participation and Interest in Professional Development on Family Engagement

At least 87 percent of faculty members across degree levels reported having participated in professional development related to family engagement in the past two years. The topics most commonly covered were "evidence-based research on the importance and value of building respectful and trusting relationships with families" and "working with families exposed to trauma."

Using a Likert scale of 1 to 5, with 1 being "not at all interested" and 5 being "very interested," faculty members were asked to rate their interest levels in eight topics related to family engagement. Interest varied for all topics across all degree levels, with faculty members most interested in "working with families exposed to trauma" and "strategies to effectively communicate with families." Additionally, more than one-half (59 percent) of faculty members teaching in associate degree programs expressed that they were "very interested" in professional development related to "considering family structure when engaging with children and families" (see **Table 3**).

FINDING EIGHT: EARLY MATHEMATICS
Required Offerings, Faculty Attitudes, Teaching Experience, and Professional Development Interests

Faculty were least likely to rate the inclusion of early mathematics as "very important" compared to other content areas. ***Nevertheless, multiple topics of early mathematics content are embedded in required course content, with variation among degree levels by topic and age-group focus. Most faculty members reported that they consider themselves prepared to teach early math content. Interest in ongoing math-related professional development varies by degree level and topic area.***

What we asked about early mathematics:

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

We asked faculty members about:

1. Attitudes/beliefs about the importance of including early mathematics;
2. Capacity to teach students about specific math-related topics;
3. Experience with teaching specific early math course content in the past two years; and
4. Participation and interest in professional development focused on topics related to early mathematics.

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 (Ryan, Whitebook, & Cassidy, 2014).

Required Early Mathematics Topics in Degree Programs

Program leads were asked about required course content and age-group focus related to 11 topics of early mathematics (see **Table 4**). All 11 early math topics were required by three-quarters or more of bachelor's degree programs. In contrast, only six early math topics were required by three-quarters or more of associate degree programs. When an age-group focus was required, both associate and bachelor's degree programs were far more likely to require a focus on preschool-age children than on infants and toddlers or school-age children. The percentage of programs requiring a focus on infants and toddlers was especially low: fewer than one-half of associate and bachelor's degree programs required an age-group focus on infants and toddlers for any of the topics.

Table 4. List of Early Mathematics Topics Included in the Oregon Early Childhood Higher Education Inventory, by Degree Level

Topic	Topic is required by at least 75% of programs	
	Associate Degree (N=14)	Bachelor's Degree (N=11)
Teaching children number sense	✓	✓
Teaching children operations and algebraic thinking		✓
Teaching children measurement skills		✓
Teaching children geometry skills	✓	✓
Teaching children mathematical reasoning/practices		✓
Building on children's natural interest and using everyday activities to develop children's mathematical knowledge	✓	✓
Encouraging children's inquiry and exploration to foster problem solving and mathematical reasoning	✓	✓
Introducing explicit mathematical concepts through planned experiences	✓	✓
Creating a mathematically rich environment	✓	✓
Developing children's mathematical vocabulary		✓
Assessing children's mathematical development to inform and individualize instruction		✓

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

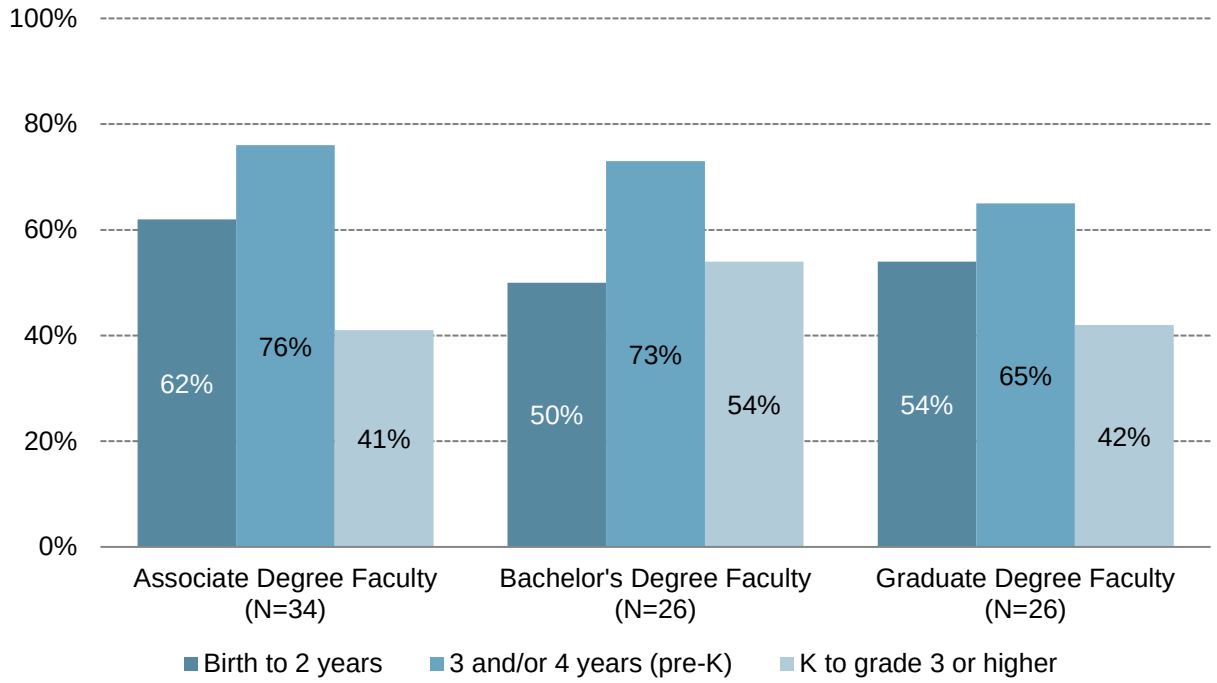
Faculty members at all degree levels were less likely to consider it "very important" to include the early mathematics domain than other domains in teacher preparation programs for practitioners working with infants and toddlers and preschoolers. Only about one-quarter of faculty members teaching in bachelor's degree and graduate degree programs (27 percent and 23 percent, respectively) and about one-third (38 percent) of faculty members teaching in associate degree programs considered it "very important" to include the mathematics domain in teacher preparation programs for teachers of infants and toddlers. In contrast, 85 percent or more of faculty members across degree levels considered it "very important" to include socioemotional development and support for dual language learners for teachers working with children under age three.

Faculty members at all degree levels were more likely to consider it "very important" to include the early mathematics domain for practitioners working with older children. Between two-fifths and three-quarters of faculty members across degree levels considered the inclusion of early math "very important" for those teaching preschool-age children. Although not rated as important as socioemotional development, literacy, or support for dual language learners, between 81 percent and 96 percent of faculty members across degree levels considered the inclusion of early math "very important" for those teaching school-age children.

Teaching Capacity and Experience Teaching Coursework on Early Mathematics Topics

In addition to the broad question regarding capability of preparing teachers to scaffold children's mathematical development, the *Inventory* also asked more specific questions related to faculty capacity to teach early math-related content. For each of the 11 specific math topics (see **Table 4**), nearly two-thirds or more of faculty members across all degree levels reported being capable of preparing teachers to work with preschool-age children. Fewer faculty members reported being capable of teaching the topics to practitioners working with infants and toddlers or the elementary grades (see **Figure 14** for an example). In general, faculty members teaching in bachelor's degree programs were more likely than faculty members teaching in associate or graduate degree programs to report being knowledgeable about the topic but not prepared to teach others.

Figure 14. Scaffolding Children's Mathematical Development: Capability of Preparing Teachers Working With Children of Various Ages, as Reported by Faculty Members Participating in the Oregon Early Childhood Higher Education Inventory, by Degree Level



Faculty members were asked whether they had taught “development of mathematical understanding” in the past two years and, if so, whether it was taught as a separate course or embedded within a broader course. Eighty percent of faculty members teaching in bachelor’s degree programs reported teaching “development of mathematical understanding” in the past two years, while 71 percent of faculty members teaching in associate degree programs and 54 percent of faculty members teaching in graduate degree programs reported teaching this topic. Mathematical understanding was more likely to be taught within a broader course than as a separate course.

Faculty Participation and Interest in Professional Development on Early Mathematics

Faculty members were asked if they had participated in professional development opportunities focused on early math development in the past three years (see **Table 5**). Although nearly all faculty members across degree levels reported participating in some type of professional development, almost two-thirds of faculty members participating in the *Inventory* had not participated in professional development related to any of the early mathematics topics listed. The topics in which faculty members were most likely to

have participated were “teaching practitioners to implement instructional strategies that support mathematical understanding in children ages three and four” and “teaching practitioners how to effectively use assessment to inform and individualize their mathematical instruction,” reported by about one-fifth to almost one-third of faculty across degree levels.

Using a Likert scale of 1 to 5, with 1 being “not at all interested” and 5 being “very interested,” faculty members were asked to rate their interest levels in five topics related to early mathematics. The topic in which the highest percentage of faculty members reported being “very interested” was “strategies to help practitioners who struggle with mathematics build confidence in their ability to facilitate children's mathematical understanding and skill.” Otherwise, faculty interest varied by topic and degree level, with faculty members teaching in associate degree programs being more likely to report being “very interested” in math topics than faculty members teaching in bachelor’s and graduate degree programs.

Table 5. List of Early Mathematics Professional Development Topics Included in the Oregon Early Childhood Higher Education Inventory

Topic
Teaching practitioners to implement instructional strategies that support mathematical understanding in children from birth through age 2
Teaching practitioners to implement instructional strategies that support mathematical understanding in children ages 3 and 4
Teaching practitioners to implement instructional strategies that support mathematical understanding in children in kindergarten through grade 3 and higher
Teaching practitioners how to effectively use assessment to inform and individualize their mathematical instruction
Strategies to help practitioners who struggle with mathematics build confidence in their ability to facilitate children’s mathematical understanding and skill

FINDING NINE: DUAL LANGUAGE LEARNERS
Required Offerings, Faculty Attitudes, Teaching Experience, and Professional Development Interests

Faculty members consider the inclusion of teaching young dual language learners to be important in the preparation of teachers. Multiple topics that focus on dual language learners are embedded in required course content, with variation among degree levels by topic and age-group focus. While most faculty members consider themselves prepared to teach topics related to dual language learners, interest in ongoing dual language learner-related professional development varies by degree level and topic area.

What we asked about dual language learners:

Program leads were asked to identify course content topics related to teaching dual language learners and diverse families[14] that were required for the degree.

We asked faculty members about:

1. Attitudes/beliefs about the importance of including support for the cognitive and social development of young dual language learners and working with families of various ethnic, racial, and cultural backgrounds;
2. Capacity to teach students about specific topics related to dual language learners and diverse families; and
3. Participation and interest in professional development focused on topics related to dual language learners.

The dual language learning domain focuses on the knowledge and skills early educators need in order to support the development of young dual language learners (DLLs).[15] Young dual language learners are a rapidly growing population in the United States. Most early educators will work with young dual language learners at some point during their careers and need to understand effective teaching practices that support English language acquisition and the development of children's home language (National Academies of Sciences, Engineering, and Medicine, 2017). Despite the crucial role of early educators for this population and the growing recognition of the benefits of bilingualism, there is concern that many early educators are not adequately prepared to support DLLs' development and learning critical to later success in school.

[14] The topics included in the *Inventory* were adapted from recommended teacher competencies developed by experts in the field of dual language learning in early childhood education (Espinosa & Calderon, 2015; Lopez, Zepeda, & Medina, 2012).
[15] Dual language learners (DLLs) are children who are learning two (or more) languages simultaneously: their home language(s) and English.

Required Dual Language Learner Topics in Degree Programs

Program leads were asked about required course content and age-group focus related to 10 topics related to dual language learners (see **Table 6** for a list of topics). All 10 dual language learner (DLL) topics were required by 70 percent or more of bachelor's degree programs. In contrast, only seven DLL topics were required by 70 percent or more of associate degree programs. The *Inventory* also asked whether content related to dual language learners was required for specific age groups. For both associate and bachelor's degree programs, by far the most commonly reported age-group focus was preschool-age children. Associate degree programs were particularly unlikely to require these topics for infants and toddlers (see **Table 6**). For example, only one-fifth (21 percent) of associate degree programs required content on strategies to support the literacy development of young dual language learners.

Table 6. List of Topics Related to Teaching Young Dual Language Learners (DLLs) Included in the Oregon Early Childhood Early Childhood Higher Education Inventory, by Degree Level

Topic	Focus on infants and toddlers is required by at least 50% of programs	
	Associate Degree (N=14)	Bachelor's Degree (N=11)
Importance and benefits of bilingualism for young children's development		✓
Role of home-language development in helping young children learn English		✓
Strategies to support the cognitive development of young DLLs		✓
Strategies to support the language development of young DLLs		✓
Strategies to support the literacy development of young DLLs		✓
Strategies to support the development of mathematical knowledge and understanding of young DLLs		
Strategies to support the socioemotional development of young DLLs		✓
How to use appropriate teaching strategies for young DLLs within various classroom language models		
How to use observation, assessment, and documentation to inform strategies for teaching DLLs		✓
Strategies for engaging families from linguistically diverse backgrounds		✓

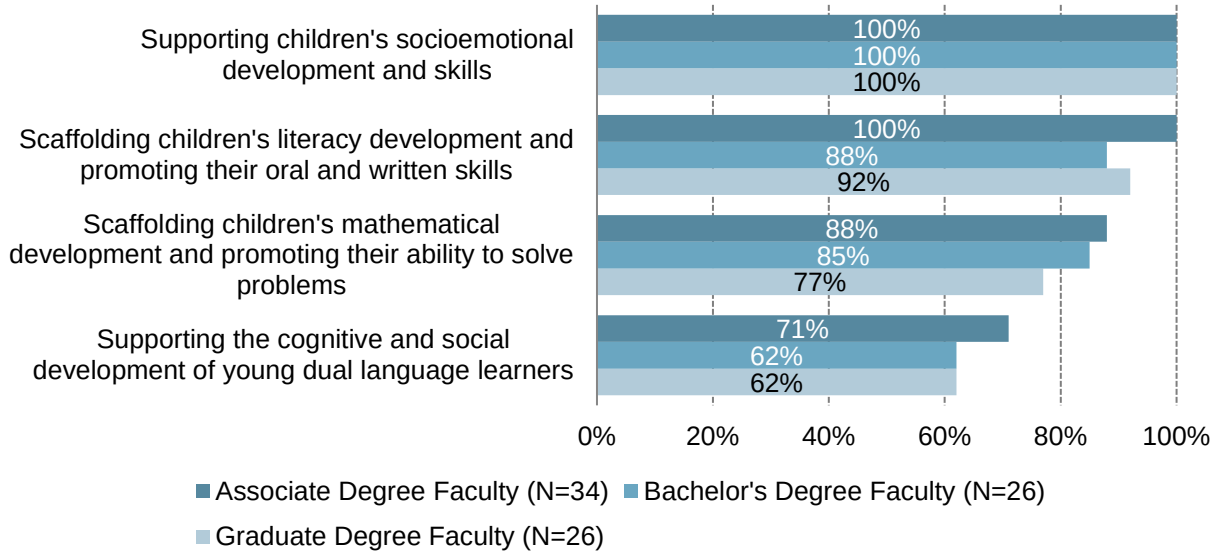
Faculty Attitudes About the Importance of Teaching Young Dual Language Learners in Teacher Preparation Degree Programs

The importance of understanding and implementing strategies to support dual language learners was considered "very important" by 85 percent or more of faculty members across degree program levels (see **Box 3** in previous section for how this assessment was conducted). However, faculty members were less likely to consider it as important as the domain of socioemotional development. Faculty members teaching in associate degree programs were more likely to consider the inclusion of teaching dual language learners "very important" for those teaching infants and toddlers and preschool-age children. Faculty members teaching in bachelor's and graduate degree programs were more likely to consider it "very important" for those teaching preschool-age and school-age children.

Teaching Capacity Related to Dual Language Learning

While the vast majority of faculty members across degree levels noted the importance of supporting dual language learners, faculty members felt the least prepared to teach this topic, compared to all the other topics asked about in the *Inventory* (see **Figure 15**.) About three-quarters (71 percent) of faculty members teaching in associate degree programs and about two-thirds (62 percent) of faculty members teaching in either bachelor's degree or graduate degree programs noted that they felt capable of preparing teachers to "support the cognitive and social development of young dual language learners."

Figure 15. Capacity to Prepare Teachers to Support and Promote Children's Development, as Reported by Faculty Members Participating in the Oregon Early Childhood Higher Education Inventory, by Degree Level

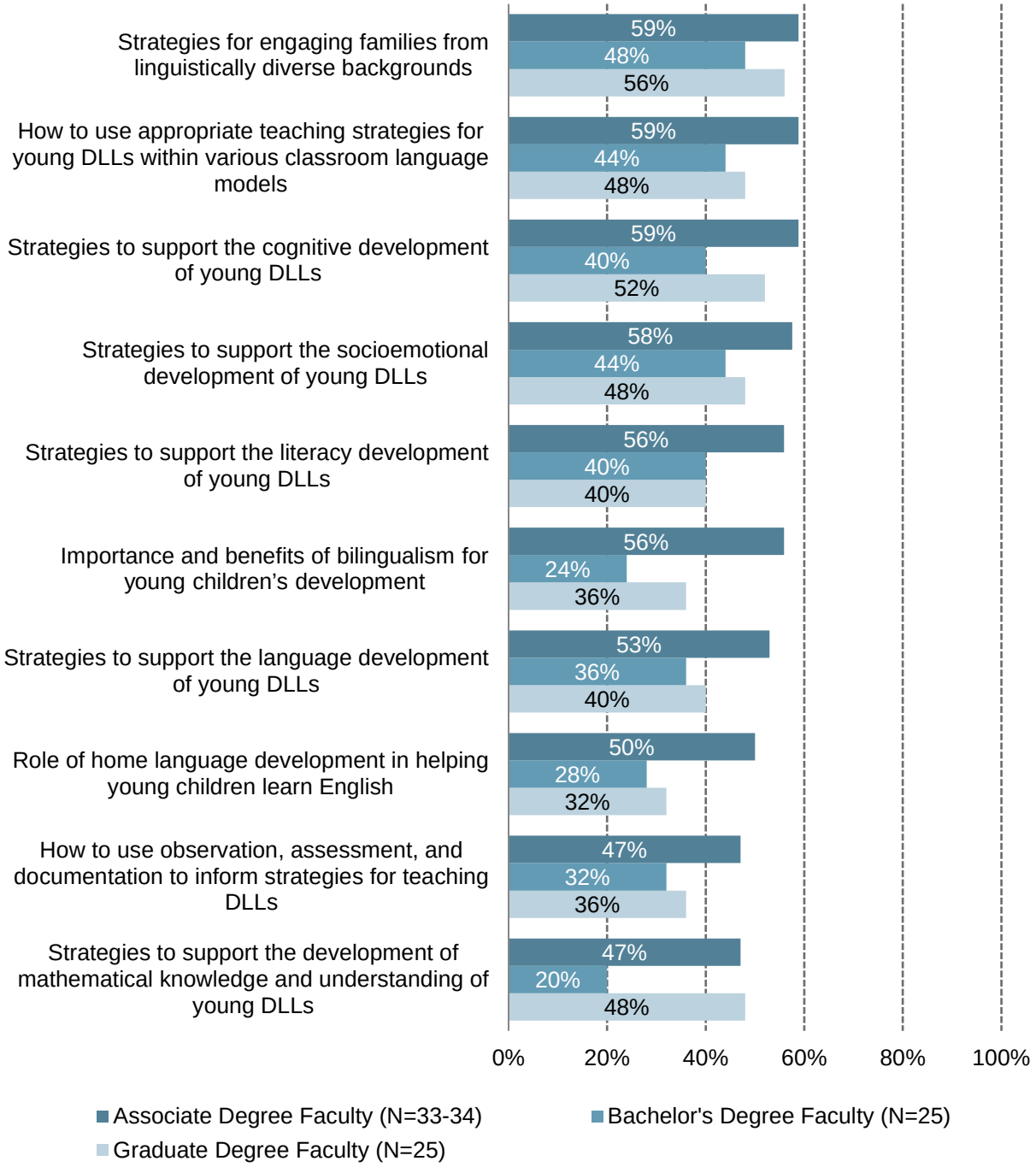


Faculty Participation and Interest in Professional Development Related to Dual Language Learners and Diverse Families

Faculty members were asked if they had participated in professional development opportunities focused on 10 topics related to teaching dual language learners and diverse families in the past three years. Participation rates across degree levels were low, but varied by degree level and topic. Faculty members teaching in associate degree programs were the least likely to have participated in professional development on this topic; just 56 percent of faculty members teaching in associate degree programs reported participating in any of the topics asked about in the *Inventory*. The DLL professional development topic in which faculty members teaching in bachelor's degree programs were most likely to have participated was "strategies to support the literacy development of young DLLs" (63 percent). Faculty members teaching in graduate degree programs were most likely to have participated in professional development on the "Importance and benefits of bilingualism for young children's development" (58 percent). More than one-third of faculty members overall participating in the study did not participate in professional development related to any of the DLL topics listed in the *Inventory*.

Using a Likert scale of 1 to 5, with 1 being "not at all interested" and 5 being "very interested," faculty members were asked to rate their interest levels in 10 topics related to teaching dual language learners and diverse families. Faculty interest varied by topics across all degree levels but was somewhat higher for topics on dual language learners than family engagement and early mathematics topics. Interest was somewhat higher among faculty members teaching in associate degree programs than among faculty members teaching in bachelor's and graduate degree programs. Overall, about one-third to one-half of faculty members identified being "very interested" in professional development topics related to teaching dual language learners (see **Figure 16**).

Figure 16: Interest in Professional Development Related to Dual Language Learners Reported by Faculty Members Participating in the Oregon Early Childhood Higher Education Inventory: Percentage Reporting "Very Interested," by Degree Level



Discussion and Recommendations

In this final section, we outline an approach to strengthening early childhood workforce development in Oregon, with an emphasis on higher education. We identify seven discrete elements that together constitute a strategy for aligning the current system with efforts to build and retain a skilled and stable workforce. The success of this approach requires ensuring that its various components be implemented in unison, calling for a research agenda to measure progress and challenges over time, and learning more about the depth of instruction delivered in higher education programs. The efforts should be coordinated among key stakeholders in Oregon (including the Oregon Early Learning Division, Oregon's Chief Education Office, and representatives from the higher education community) and are predicated on identifying new resources from state, federal, and philanthropic sources.

We call upon policymakers, philanthropists, higher education faculty and administrators, advocates, teachers, and other stakeholders across the state to advance the following approach.

1. Invest resources in early childhood higher education degree programs and increase access and supports for students

Strengthening early childhood teacher preparation in Oregon will require an increased investment of resources into Oregon's system of early childhood higher education degree programs. To increase equity and access to higher education opportunities for a diverse current and incoming workforce, many of whom are non-traditional students, and to ensure that students can successfully attain college education, it is also critical to provide student services and infrastructure that are known to support student success. We recommend:

- Investing more resources for ECE degree programs across the state, including funding for program planning and improvement, and expanding access to students in rural areas such as the eastern part of the state that have limited access to brick-and-mortar colleges; and
- Implementing or expanding resources and supports that promote student success in attaining their degrees, including:
    - Blended and non-traditional formats for degree programs;
    - Alternative class schedules and locations;
    - Targeted academic advising and tutoring;
    - Cohort models;
    - Academic skills support in reading, writing, mathematics, and computer/technological skills; and
    - Financial resources for students (building on and expanding the work of Early Learning Professional Development Consortium Projects) and financial aid counseling.

2. Unify expectations and pathways for early childhood workforce preparation

Findings from *Inventory* studies conducted in other states suggest that when states intentionally redesign their certification system for early childhood educators, higher education systems adjust by making changes in required course content, age-group focus, and field-based practice, as appropriate. In Oregon, standards that apply to early childhood teachers and administrators in private settings across the

state vary according to program type and, in general, are minimal (e.g., many positions only require minimal experience or ECE units), while more rigorous certification standards and higher education degree requirements apply to early childhood teachers working in public preschool settings. Thus, institutions of higher education in Oregon offer programs that vary widely in course content and field experiences required for student learning.

In Oregon, as is true throughout the nation, uneven qualifications across the early childhood system are out of step with what we know today about early learning and development (Whitebook, McLean, & Austin, 2016). In the absence of consistent statewide certification standards that apply to early childhood teachers and administrators in all types of ECE programs, working with all age groups of children, Oregon institutions of higher education have largely placed an emphasis on preschool-age children, which affects only limited segments of the workforce. However, with appropriate resources and supports, programs responsible for preparing early educators have the opportunity to go above and beyond the minimum standards and ensure that practitioners across settings have the foundational knowledge and skills necessary to support young children's development across the birth through age eight spectrum.

Clarity among degree programs as to their purpose and a revision of Oregon's current system for certifying teachers, administrators, and other practitioners is required in the effort to erase the divisions in professional expectations and preparation across and within age groups on the birth-to-age-eight continuum in line with the Institute of Medicine and National Research Council recommendations and to clarify the purpose of early childhood higher education programs (IOM & NRC, 2015). To initiate this process, we recommend:

- Building on the professional development steps outlined in the Oregon Registry to establish a more uniform system for certifying teachers and administrators throughout the state that reflects foundational knowledge for early educators across age groups and auspices aligned with the Core Body of Knowledge for Oregon's Childcare and Education Profession and the Oregon Early Learning Standards and that articulates a streamlined pathway for lead and advanced teacher, administrator, and professional support roles;
- Aligning early education degree program course requirements with state standards and competencies, such as the Oregon Core Body of Knowledge and Oregon Early Learning Standards; and
- Providing clear roadmaps to identify whether the course of study is intended to prepare practitioners for the demands of teaching young children and/or for leading ECE programs or whether the course of study is designed for other purposes.

3. Strengthen program content and equity across the age span

Many ECE stakeholders emphasize the importance of relying on research findings to guide ECE policy and practice, yet our findings suggest uneven application of such evidence across multiple domains of early learning and development for children from infancy through the early elementary grades. Infants and toddlers were most likely to be disadvantaged, with fewer Oregon early childhood degree programs requiring the inclusion of the youngest children in the course content and field-based experiences compared to preschool-age children. Additionally, the diversity of Oregon's population suggests a need to prepare teachers to work with a broad range of children, particularly those who are Hispanic or Latino and who are learning more than one language, and to ensure that all content is culturally and linguistically responsive to the children and families being served in ECE programs.

To strengthen required content and align it with child development and teacher preparation research and to equalize required content for all children across the birth-to-age-eight continuum, we recommend that resources be provided to develop and support participation in faculty professional development to enable faculty members across degree programs and institutions to collaborate with other experts to develop and enhance program content standards related to:

- **Child Development and Pedagogy,** preparing teachers to work with children of different ages, including:
    - Infant development and learning across multiple domains; and
    - Methods of teaching and pedagogy for children of different ages;
- **Early Mathematics,** addressing:
    - Children's mathematical understanding from infancy through early elementary grades; and
    - Developmentally appropriate pedagogy for early mathematics instruction, in particular for infants, toddlers, and preschool-age children;
- **Dual Language Learners,** emphasizing:
    - Recognition of the value and importance of supporting children's home language development as they also learn English, with an emphasis on very young children;
    - Strategies for using observation and assessment in teaching young dual language learners and strategies to support the mathematical, literacy, language, cognitive, and socioemotional development of young dual language learners; and
    - An understanding of the strengths and needs of adults from diverse linguistic, racial/ethnic, and cultural backgrounds to support their entry and retention in the ECE field; and
- **Trauma**, preparing practitioners to work with children and families who have experienced trauma.

4. Strengthen the application of field-based learning experiences

Although all early childhood higher education degree programs in Oregon require students to participate in at least one practicum course, there is great variation in the characteristics of those practica experiences. In addition, access to longer and more in-depth student teaching experiences is limited, particularly for students in associate degree programs. With limited opportunities to work with infants and toddlers, families, dual language learners, or children with disabilities during their practicum, graduates from Oregon degree programs have highly disparate field-based learning experiences.

To strengthen the application of field-based learning experiences, we recommend:

- Providing resources and support to faculty members across degree programs and institutions to develop degree program standards for the timing, frequency, and duration of field-based

experiences, with opportunities focused on children from infancy through preschool and the differentiation of experiences for pre- and in-service students;
- Implementing additional opportunities for student teaching experiences, in which students are engaged in classrooms for a longer period of time and are given increasing responsibility related to curriculum development, instruction, and assessment; and
- Providing field-based learning opportunities for students to engage with:
    - Infants and toddlers;
    - Children with special needs;
    - Children who are dual language learners;
    - Families; and
    - Community organizations that support children and families.

5. Improve and expand articulation agreements across institutions

In Oregon and across the country, increasing numbers of students are entering the higher education system as community college students with the intent to transfer to bachelor's degree program at a college or university. With a large percentage of degree programs participating in articulation agreements, Oregon has a good framework for supporting students in extending their education; however, there are inconsistencies in the practice and perception of articulation agreements between community colleges and universities. We recommend:

- Establishing partnerships and improving articulation agreements between two- and four-year institutions;
- Ensuring that articulation agreements are comprehensive and that coursework is aligned across institutions so that students may realize the maximum benefits of the agreements; and
- Expanding the availability of portable and stackable certificates that articulate and lead to degree completion across higher education systems.

6. Build a leadership pipeline reflective of the diversity of the state's practitioner and child populations

In Oregon, K-12 principals are required to have teaching experience, hold a master's degree, develop their leadership skills by completing an approved administrator program, and pass an administrator assessment. In contrast, child care and preschool center directors in private settings are required to have child development knowledge and one year of experience/training in management/supervision of adults, *or* documentation of attaining at least Step 9 in the Oregon Registry (practitioners may also quality to be a director by having child development knowledge *or* experience/training, and evidence of a plan to attain the remaining requirements).[16] Mentors and coaches in K-12 are typically drawn from the teaching ranks and receive specific training (Isner et al., 2011), yet there are no widely applied qualifications for mentors and coaches working with teachers of younger children. In light of these inconsistent and nominal expectations for ECE leadership positions, it is not surprising that across degree levels, program course content was not routinely offered to prepare practitioners for early childhood supervisory, administrative, or other leadership roles.

[16] While there is an Oregon Registry Director Credential, ECE administrators are not required to hold the credential.

To create a better-defined leadership pipeline and ensure that leaders have comparable skills across age groups and settings, we recommend:

- Identifying the appropriate course of study and degree level (associate, bachelor's, graduate) for each leadership role based on the specific skills and knowledge outlined in the Core Body of Knowledge for Oregon's Childhood Care and Education Profession and the Oregon Registry Director Credential;
- Ensuring training and ongoing professional opportunities for faculty teaching coursework on supervision, administration, and leadership development in undergraduate and graduate degree programs;
- Identifying options to create leadership pathways and/or programs; and
- Ensuring an adequate number of degree programs at both the undergraduate and graduate level that offer the appropriate course content.

In addition to gaps in course content related to leadership development, the demographics of the faculty participating in the *Inventory* indicate an aging faculty workforce that is primarily white/Caucasian and English-speaking. To increase the diversity of the ECE faculty, we recommend:

- Investigating and developing strategies used in other professions (e.g., health, education, social welfare) to create faculty development programs — such as a fellowship — intended to increase ethnic and linguistic diversity among faculty, particularly in key leadership positions.

7. Increase faculty supports

Early childhood degree programs report being under resourced and requiring additional support to allow faculty members to engage individually with students, support student success, and engage in program planning and improvement. In addition, early childhood associate degree programs in Oregon rely heavily on part-time faculty. Faculty members also identify the need for greater opportunities to engage in their own professional growth in response to new developments in the field and changing characteristics of the populations they serve.

To decrease the reliance on part-time faculty and support faculty success, we recommend:

- Developing strategies to support an increase in the number of full-time faculty members, with sufficient release time, who can share in administrative responsibilities; and
- Identifying and implementing best practices for supporting adjunct faculty.

To facilitate improvements in program offerings and to support faculty to engage in their own professional development, we recommend:

- Establishing an ongoing fund with well-articulated expectations for faculty members' professional development honoraria and program improvement grants; and
- Ensuring adequate resources, including funding, staffing, and dedicated time for program planning and improvement.

Concluding Thoughts

The call for an integrated system of early learning for all young children rests upon an understanding of the critical importance of early childhood, beginning at birth and extending through the first years of elementary school. But the early childhood service system and infrastructure in the United States — of which higher education is a cornerstone — is poorly integrated, ascribing differing expectations for teacher preparation across the birth-to-age-eight continuum, and severely under-resourced, assigning different resources to teachers across settings with virtually all members of the workforce being poorly compensated. An early care and education system that is fully prepared to support the well-being of young children *and* the adults who educate them calls for innovative solutions and coordinated efforts on multiple fronts.

This report provides a portrait of Oregon's early childhood higher education landscape amid efforts to invest in, strengthen, and coordinate early childhood workforce development efforts. A strong preparation system for Oregon's early childhood teachers and administrators is central to these efforts aimed at ensuring that all young children in Oregon have access to high-quality early learning experiences. Institutions of higher education can play a lead role in elevating the preparation of a high-quality workforce by aligning curriculum and field-based experiences with the standards and competencies developed by early care and education experts and supporting students in the pursuit and attainment of higher education degrees. However, while it is crucial that early educators receive the education and training they need, the preparation of the ECE workforce must go hand and hand with comprehensive reforms to the system, such as supportive work environments, financial investment to enable increased compensation and parity across age groups and settings, and financial resources to support the implementation of heightened expectations and standards. System-wide improvement requires a continued discourse among multiple stakeholders on how our nation prepares, supports, and rewards the early care and education workforce. Without these larger systemic changes, we will continue to disadvantage early educators and the children and families they serve.

Appendix

Appendix Table 1: Oregon Minimum Education Requirements for Select Roles

Type of Program	Role	Minimum Education Requirements
Certified Family Child Care Home	Provider	None*
Certified Child Care Center	Lead Teacher	None*
Oregon Pre-K	Lead Teacher	Bachelor's Degree in ECE or related field
Head Start	Lead Teacher	Bachelor's Degree in ECE or related field
Preschool Promise Program	Lead Teacher	Bachelor's Degree in ECE or related field

***** While higher education course credits, degrees, and credentials may be one way to meet qualifications for these positions, they are not required; requirements may also be met by experience.

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