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Authors

Petig, Abby C
Knight, Jenna
Austin, Lea J.E.
et al.

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Report | September 2022

Teaching the Teachers of Our Youngest Children

The State of Early Childhood Higher Education in Pennsylvania

By Abby Copeman Petig, Jenna Knight, Lea J.E. Austin, and Raúl Chávez



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Introduction

Through research and practice, the early care and education (ECE) field has demonstrated that 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 knowledge and skills just as complex as those required to teach 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* includes among its recommendations: 1) the strengthening of competency-based qualifications for all early educators and transition to a minimum requirement of a bachelor's degree, with specialized knowledge and competencies, for all lead teachers working with children from birth to age eight; and 2) the development and enhancement of interdisciplinary higher education programs for ECE professionals, including practice-based and supervised learning opportunities (Institute of Medicine [IOM] & National Research Council [NRC], 2015).

Despite these acknowledgements, there has not been significant movement to advance state policies to align minimum education requirements with these recommendations nor has there been widespread progress in higher education systems within states to ensure the availability and accessibility of high-quality interdisciplinary degree programs tasked with preparing early educators. Teacher preparation in the field of ECE has historically included a variety of higher education degree programs in various child-related disciplines. Many of these programs share the title of "early childhood education," and all of them have generally been considered equally acceptable. Yet, too often, these highly diverse degree programs are assumed to produce equivalent results (Early Educator Investment Collaborative, 2020; 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.

Pennsylvania is home to more than 840,000 children under the age of six. Prior to the onset of the COVID-19 pandemic, 71 percent of these young children had all available parents in the labor force and thus potentially needed child care (Annie E. Casey Foundation, 2019a). Stakeholders and advocates in Pennsylvania are committed to

advancing strategies that improve ECE services, including workforce preparation and development in order to ensure that early educators have what they need to meet the complex needs of young children. Critical to these efforts is the establishment of a well-coordinated, comprehensive professional preparation and development system that can train 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.

As noted in the most recent edition of the *Early Childhood Workforce Index* (McLean et al., 2021), progress toward an equitable, efficient, and effective early childhood system requires advancing preparation, workplace supports, and compensation for the workforce, simultaneously. Adequate preparation for teachers, workplace supports that allow for ongoing reflection and development, and appropriate compensation are all variables that are necessary to attract and retain a skilled workforce. Making progress in each of these three areas additionally requires building solid foundations for these policies by securing sufficient financial resources and collecting quality, comprehensive workforce data.

The Early Childhood Higher Education Inventory II (Center for the Study of Child Care Employment [CSCCE], 2016) is a tool designed to collect baseline data and inform the workforce preparation aspect of quality early childhood education. The Inventory is 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). Since its creation, the Inventory has been adapted over time to explore the impacts of current events (e.g., the COVID-19 pandemic) and investigate the attention given to emerging topics of interest and importance in the early childhood field (e.g., dual language learners, trauma and adverse childhood experiences).

The Inventory was implemented in Pennsylvania during the 2020-2021 academic year. The totality of the data collected through the Inventory allows stakeholders to identify gaps and

[1] Pennsylvania is one of 15 states (along with Arkansas, California, Florida, Indiana, Maryland, Mississippi, Nebraska, New Hampshire, New Jersey, New York, Oregon, Rhode Island, Tennessee, and Washington) in which the Inventory has been completed at the time of publication of this report.

opportunities in the available offerings and to assess the capacity of the state's higher education system over time. This report summarizes major findings collected through program and faculty modules of the Inventory (CSCCE, 2016) as well as individual faculty member and program director interviews and provides recommendations for policy changes that could lead to more effective teacher practices to support children's learning. The **Appendices** present more detailed findings.

The COVID-19 pandemic that emerged in the United States in the early months of 2020 has highlighted both the essential, invaluable nature of ECE services and the educators who provide them and the crisis that exists within the system of early care and education in this country. Between September and December 2020, 50 percent of adults with children at home experienced a loss of employment income, further highlighting the need for stable child care for families seeking employment (Annie E. Casey Foundation, 2021).

As stakeholders, including various levels of government, strive to reform an ailing and fragmented ECE system, significant attention must be paid to the issue of educator preparation. Meaningful reform of the ECE system begins with appropriate qualifications for educators, coupled with access to and supports for the education and training of the existing and future workforce. As the fields of higher education and early childhood education look to recover from the devastating impacts of COVID-19, it will be crucial to focus attention on what educators need to know, learn, and be able to do in order to best promote children's development and learning as both fields embrace this unique opportunity to reimagine and restructure how to deliver effective early educator preparation and quality ECE services for children and families.

The Early Childhood Higher Education Landscape in Pennsylvania

The state of Pennsylvania is home to a unique and extensive collection of institutes of higher education (IHEs) at which students can pursue post-secondary education. In addition to a network of public community colleges, there exists a set of public universities collectively called the Pennsylvania State System of Higher Education (PASSHE). In addition, there is a small group of universities that receive both public and private funding, often called "state-related" universities, as well as a host of private institutions that confer bachelor's and graduate degrees. Among these many IHEs, 16 community colleges, 13 public universities, four state-related universities, and 58 private colleges and universities offer an array of early childhood degree programs across the state.

Traditionally, IHEs with doctoral programs are referred to as universities. However, in Pennsylvania some IHEs with doctoral programs are referred to as colleges. While community colleges can only offer associate degrees, some bachelor's-granting institutions can also offer associate and graduate degrees. For this report, programs that lead to an associate degree are identified as associate degree programs, regardless of the type of institution at which they are housed.

In addition, many institutions granting bachelor's degrees in Pennsylvania offer both a bachelor's degree leading to Pennsylvania teacher certification and also a non-certification degree. Overall, content across these programs is largely similar and later sections of the Inventory will describe any differences. In general, the combined bachelor's and master's degree programs focus the content of the bachelor's degree on pre-K-4 and the master's degree portion on special education. As the highest degree in early childhood education is at the bachelor's level, these programs are reported under bachelor's degree programs in this report. While several doctoral programs exist for education in Pennsylvania, none were specifically for early childhood education and, therefore, were not included in this sample.

In all, the 91 schools identified as offering early childhood education or related degree programs offer 39 associate degree programs, 142 bachelor's degree programs, 50 master's degree programs, and five combined bachelor's and master's degree programs in early childhood education or a closely related major. Additionally, numerous IHEs had both a pre-kindergarten to grade 4 (pre-K-4) program and special education for pre-kindergarten to grade 8 (pre-K-8) program.[2] Of note, this study was conducted prior to the redesign of the PASSHE system (approved in July 2021), which consolidated several campuses and programs in the western and northeastern areas of the state, likely reducing the number of early childhood education program offerings (Pennsylvania's State System of Higher Education, 2022).

The Inventory findings are presented in five sections. The first section, "Early Childhood Higher Education, Mapping the Scene," examines the historical context and recent policy changes that have shaped degree and program offerings. It then explores the extent to which Pennsylvania early childhood degree programs:

[2] As both programs cover pre-kindergarten, this study recruited participation from both types. Since the start of this study, Pennsylvania changed its special education scope to now cover pre-K to grade 12. For more detail, see Section 1, Finding 3.

- Offer the knowledge, skills, and experiences associated with effective teaching practice and program leadership;
- Incorporate emergent research into curriculum;
- Approach student teaching and practicum; and
- Have been adapted to teacher certification changes.

The second section of this report, "An Evolving Landscape," explores the dynamic and evolving requirements for state licensure programs. This report then examines the extent to which programs are able to adapt to meet these complex standards and guidelines.

The third section of this report, “Early Childhood Higher Education Faculty Profile,” examines to what extent the faculty workforce is prepared to provide early childhood practitioners with the necessary knowledge and skills associated with effective teaching practice and program leadership. Specifically, the report profiles Pennsylvania IHE faculty members and explores:

- Employment status;
- Demographic characteristics; and
- Professional experiences.

The fourth section of this report, "Early Childhood Education Program Commitments," examines to what extent institutes of higher education are prepared to support students in their higher education pursuits with resources such as counseling and skill support. Additionally, this section reviews department and degree program challenges, specifically, to what extent programs:

- Have the resources to support faculty success;
- Support articulation and degree completion; and
- Address enrollment issues.

The final section of this report, "The COVID-19 Pandemic and Its Lasting Impact on Early Childhood Higher Education," examines how Pennsylvania's institutions of higher education adapted their programming in response to the COVID-19 pandemic, as well as the effects on faculty members and students as a result of these changes. Specifically, the report explores the extent to which the COVID-19 pandemic has:

- Impacted program delivery and teacher preparation; and
- Placed a burden on faculty members and students.

Box 1. Study Design

During the 2020-2021 academic year, researchers from CSCCE implemented a mixed methods study that employed the Early Childhood Higher Education Inventory II and interviews with higher education faculty members and program staff.

The Inventory 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 10 associate, 32 bachelor's, and 11 master's degree programs. The faculty findings are drawn from a final sample of 15 faculty members at community colleges and 126 faculty members at colleges and universities granting bachelor's degrees.

The qualitative element of the study involved one-on-one interviews with 27 faculty members and program directors. Seventeen of these interview participants were tenured/tenured track/full-time faculty members, seven were adjunct/part-time faculty members, and three were program directors.

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

Response rates across degree levels average 25 percent (see **Table 1**). The total number of program modules administered and completed is adjusted for email bounces and reflects the eligible sample determined through sample analysis. In this report, data are reported in the aggregate, with certain areas where findings differ significantly across degree levels. Due to low response rates on the surveys, this report utilizes qualitative data from the faculty member and program director interviews for further analysis (see **Table 2**).

TABLE 1. RESPONSE RATE FOR THE PROGRAM MODULE OF THE PENNSYLVANIA INVENTORY

Program Type	Number of Program Modules Administered	Program Response Rate (Number)	Program Response Rate (Percentage)
Associate	37	10	27.0%
Bachelor's	128	32	25.0%
Master's	47	11	23.4%
Total	212	53	25.1%

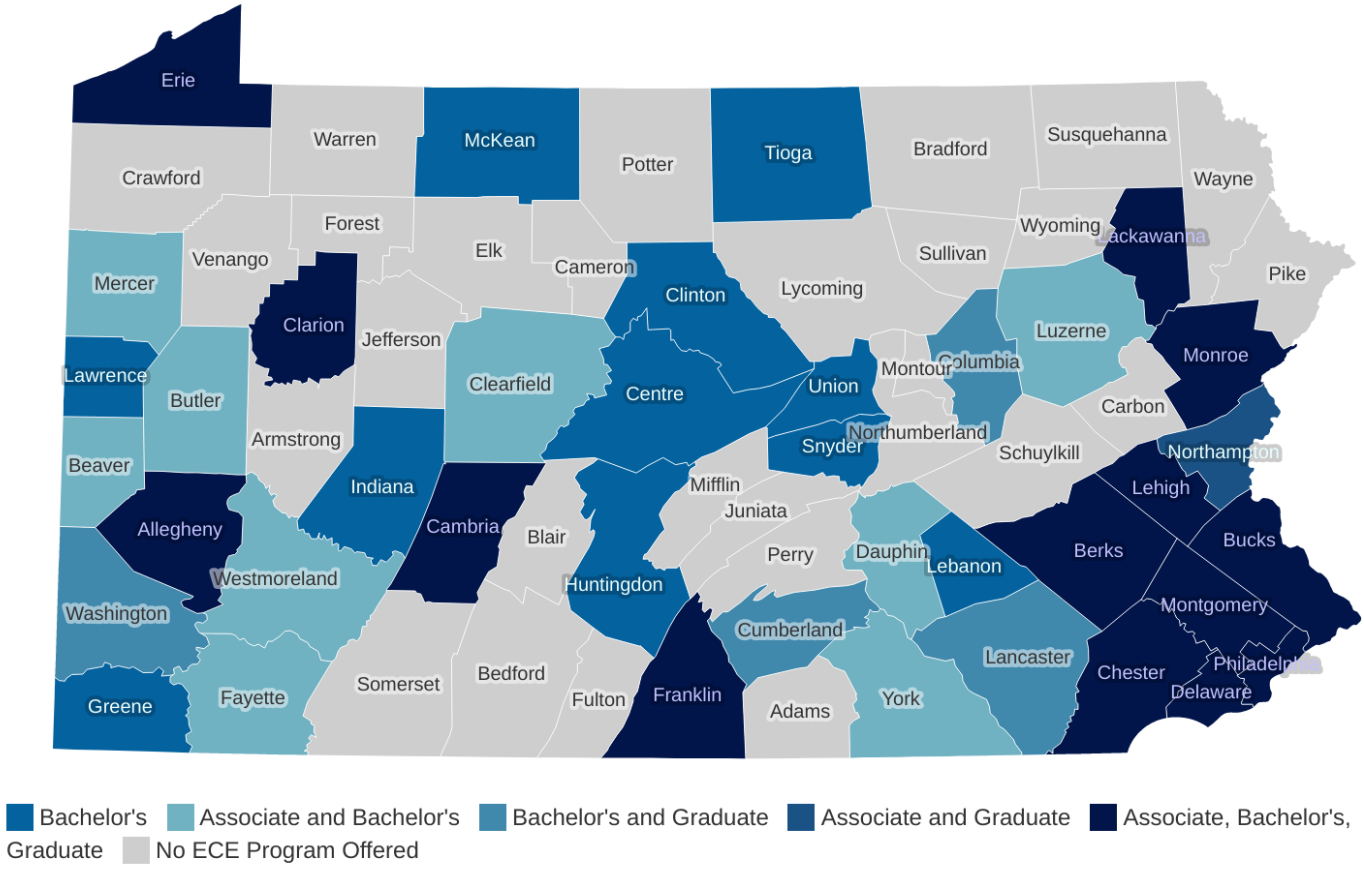
TABLE 2. FACULTY MEMBER AND PROGRAM DIRECTOR INTERVIEW PARTICIPATION, BY POSITION, DEPARTMENT, AND INSTITUTE OF HIGHER EDUCATION TYPE

	Number of Interviews
Position	
Tenured/Tenure-track/Full-time	17
Adjunct/Part-time	7
Program Director	3
Department	
Education Department	20
Early Childhood Education Department	5
Education and Human Services Department	2
Institute of Higher Education Type	
Community College	3
Public University	7
Private College or University	17

Distribution of Pennsylvania Early Childhood Degree Programs, By County

Early childhood education programs are relatively evenly distributed throughout Pennsylvania with greater concentrations of all degree programs in more urban settings. Several more rural areas that have no access to in-person degree programs are concentrated primarily in the northern section of the state.

EARLY CHILDHOOD EDUCATION DEGREE PROGRAMS IN PENNSYLVANIA



Part 1: Early Childhood Higher Education, Mapping the Scene

This section of the report examines current program offerings as well as the historical context that led to current program certifications.

Finding One: Program Offerings

Most Pennsylvania early childhood degree programs identified their primary goal as teacher preparation across early childhood and elementary school settings or as preparation for multiple roles in many types of settings. While these programs offer a range of topics related to child development and approaches to teaching, the age-group focus varied, with the least amount of content focused on children from birth to age two. Associate degree programs were more likely to require a focus on children from birth through pre-K, while bachelor's and master's degree programs were more likely to focus on children in pre-K and elementary school. Availability of content related to administration and leadership is inconsistent across degree levels.

Like most states throughout the country, education requirements in Pennsylvania 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 et al., 2018). In Pennsylvania, there are different requirements for those teaching in family child care homes, child care centers, and publicly funded preschool programs (see **Table 3**). Furthermore, the four funding streams supporting public preschool in Pennsylvania also require differing levels of preparation and training. Such divergent qualifications disadvantage educators across Pennsylvania's ECE field due to disparities in compensation based on funding stream or structure. These uneven requirements also impact the children themselves, who may have teachers with vastly different experience and qualifications depending on the setting in which they receive care and education services.

TABLE 3. PENNSYLVANIA MINIMUM EDUCATION REQUIREMENTS FOR SELECT ROLES

Type of Program	Role	Minimum Education Requirements
Family Child Care Homes	Primary Provider	No secondary or post-secondary education requirements
Group Child Day Care Home	Teacher	Child Development Associate (CDA) Credential or 9 credit hours of post-secondary education in early childhood education
Child Care Center	Teacher/Group Supervisor	Associate degree with some early childhood education courses
Pennsylvania Pre-K Counts Program (PAPKC)	Teacher	Bachelor's degree in early childhood education
Pennsylvania Head Start Supplemental Assistance Program (PAHSSAP)	Teacher	Associate degree in early childhood education
Pennsylvania Four-Year-Old Kindergarten (K4)	Teacher	Bachelor's degree in early childhood education
Ready to Learn (RTL)*	Teacher	Bachelor's degree (publicly funded ECE programs) or associate degree (privately funded ECE programs) in early childhood education

Source: Pennsylvania Office of Child Development and Early Learning, 2017a, 2017b, & 2018.

*Ready to Learn is not a standalone ECE program, but a block grant that supports grantees establishing, maintaining, or expanding pre-kindergarten among other educational services.

It is likely, however, that many early childhood educators in Pennsylvania mirror their counterparts nationally and possess higher levels of education and training than required (Whitebook et al., 2018), given a variety of state and local initiatives over the years to encourage participation in college-level education. Pennsylvania Keystone STARS, the statewide quality rating and improvement system (QRIS), requires higher levels of staff education to achieve higher ratings. In addition, providers are eligible for scholarships for coursework towards a degree in child development or Pennsylvania teacher certification, if they are participating in Keystone STARS and working in child care programs certified by the Department of Human Services (Pennsylvania Office of Child Development and Early Learning, 2016).

Program Goals

What we asked about program goals:

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.

Not all early childhood 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" degree programs as acceptable for preparing early educators (Whitebook et al., 2012). This reality has resulted in wide variation in the goals and content of programs, though graduates of these different programs often are held to the same expectation of what they should know and be able to do upon degree completion (Early Educator Investment Collaborative, 2020).

Recent programmatic and certification changes in Pennsylvania have led to higher education programs offering a variety of degrees in the early childhood education field. Commonly, colleges and universities will offer two programs specific to early childhood education: one leading to certification and one that does not. This bifurcated system was created in response to students initially matriculating into certification programs and either not passing the basic skills test administered by the Pennsylvania Department of Education or not maintaining a grade point average of 3.0 and above, both of which are requirements for teacher certification. Programs' responses to certification changes leave Pennsylvania with a range of degree programs with varying focuses.

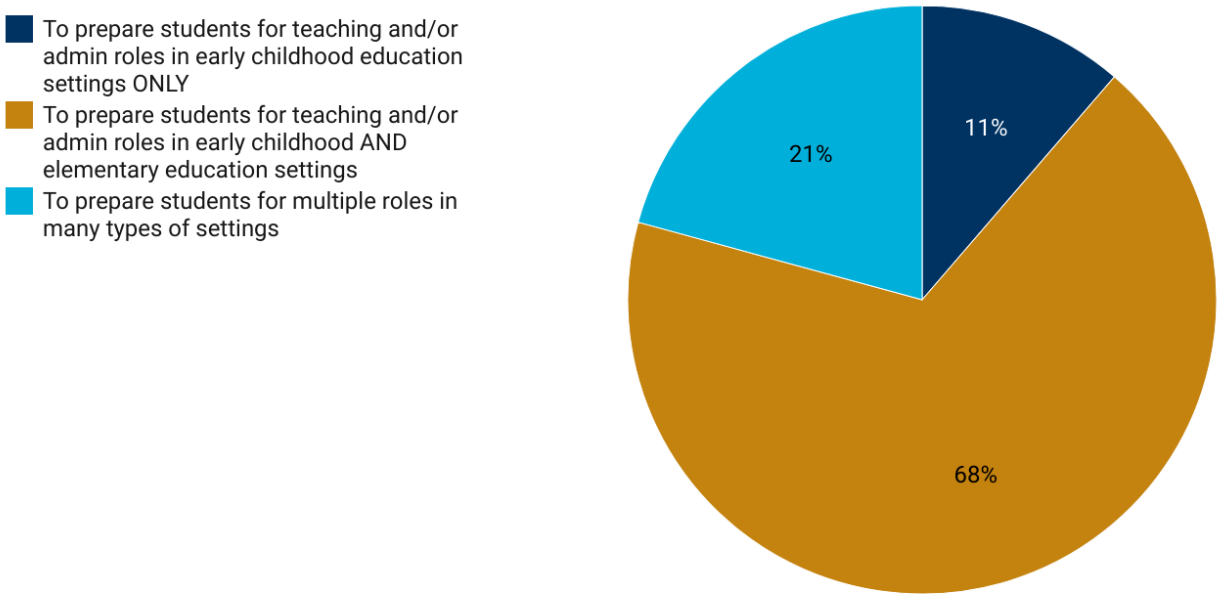
The majority of degree programs in our sample (89 percent) reported that their primary goal was to prepare students for teaching and administrative roles. Across all three degree levels, programs were most likely to focus on preparing students for teaching and/or administrative roles in early childhood AND elementary education settings (68 percent), while only 11 percent were not primarily focused on teacher/administrative preparation (see **Figure 1**). Associate degree programs were more likely to focus equally on preparing students for early childhood education settings ONLY and both early childhood AND elementary education settings, and bachelor's and master's degree programs were more likely to report their primary goal as preparing students for early childhood AND elementary education teaching.

Although none of the associate, bachelor's, or master's degree programs participating in the Inventory listed their primary goal as preparing early interventionists or early special education teachers, these institutions may offer degrees and/or certificates in early intervention and/or early childhood special education. In fact, universities frequently offer dual certification programs for pre-K-4 and pre-K-8 special education (see **Appendix A** for a complete list of early childhood education programs).

None of the programs responding indicated that their primary program goal is to train researchers or future faculty. While there are likely institutions and programs throughout the state that do focus on these career paths, this finding raises concerns about the limitations for career advancement within the early childhood education field.

In the current study, the vast majority of associate degree programs reported serving a mix of those already working in the early childhood field as well as more traditional pre-service students, while nearly two thirds of bachelor's degree programs reported serving primarily pre-service students only.

FIGURE 1. PRIMARY GOAL OF PENNSYLVANIA EARLY CHILDHOOD AND RELATED HIGHER EDUCATION DEGREE PROGRAMS



N=53

Source: Center for the Study of Child Care Employment, University of California Berkeley

Course Content

What we asked about course content:

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:
    a. Engaging with diverse children and families;
    b. Teaching and curriculum; and
    c. Teaching skills in early childhood settings; and
3. Administration and leadership.

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).

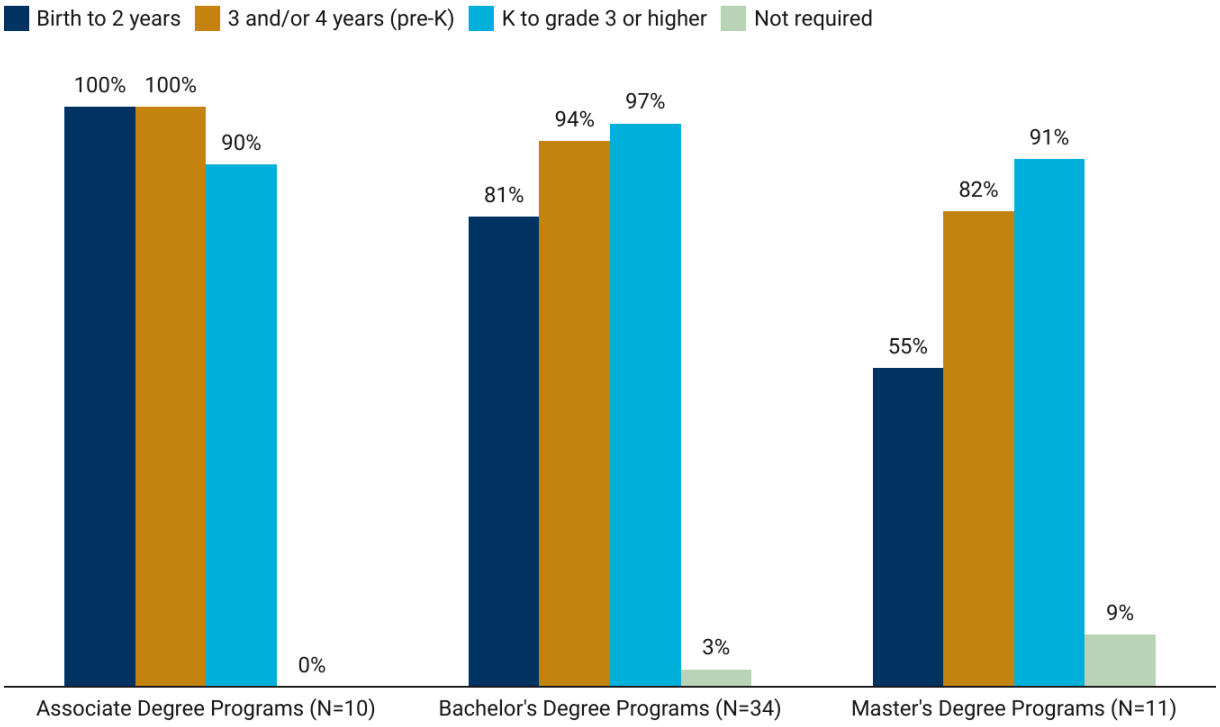
In Pennsylvania, the Office of Child Development and Early Learning (OCDEL) is a collaborative effort between the Pennsylvania Department of Education and the Department of Human Services and approaches programming from a prenatal-to-grade-3 (P-3) lens. This P-3 approach includes providing a coordinated early learning system for children birth to age five, including child care, pre-K, early intervention, Head Start, and supporting children's transitions to kindergarten and the early grades. While OCDEL focuses on the entire prenatal-to-grade-3 span, many degree programs have curriculum targeted toward the age range of pre-K to grade 4. This lack of alignment between age ranges is evident in program requirements and is examined throughout this section.

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).

Creating an integrated birth-to-age-eight early care and education system, inclusive of the institutions preparing the ECE workforce, has thus 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. Degree programs in Pennsylvania consistently place a strong focus on preparing educators to work with preschool- and elementary-age children; however, content focusing on children birth through age three is required at much lower rates. Among associate degree programs, there is similar emphasis on topics related to infants and toddlers, while bachelor's and master's degree programs typically require topics related to children in elementary school at even higher rates than topics related to preschool-age children (see **Figure 2** for an example and **Appendix B** for data on all topics). In general, the lack of requirements for students to learn about children younger than three is reflective of the

undervaluing and marginalization of infant and toddler care and education at the national level and may serve to reinforce the perception that caring for very young children is less-skilled work than caring for older children.

FIGURE 2. DEVELOPMENT OF CHILDREN'S EARLY LITERACY SKILLS, BY AGE GROUP AND DEGREE LEVEL



Source: Center for the Study of Child Care Employment, University of California Berkeley

Child Development and Learning

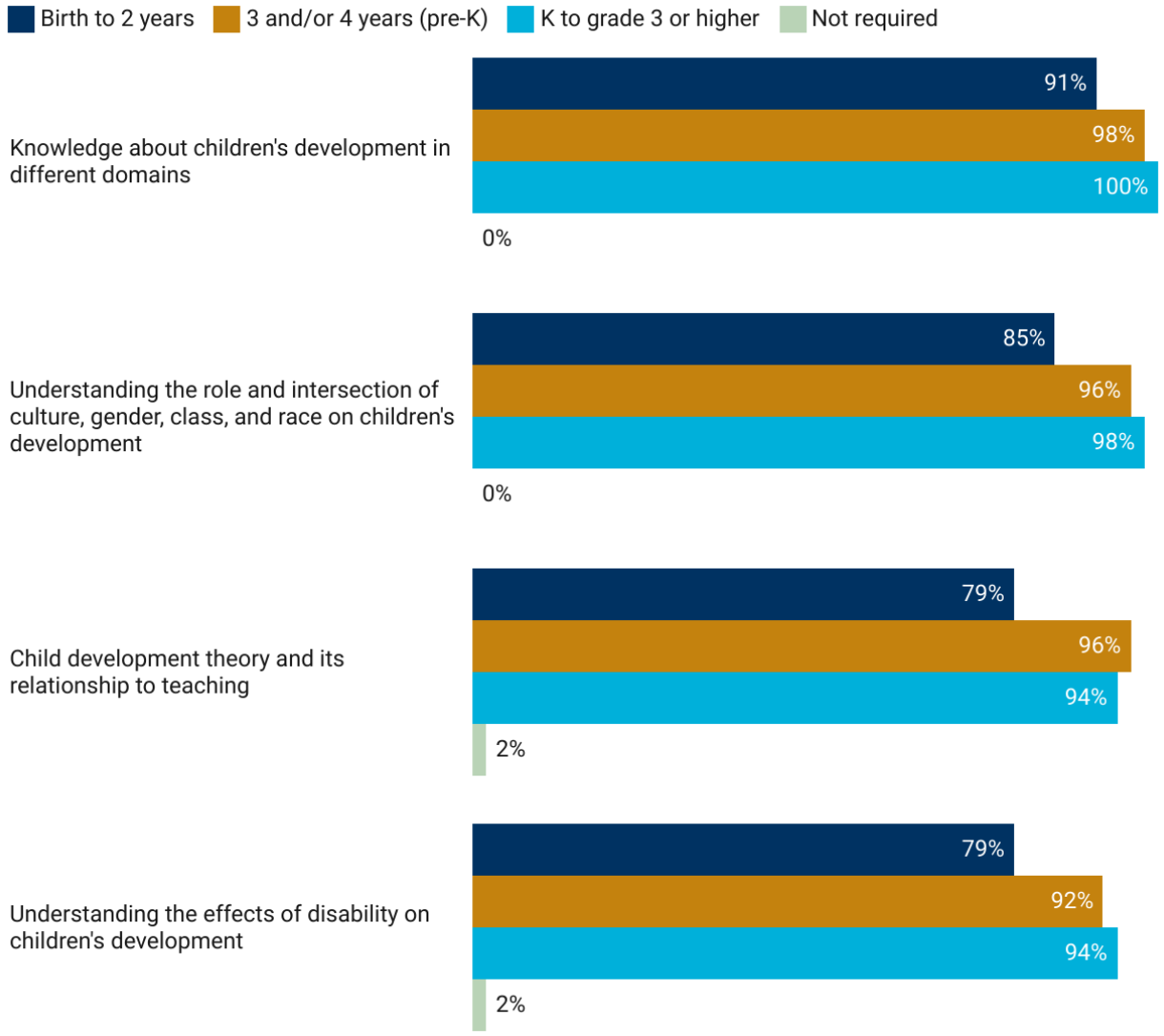
What we asked about child development and learning:

Respondents were asked to indicate whether a series of specific topics were required and also whether it was required for students to cover material focused on specific age groups or grade levels for each topic. Specifically, programs were asked about:

- 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; and
- Development of children's mathematical and scientific understanding.

The vast majority of degree programs reported requiring all six of the course content topics related to the domain of child development and learning. Across all degree levels, programs required each of these topic areas to include material for children preschool-age and older. However, content focused on infants and toddlers was less likely to be required across the topics. In particular, more than one half (55 percent) of programs required students to learn about the development of scientific understanding for children younger than three years (see **Figure 3**).

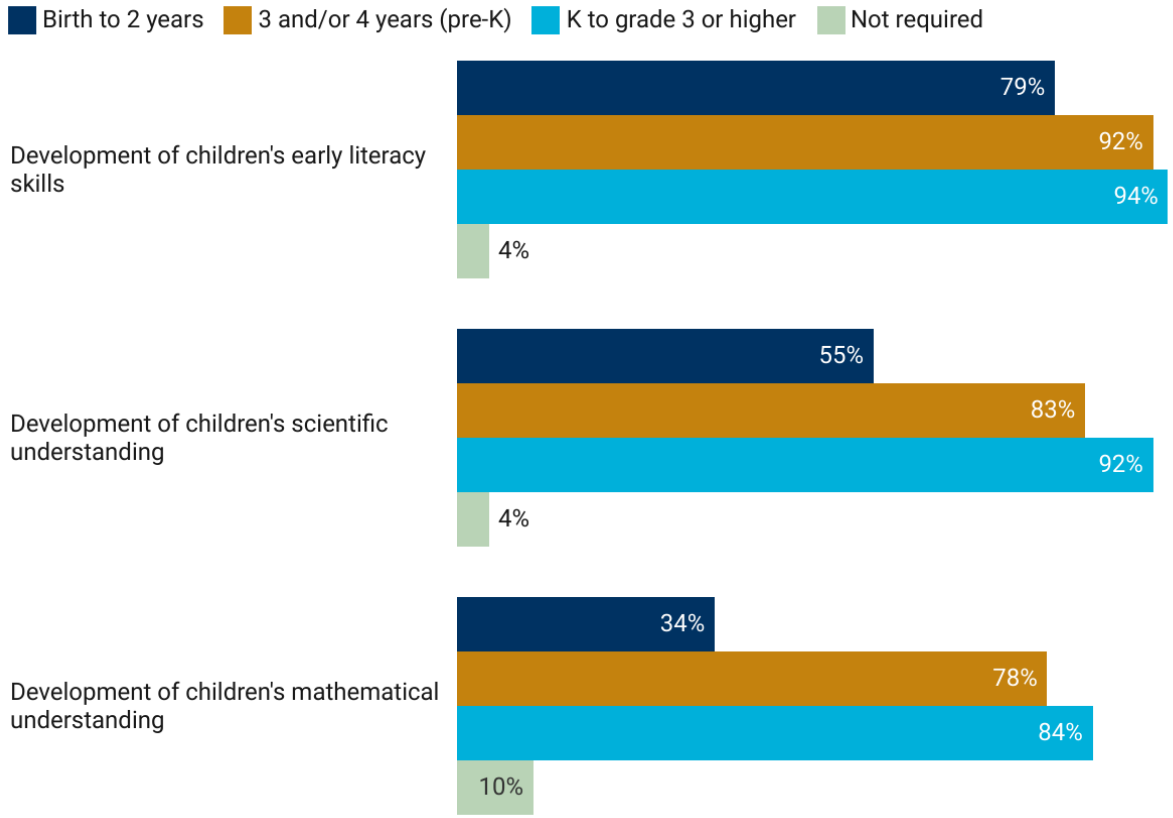
FIGURE 3. CHILD DEVELOPMENT AND LEARNING TOPICS, BY AGE GROUP



N=52-53

Source: Center for the Study of Child Care Employment, University of California Berkeley

FIGURE 3. CHILD DEVELOPMENT AND LEARNING TOPICS, BY AGE GROUP (CONTINUED)



N=52-53

Source: Center for the Study of Child Care Employment, University of California Berkeley

The majority of faculty members interviewed in teacher preparation programs noted that their programs primarily focused on content for teaching children age four to ten, as reflective of program goals.

> *"We have one specific course that's focused on early childhood education, and then a lot of the other courses will do that span of pre-K to [grade] 4."*
>
> — Program Director

Engaging With Diverse Children and Families

What we asked about engaging with diverse children and families:

Respondents were asked to what extent certain topics relating to supporting diverse learners were covered and in which age range. Specifically, they were asked how students were prepared to teach children who:

- Are experiencing poverty;
- Have disabilities;[3]
- Exhibit challenging behaviors;
- Have experienced trauma or adverse childhood experiences (ACEs);[4] and/or
- Are dual language learners.

Additionally, respondents were asked to what extent topics relating to family engagement were covered, such as the importance of building relationships with families. Topics also included techniques help students:

- Engage families in classroom, program, and/or school activities;
- Work with families to help them enhance their children's learning at home; and
- Work with families from diverse racial, cultural, and ethnic backgrounds.

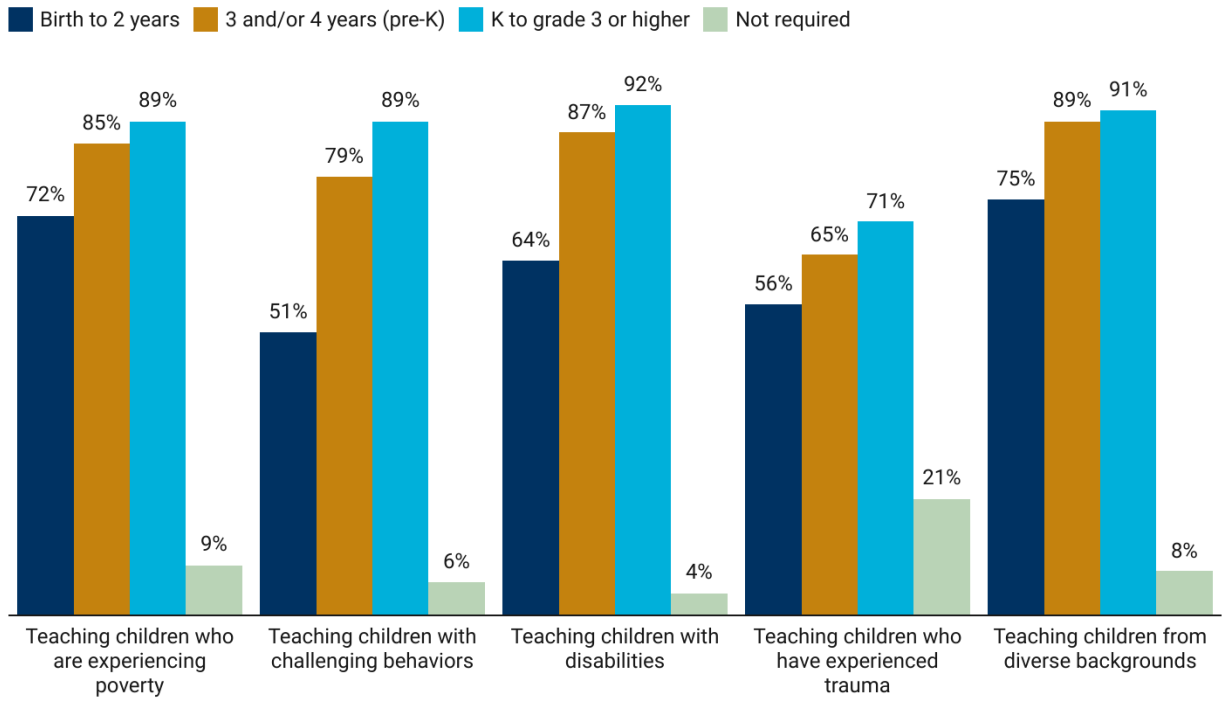
Working With Diverse Child Populations

While programs were highly likely to require content knowledge of child development and learning, they were more varied in course requirements for pedagogy related to engaging with diverse children and families. For example, while nearly all programs participating in the survey require coursework on “teaching children with disabilities” (96 percent), fewer programs across degree levels require students to take any coursework on “teaching children who have experienced trauma” (79 percent; see **Figure 4**).

[3] CSCCE is committed to using inclusive language. The Inventory tool administered for this study used the language "children with special needs," and CSCCE has since adopted "children with disabilities" as a more inclusive term. Thus, throughout this report, we will use the term "children with disabilities."

[4] Adverse childhood experiences (ACEs) are events that happen in childhood (from birth to age 17) that can be potentially traumatic.

FIGURE 4. REQUIRED DIVERSE CHILD POPULATION TOPICS, BY AGE GROUP



N=52-53

Source: Center for the Study of Child Care Employment, University of California Berkeley

Additionally, programs were less likely to require course content related to engaging with diverse children and families for children from birth through age two. For example, in the "teaching dual language learners" domain, only 42 percent of programs across all degree levels require students to take coursework on "teaching strategies within various classroom language models" for the birth-to-two age group, which is half the number of programs covering kindergarten through grade 3 or higher (79 percent; see **Figure 5**).

FIGURE 5. PERCENTAGE OF PROGRAMS REQUIRING STUDENTS TO TAKE COURSEWORK ON STRATEGIES FOR YOUNG DUAL LANGUAGE LEARNERS, BY AGE GROUP

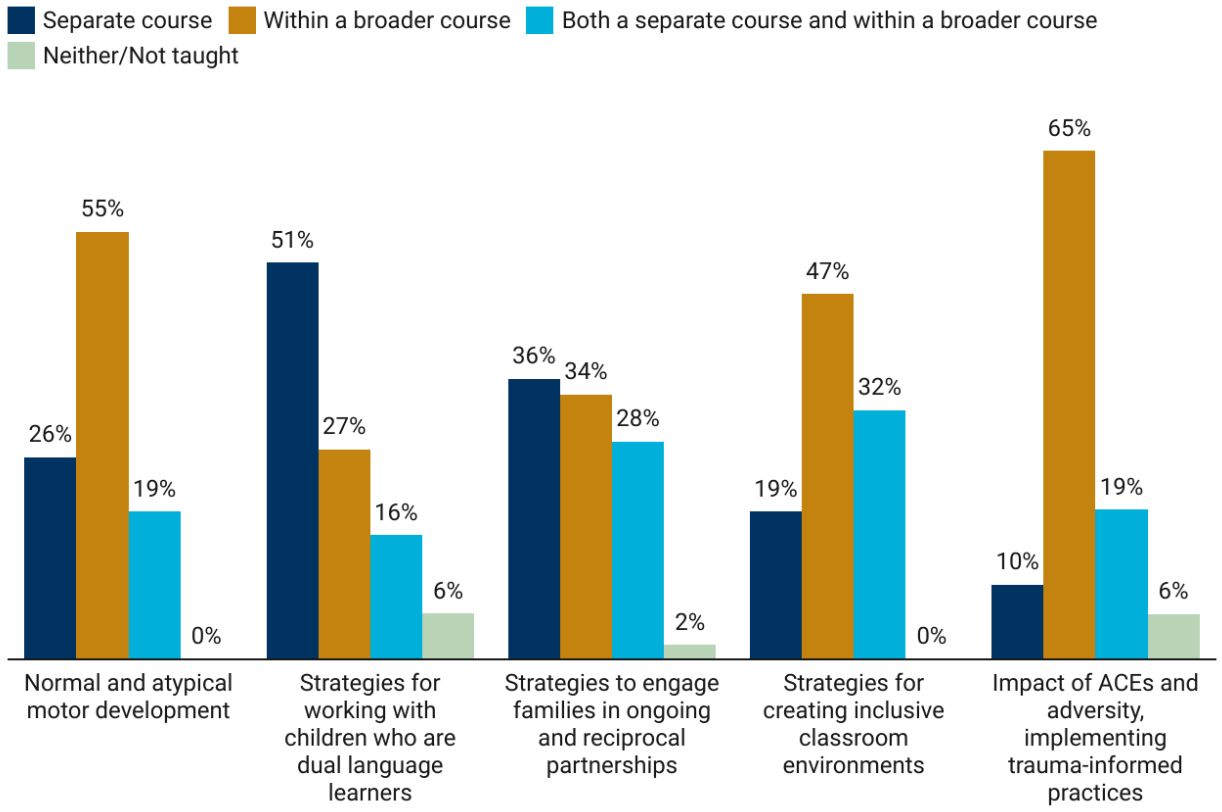


N=53

Source: Center for the Study of Child Care Employment, University of California Berkeley

Degree programs were most likely to embed content on engaging with diverse children and families within larger courses. However, 51 percent of programs surveyed indicated that they cover strategies for working with children who are dual language learners as a separate course (see **Figure 6**).

FIGURE 6. CONTENT AREAS COVERING MULTIPLE TOPICS ABOUT ENGAGING WITH DIVERSE CHILDREN AND FAMILIES



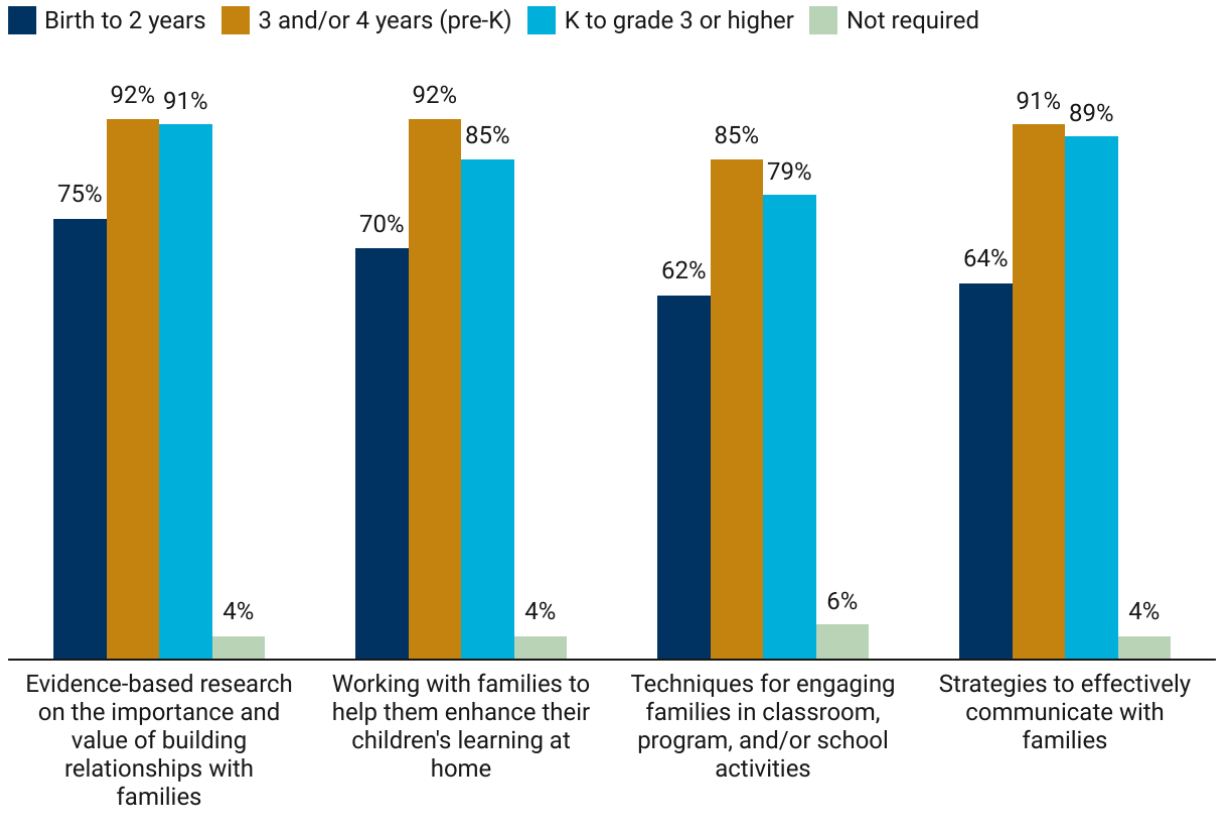
N=53

Source: Center for the Study of Child Care Employment, University of California Berkeley

Family Engagement

Nearly all degree programs require content on family engagement. However, degree programs were most likely to include this content for pre-K and kindergarten and older age groups (see **Figure 7**). Furthermore, required family engagement content was slightly more likely to focus on pre-K than the kindergarten and older age groups.

FIGURE 7. SELECT CONTENT AREAS RELATING TO FAMILY ENGAGEMENT, BY AGE GROUP



N=53

Source: Center for the Study of Child Care Employment, University of California Berkeley

Teaching and Curriculum

What we asked about teaching and curriculum:

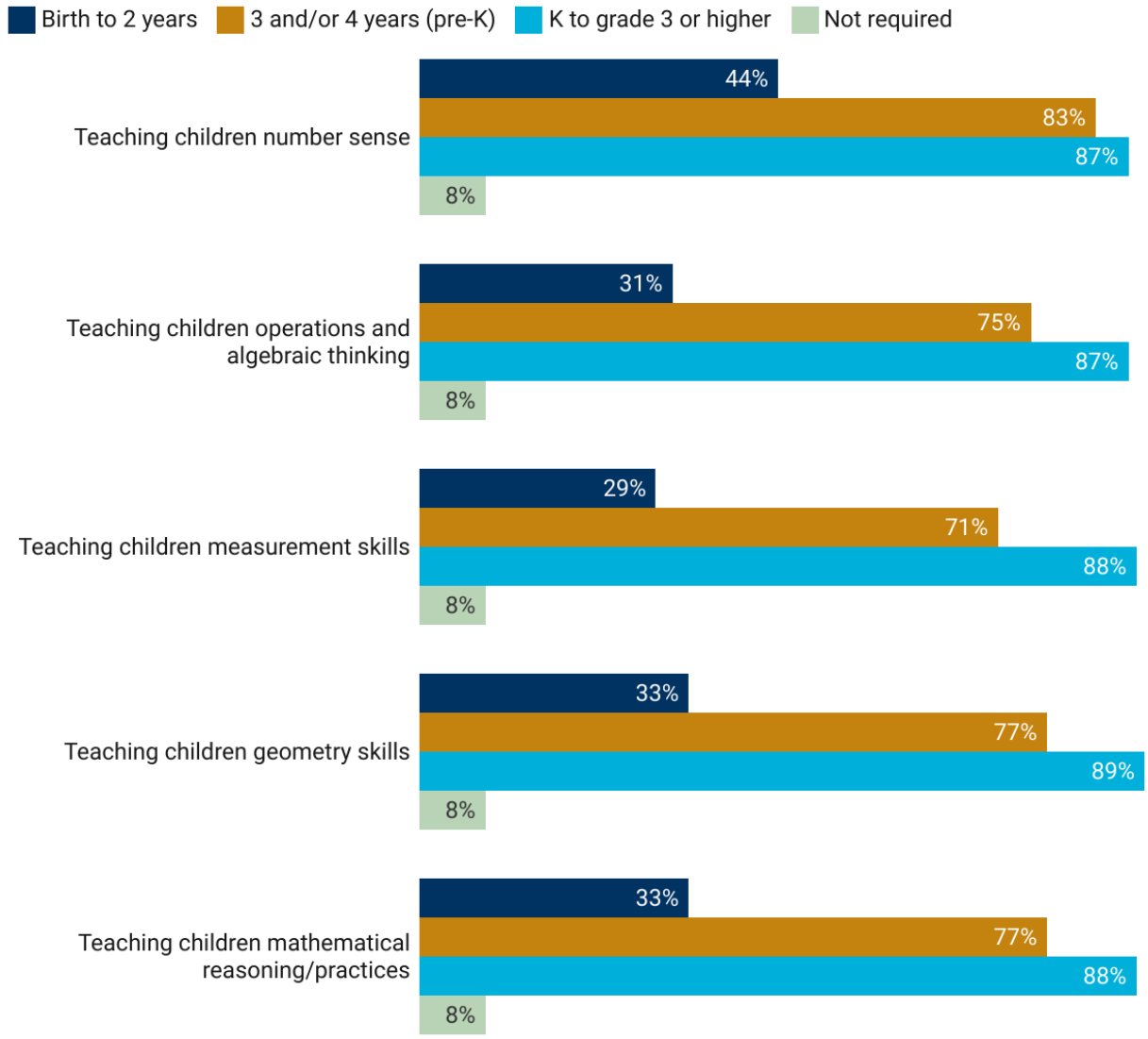
Respondents were asked to identify course content topics that were required for the degree. Specifically, we asked faculty members to what extent students are prepared to:

- Implement integrated curriculum and play in teaching;
- Implement inclusion strategies;
- Support social and physical development; and
- Teach art, literacy, math, science, and social studies.

These domains address key areas of children's cognitive development and important foundational knowledge and intellectual skills associated with school success. Specifically, 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 et al., 2014).

Content on teaching children specific math skills was significantly more likely to focus on pre-K and K-3 or higher (see **Figure 8**). Furthermore, associate degree programs were more likely to require content focused on infants and toddlers in this domain, whereas bachelor's and graduate degree programs were far less likely to require coursework focused on that age group (see **Figure 9**).

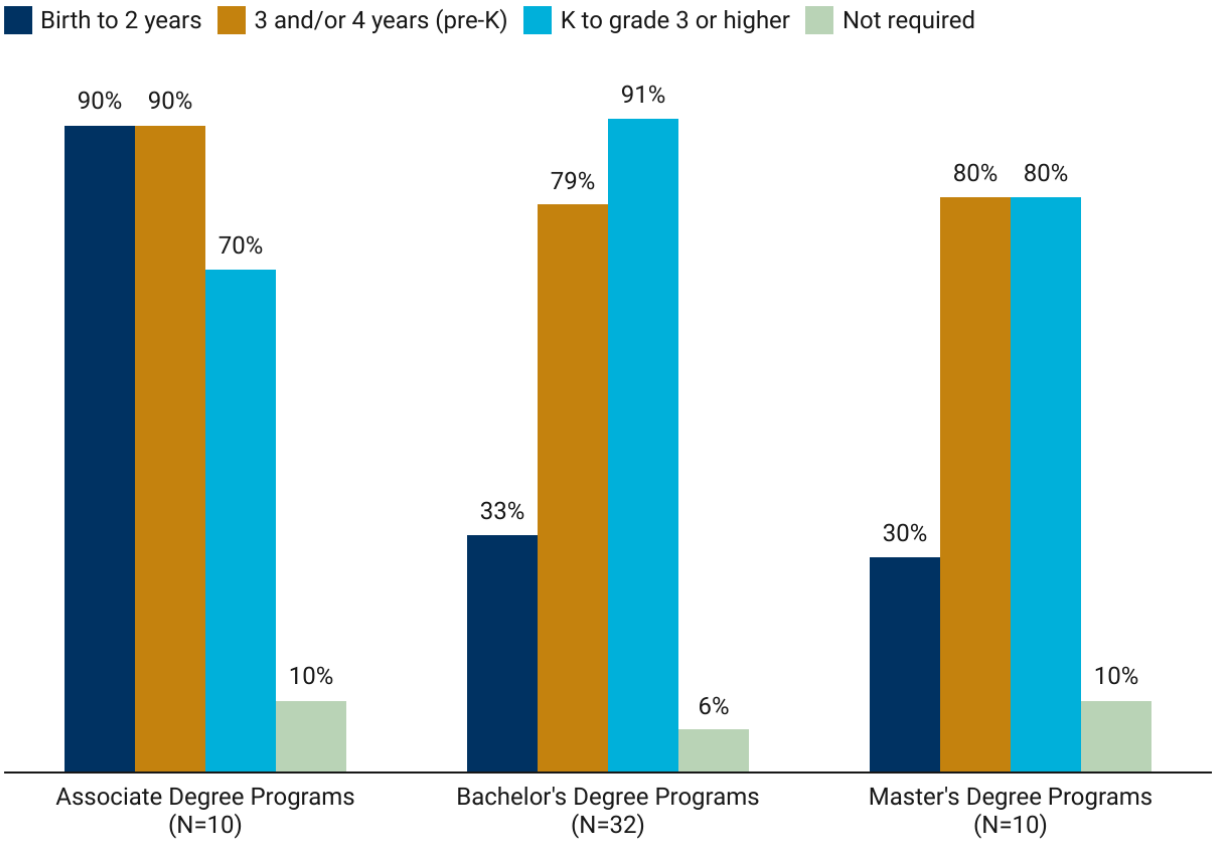
FIGURE 8. CONTENT AREAS COVERING MULTIPLE MATH SKILLS TOPICS, BY AGE GROUP



N=52

Source: Center for the Study of Child Care Employment, University of California Berkeley

FIGURE 9. TEACHING CHILDREN NUMBER SENSE, BY AGE GROUP



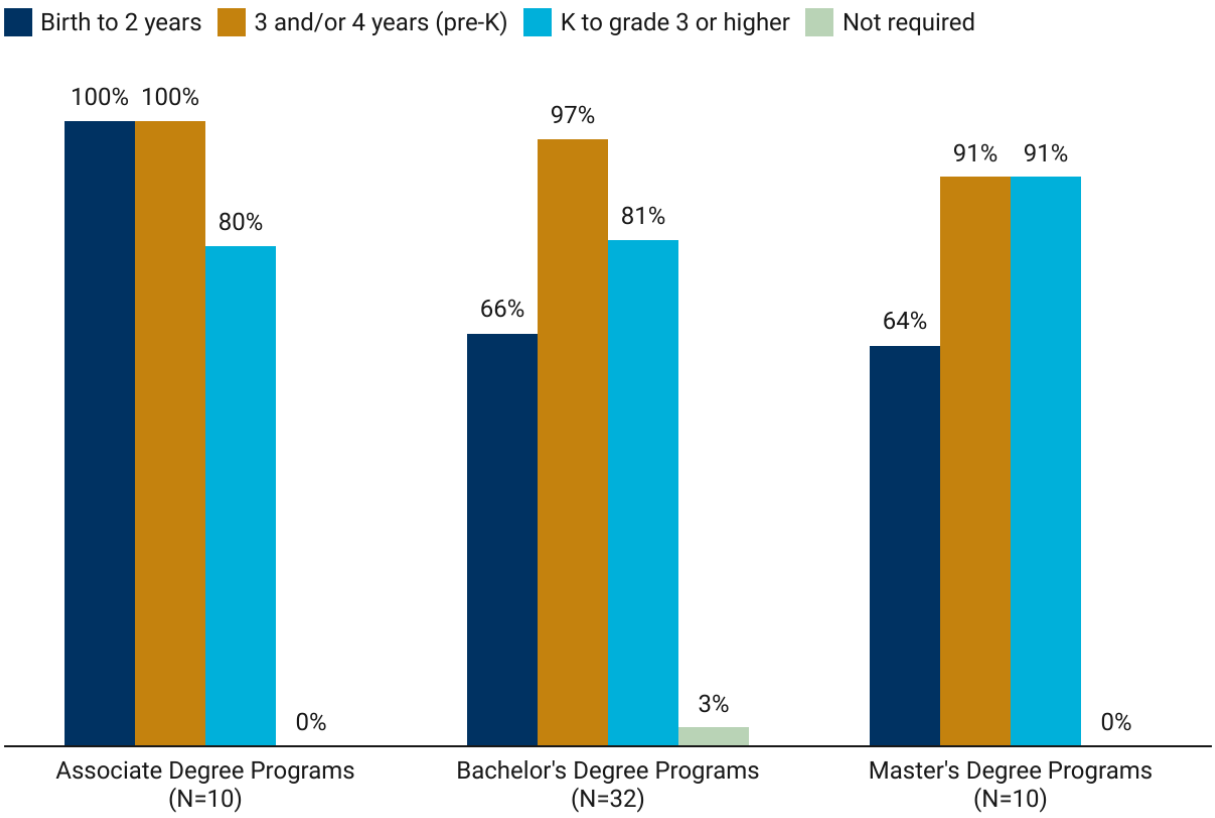
Source: Center for the Study of Child Care Employment, University of California Berkeley

The differentiated focus on children across the birth-to-age-eight spectrum by degree level was evident in other areas, as well. For instance, associate degree programs universally required content related to using play in the curriculum across the birth-to-pre-K age range, while bachelor's and master's degree programs were slightly less likely to require this content for infants and toddlers. Bachelor's degree programs were most likely to require content on using play in the curriculum for children in the pre-K age range (see **Figure 10**).

"The majority of the students who [...] are seeking the four-year teaching degree are taking it to go out and teach in a school district setting or in a private school setting. It's very rare for us to get any students who come to [our college] that want to go back and teach in those early years, like a child care center."

— Assistant Professor

FIGURE 10. USING PLAY IN THE CURRICULUM, BY AGE GROUP



Source: Center for the Study of Child Care Employment, University of California Berkeley

Teaching Skills in Early Childhood Settings

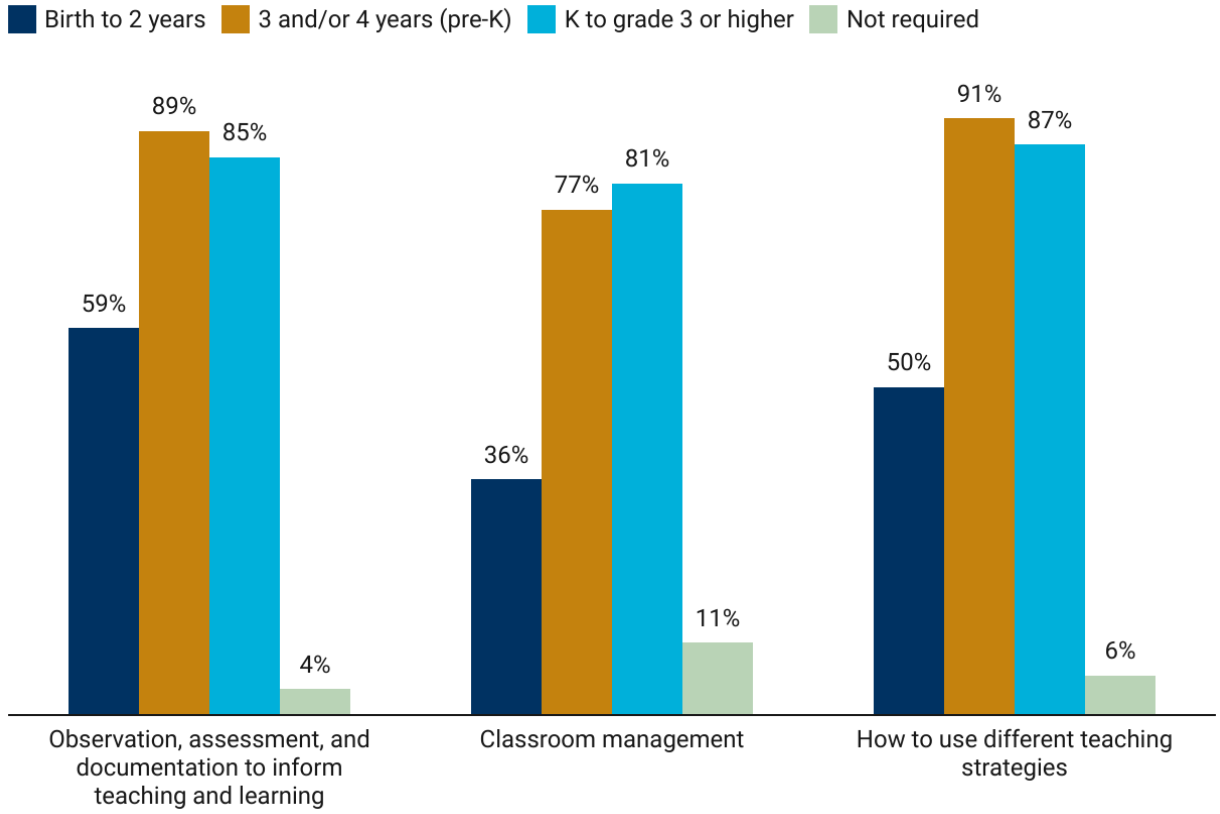
What we asked about teaching skills in early childhood settings:

Respondents were asked to what extent certain topics relating to teaching skills in early childhood settings were covered. Specifically, they were asked whether students were prepared to use:

- Observation, assessment, and documentation to inform teaching and learning;
- Different teaching techniques; and
- Classroom management.

Teacher preparation programs in Pennsylvania vary widely in their requirements around content relating to classroom management, which may leave educators feeling underprepared as they enter the workforce and face children's challenging behaviors. Degree programs across all levels in Pennsylvania were more likely to offer content relating to teaching skills for pre-kindergarten, kindergarten, and children older than birth to age two (see **Figure 11**). Furthermore, while most programs require some content on classroom management, 11 percent of programs do not require students to take any coursework on this topic.

FIGURE 11. REQUIRED CONTENT FOR TEACHING SKILLS, BY AGE GROUP



N=52

Source: Center for the Study of Child Care Employment, University of California Berkeley

Administration and Leadership

What we asked about administration and leadership:

For the leadership and administration domain, respondents were asked to identify the following course content topics offered to students in the degree program.

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
- Preparation to provide professional development services

Organization and Systems

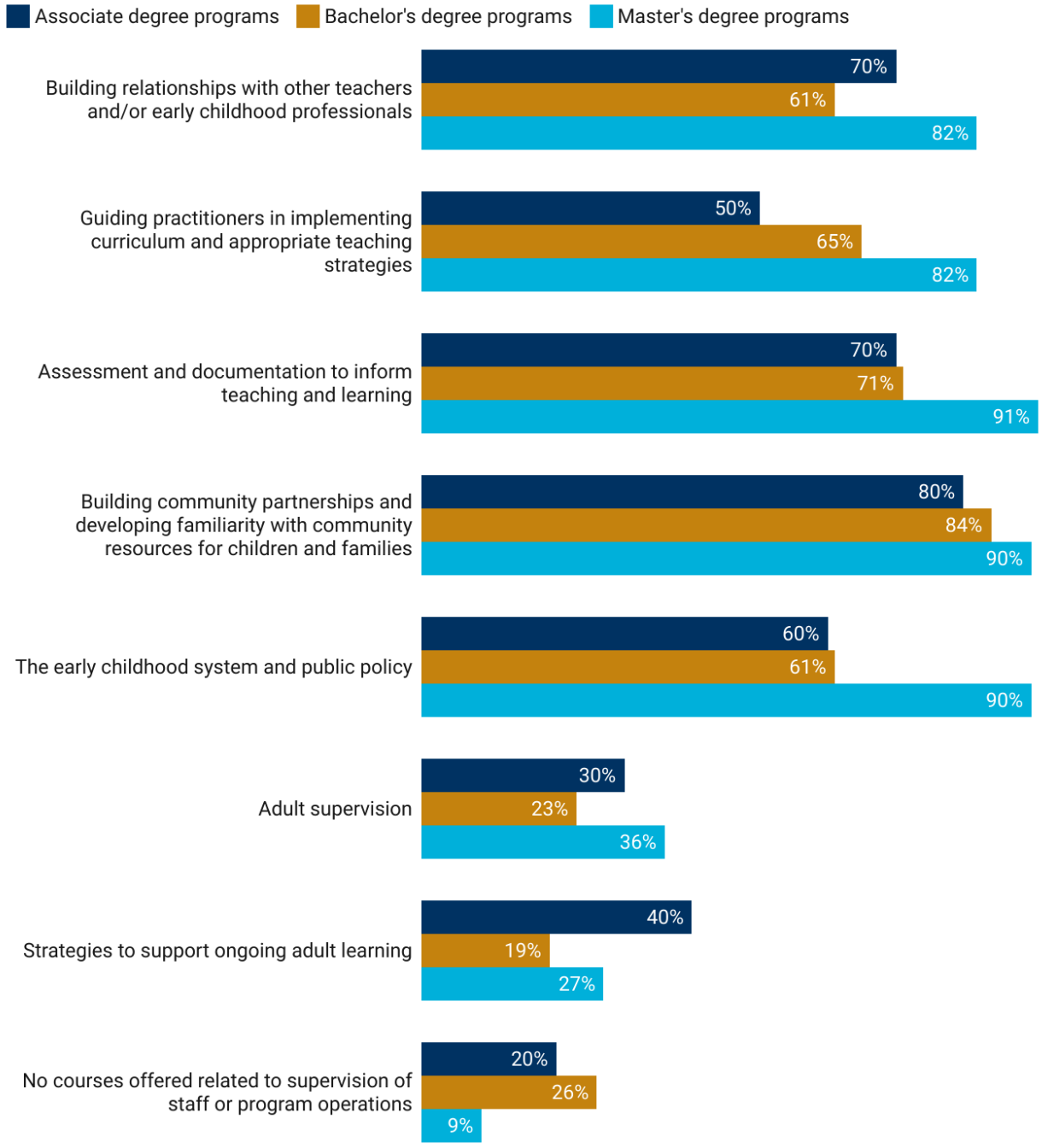
- Human resources/personnel policies
- Fiscal procedures and management
- Grant management and proposal writing
- Organizational development and change
- The early childhood system and public policy
- Effective advocacy, policy analysis, and development
- Building community partnerships and developing familiarity with community resources for children and families

Course content is not consistently offered to prepare practitioners for early childhood supervisory, administrative, or other leadership roles. Overall, this domain was among the domains offered by the fewest number of programs that participated in the Inventory. In fact, one fifth (21 percent) of programs across all three degree levels reported that they did not offer any of the Supervision and Operations topics (see **Figure 12**).

The topics most often offered in associate degree programs were “building community partnerships and developing familiarity with community resources for children and families,” “building relationships with other teachers and/or early community childhood professionals,” and “assessment and documentation to inform teaching and learning,” each of which was offered by at least 70 percent of associate degree programs. At the bachelor’s degree level, the most commonly offered topics were “assessment and documentation to inform teaching and learning,” “building relationships with other teachers and/or early childhood professionals,” and “guiding practitioners in implementing curriculum and appropriate teaching strategies,” each of which was offered by at least 65 percent of programs. Graduate degree programs most often offered “building community partnerships and developing familiarity with community resources for children and families,” "the early childhood system and public policy," and "assessment and documentation to inform teaching and learning," each of which was offered by at least 90 percent of master's degree 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). This content was offered by 60 percent of master's degree programs, 23 percent of bachelor’s degree programs, and 30 percent of associate degree programs that participated in the Inventory.

FIGURE 12. SELECT ADMINISTRATION AND LEADERSHIP COURSES OFFERED, BY DEGREE LEVEL



N=52

Source: Center for the Study of Child Care Employment, University of California Berkeley

Finding Two: Field-Based Learning Experiences

Bachelor's degree programs are more likely than associate degree programs to require students to participate in student teaching or practica. When such field-based learning experiences are required, students across degree programs are more likely to be required to participate in a practicum experience. However, there is little consistency as to the duration, frequency, and age-group focus of these field experiences.

What we asked about field-based learning experiences:

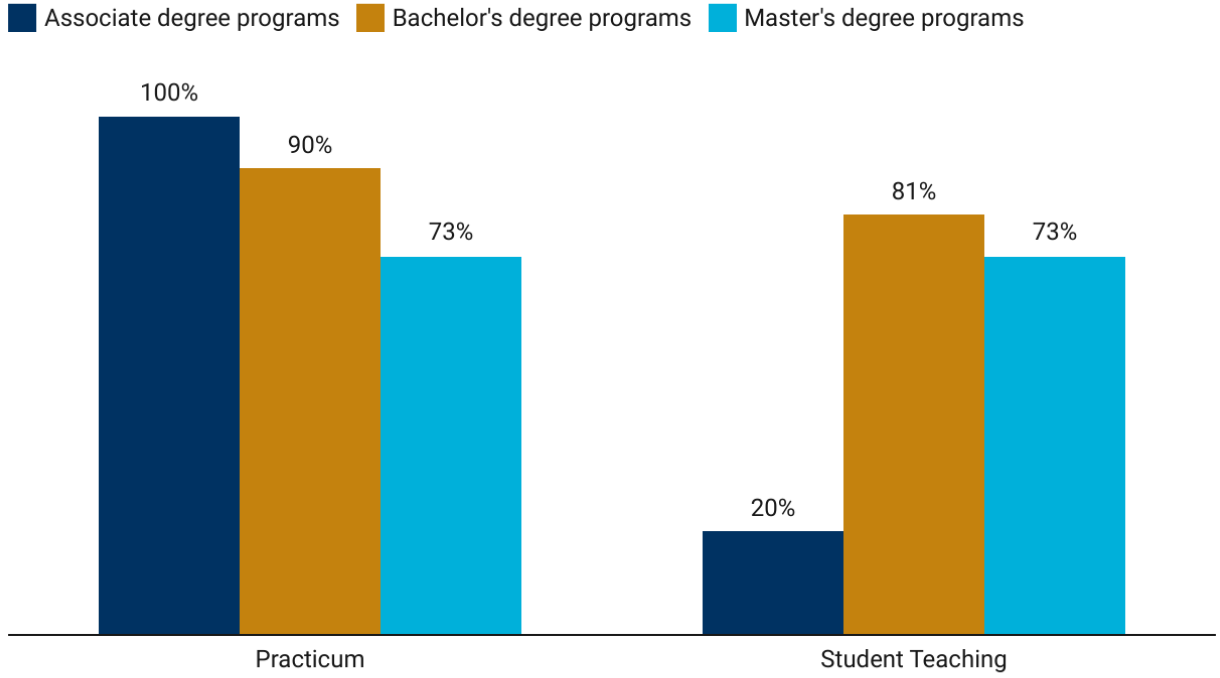
Program leads were asked about two distinct types of field experiences: student teaching and practica. By student teaching, we mean full-time immersion in a classroom, with increasing responsibility for curriculum planning and teaching and supervision by a faculty member and/or cooperating teacher and/or mentor. By practicum, we mean an experience, associated with a course, that is short in duration, is 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.

There is widespread agreement that field-based learning experiences are critically important to teachers working with children of all ages for developing new teaching skills or improving existing ones (IOM & NRC, 2015; National Council for Accreditation of Teacher Education [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; Early Educator Investment Collaborative, 2020). This structural divide in the hands-on experiences taking place within educator preparation runs counter to the call from many ECE experts, policymakers, and other stakeholders for a more integrated birth-to-age-eight educational system (IOM & NRC, 2015).

Required Field Experiences

Overall, bachelor's and graduate degree programs are more likely than associate degree programs to require students to participate in both student teaching and practica (see **Figure 13**). All associate degree programs require at least one practicum experience, but only 20 percent require a student teaching experience, while between 80 and 90 percent of bachelor's degree programs and the majority (73 percent) of master's degree programs also require both types of field-based experience. However, when examining bachelor's degree program requirements by certification status, nearly all programs (90 percent) leading to teacher certification require practicum and all require student teaching. In contrast, bachelor's degree programs not leading to certification are less likely to require student teaching. In fact, only one program in our survey required this experience for students to earn their degree. While this finding may not be representative of the requirements of other non-certification bachelor's degree programs throughout the state, the difference in requirements across degree programs seems reflective of the primary program goal of programs leading to certification—to prepare students for roles in a variety of early childhood settings.

FIGURE 13. FIELD EXPERIENCES REQUIRED IN PENNSYLVANIA EARLY CHILDHOOD DEGREE PROGRAMS, BY DEGREE LEVEL



N=52

Source: Center for the Study of Child Care Employment, University of California Berkeley

Number, Duration, and Timing of Practica

Practica are the most common type of field experience required across Pennsylvania early childhood degree programs.[5] 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 4**).

TABLE 4. NUMBER AND MEAN HOURS OF PRACTICA REQUIRED BY PROGRAMS PARTICIPATING IN THE PENNSYLVANIA INVENTORY

	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
All Degree Programs (N=39)	9	3	3	24	109.7

Across all degree levels, programs were most likely to require students to participate in practica during their first year of study (60 percent). A smaller percentage of programs (22 percent) required that the first practicum occur at the end of the course of study, while even fewer programs (18 percent) noted that students completed their first practicum during the middle of the course of study. The majority of programs (81 percent) reported that they do not structure practica differently for novice and experienced teachers.

[5] Because practica were the primary strategy for field experiences required by degree programs and due to small sample size of associate degree programs and non-certificated bachelor's degree programs requiring student teaching, practica are the focus of this section of the report.

What we asked about required elements of practicum experiences:

Program leads were 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 disabilities), or families.

Program leads were also 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 social-emotional 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.

Required Elements of Practicum Experience

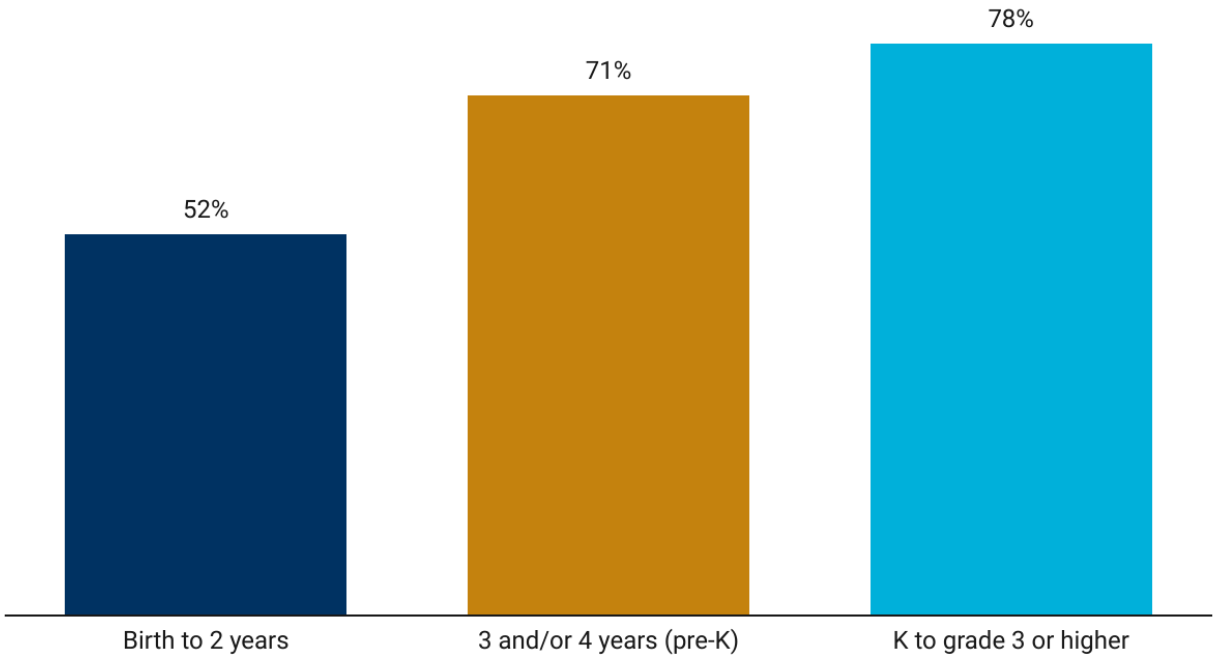
Degree programs had mixed requirements for practica experiences. While the majority of degree programs required students to engage in field experiences with children with disabilities, few degree programs required field experiences that focus on other populations they are likely to encounter in their work as teachers, such as dual-language-learning children and non-English-speaking families.

Approximately three quarters of programs required a focus on pre-school and school-age children in their practicum experiences (71 percent and 78 percent, respectively), and 52 percent of programs required students to participate in a practicum working directly with infants and/or toddlers (see **Figure 14**).

"The majority of our students are not getting that pre-K experience. They do in one class, they always do [...] but the vast amount of their experiences are in the K-4, in the public school settings [...] they're not in those pre-K spaces as much as they are in the K-4."

— Program Director

FIGURE 14. REQUIRED AGE-GROUP FOCUS IN PRACTICUM EXPERIENCES



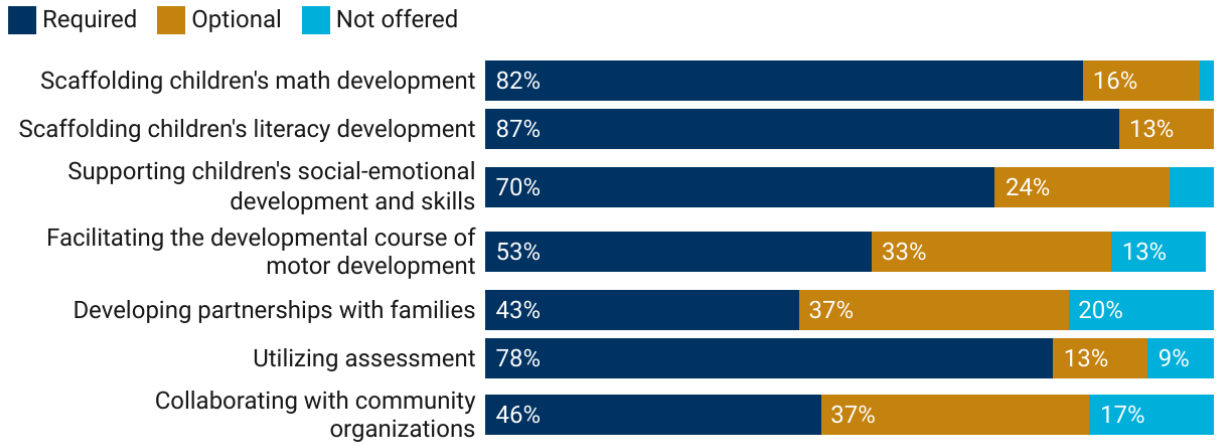
N=45

Source: Center for the Study of Child Care Employment, University of California Berkeley

The majority of programs (67 percent) required students to complete a practicum that involves working with children with disabilities. Only 39 percent of programs that participated in the Inventory required students to complete a practicum that involves working with children who are dual language learners, although associate degree and master's degree programs were more likely to do so than bachelor's degree programs (60 percent, 57 percent, and 29 percent, respectively). Additionally, almost one half (53 percent) of programs require students to complete a practicum that involves working with families.

The Inventory also asked about specific practices that students may be required to incorporate into their practica (see **Figure 15**). The practices most likely to be required were "scaffolding children's literacy development" (87 percent), "scaffolding children's math development" (82 percent), and " supporting children's social-emotional development and skills" (70 percent).

FIGURE 15. SELECT PRACTICES REQUIRED FOR STUDENTS IN THEIR PRACTICUM EXPERIENCES



N=46

Source: Center for the Study of Child Care Employment, University of California Berkeley

Field Experiences Changed to Align With New Certification

As they have included pre-K into the new curriculum, many degree programs have also made changes to the field experiences. The changes were intended to align field experiences with the new pre-K-4 certification by creating field experience placements in pre-K spaces. Some programs took advantage of the changes to formalize their field experiences.

> *"[B]ringing [the certification] down to pre-K-4, we can focus our really intensive field experiences [...] on that age group. I think that's a real plus because we know the fieldwork is where you take theory and put it into practice."*
>
> — Professor

"[T]hey really revamped the entire field placement. And they actually brought in someone to manage that, which was really helpful. And we did really look at 'we want them to be in this many placements, this many times.'"

— Associate Professor

Many of the study participants noted that the prioritization of pre-K to grade 4 for students' field experiences has led to difficulty incorporating early childhood placements in these experiences for future early educators.

"[I]t does get challenging because the state certifies [in pre-K-4]. And so, I'm always pushing to do field experiences in a Head Start classroom or a true NAEYC-accredited early childhood program. And that's not always given the priority."

— Associate Professor

Finding Three: 2013 Certification Changes

In 2013, Pennsylvania discontinued the certifications for nursery through grade 3 (N-3) and kindergarten through grade 6 (K-6) and enacted the certification for pre-kindergarten through grade 4 (pre-K-4), leading to mixed results for birth-to-age-three (B-3) content in higher education programming (Pennsylvania Department of Education, 2019). Content specific for early childhood continues to be shortlisted, while the focus primarily remains on elementary education. Additionally, in 2018 Pennsylvania passed legislation consolidating the previous special education certifications (pre-K to grade 8 and grade 7-12) into a single certification for pre-kindergarten to grade 12/age 21, while eliminating the dual certification in early education and special education (Public School Code of 1949, No. 82, 2018). This certification shift likely further reduced the time future practitioners spend on specific early childhood education content within their degree programs focused on special education.

Pre-K Programming Expanded

Many of the programs responded to the 2013 state teacher certification changes by expanding their focus on pre-K content. The elimination of grades 5 and 6 from the new pre-K-4 certification allowed these programs to add pre-kindergarten content to their curriculum without sacrificing other content critical to the certification. Programs housed under education departments also hired early childhood education experts to teach the pre-K content that was added to the curriculum.

> *"[T]here was more of a shift to include the pre-K that was not necessarily a part of the curriculum. They added courses to address preschool education."*
>
> — Adjunct Professor

> *"I was basically hired because of the early learning experience that I have… They needed more faculty that were really familiar with ECE. Most of their faculty would have been kindergarten and on up."*
>
> — Associate Professor

B-3 Programming Experiences Minor Curricular Gains

Many of the interview participants acknowledged that birth-through-age-three content would help programs prepare better early childhood educators. Nonetheless, B-3 content generally did not experience an expansion like pre-kindergarten programming did. Only programs housed under education departments were able to add to their B-3 content. In two of the programs interviewed, an ECE advocate in the program was instrumental in making this happen.

> *"We taught child development in the past. And one of the switches is they split child development into two courses. So now there is early child development and adolescent child development."*
>
> — Associate Professor

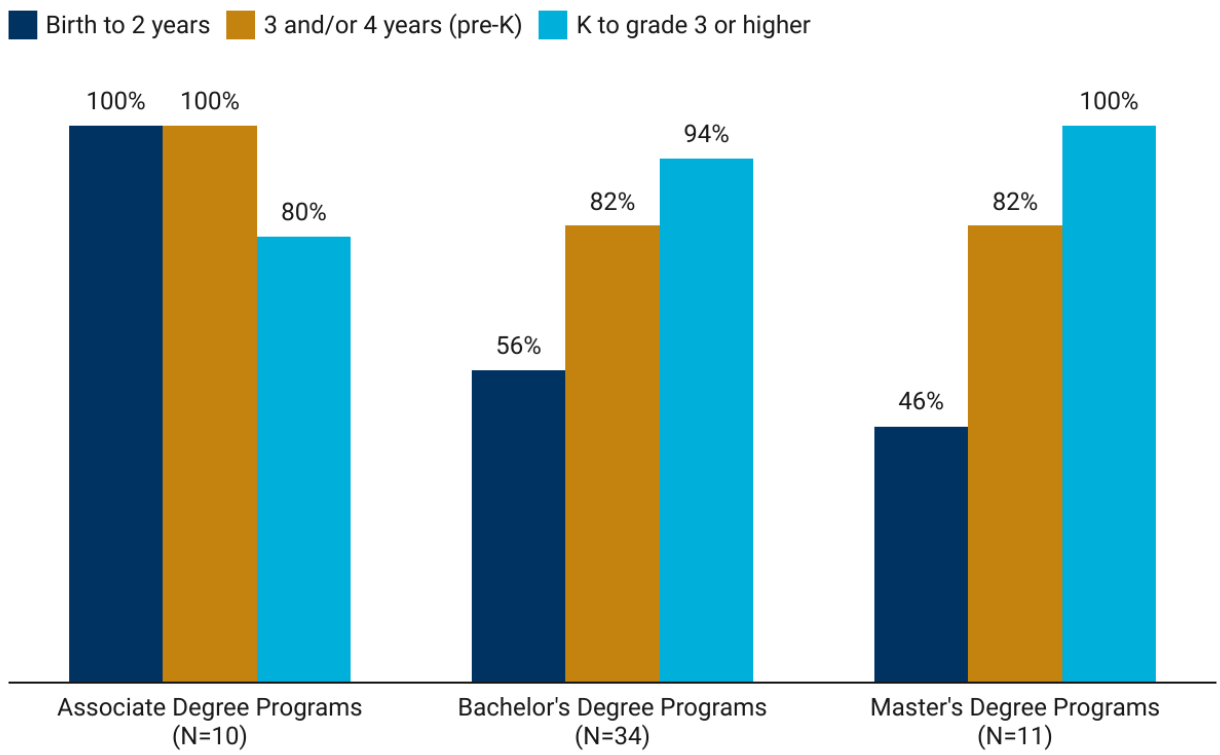
> *"[T]hey left [early childhood] with two courses.... How could they not have family [content in the curriculum]? So I played a gambit, and it was worked out.... [W]e're going from having just two courses [in B-3] to having three."*
>
> — Professor

B-3 Programming Remains the Same, With Potential for Growth

Despite the minor expansion in B-3 content, many programs kept programming devoted to the birth-to-age-three span, especially those programs focused on the Child Development Associate (CDA) credential or programs housed in a human development department. These programs have leaders in place who foster a continuum between early childhood education and elementary education and have faculty members prepared to teach the B-3 development period.

Furthermore, some potential exists for these programs to elevate the standing of B-3 content within their programming. Survey responses indicate that 90 percent of programs cover content on knowledge about children's development in birth through age two. However, specific content such as teaching children with disabilities is significantly lower in the birth-to-age-two area for bachelor's and master's degree programs (see **Figure 16**). At the time of data collection, the dual certification in pre-kindergarten to grade 4 and special education was in its final year of availability before being eliminated.

FIGURE 16. PERCENTAGE OF PENNSYLVANIA DEGREE PROGRAMS REQUIRING STUDENTS TO TAKE COURSEWORK ON TEACHING CHILDREN WITH DISABILITIES, BY AGE GROUP



Source: Center for the Study of Child Care Employment, University of California Berkeley

"Our students currently have a course their freshman year in child development.... The predominant focus of that course is [...] birth to five. There is an attached field experience with that at our early childhood center.... They have about 60 hours of immersive programming that they attend and participate in."

— Associate Professor

"[B]ecause my students earned their bachelor's not in education, but in applied developmental psychology [...] we did not lose the [B-3 content].... They still take developmental curriculum courses.... So we felt that it was really important to keep that piece in the program."

— Associate Professor

"[W]e're completely comfortable with doing that focus on prenatal up to emerging adulthood. All the faculty in our program, we're all developmental psychologists. That's our training. But in training and in experience, we're used to working with human service agencies that are covering that broad age range."

— Associate Professor

Some Programs Narrow B-3 Content

Nonetheless, some of the programs did respond to the certification changes by narrowing the focus on B-3 content and experiences. This response largely came about with the loss of the nursery-to-grade-3 certification, which fully eliminated birth to age three from available teacher certification in the state. Some programs saw a narrowing in B-3 content in the curriculum and in the required field experiences. Programs housed under education departments in particular made such changes.

"[The certification changes] caused a real crunch to some of the courses we had.... [T]he whole focus of nursery through third grade, which a lot of it was on preparing students [to run a] program, that coursework just disappeared."

— Program Director

"We had five courses in [B-3], and we reduced it to two."

— Professor

While faculty noted that birth-to-age-five content was limited, program leads were less likely to share this concern: only 14 percent of program coordinators across degree levels indicated that "insufficient course content focused on children younger than five" was a challenge.

Merits of B-3 Programming: Expanding Children's Understanding

Several study participants noted the benefits of the prenatal-to-grade-3 approach[6] to programming, which is promoted by Pennsylvania's Office of Child Development and Early Learning (OCDEL). Many interview participants expressed support for such an approach because of its potential to expand teachers' understanding of the children in their classrooms. Taking into account students' earliest experiences can give teachers a deeper understanding of the developmental experiences their students have had prior to entering their classrooms.

> *"I think it's very important for students, even those who are teaching preschool, to have a good understanding of what came before. What are the kinds of experiences that their students should have had, may not have had? I see the value of that."*
>
> — Program Director

> *"I don't think we're able to truly understand the behaviors as well as the needs of children when they get to the elementary grades if we do not have a strong early childhood education basis.... [T]hat holistic approach [...] to understanding that children need to have stable child care situations [and] high-quality early learning programs."*
>
> — Assistant Professor

[6] Many departments of education have begun to incorporate a more holistic approach to child development and now include a prenatal focus. This study focuses on early care and education and therefore uses birth to grade 3 (B-3) in other sections of the report.

Part 2: An Evolving Landscape: Integration of Standards and Competencies Into Coursework

This section examines the challenges degree programs face when integrating multiple standards and competencies, accreditation requirements, and licensure requirements into their curricular and program offerings.

Degree program coordinators and faculty are faced with the challenge of covering a breadth of content required for degree completion while also integrating a variety of learning standards and competencies and meeting accreditation criteria. As noted in **Part 1** of this report, although OCDEL focuses on the entire prenatal-to-grade-3 (P-3) continuum, most degree programs (particularly those leading to pre-K-4 teacher certification) focus their course content on child development from pre-kindergarten through grade 4. Although most faculty and program leads interviewed appreciate the merits of a P-3 approach, they struggle to incorporate it in a meaningful way while navigating accreditation guidelines and state standards and preparing students to teach pre-K to grade 4.

> *"[T]he difficulty is—when you have a span that goes all the way from the prenatal up through fourth grade or preparing students even through sixth grade—there's only so many courses that you can include."*
>
> — Program Director

Program Alignment With State and National Standards

In recent years, growing attention placed on the importance of early childhood development has led to the creation of a host of standards and competencies outlining what early educators should know and be able to do to meet children's developmental needs (IOM & NRC, 2015; Whitebook et al., 2018). However, despite increasing agreement on the value of these standards and competencies for delineating effective teaching practices, not all early childhood degree students in Pennsylvania are exposed to coursework aligned with state or national standards.[7]

[7] In the spring of 2022, Pennsylvania adopted the Pennsylvania Professional Standards and Competencies for Early Childhood Educators and retired Core Knowledge and Competencies. See **Recommendation 2** for further detail.

Program leads were asked whether the degree program incorporated any of the following 11 state or national standards into its course content:

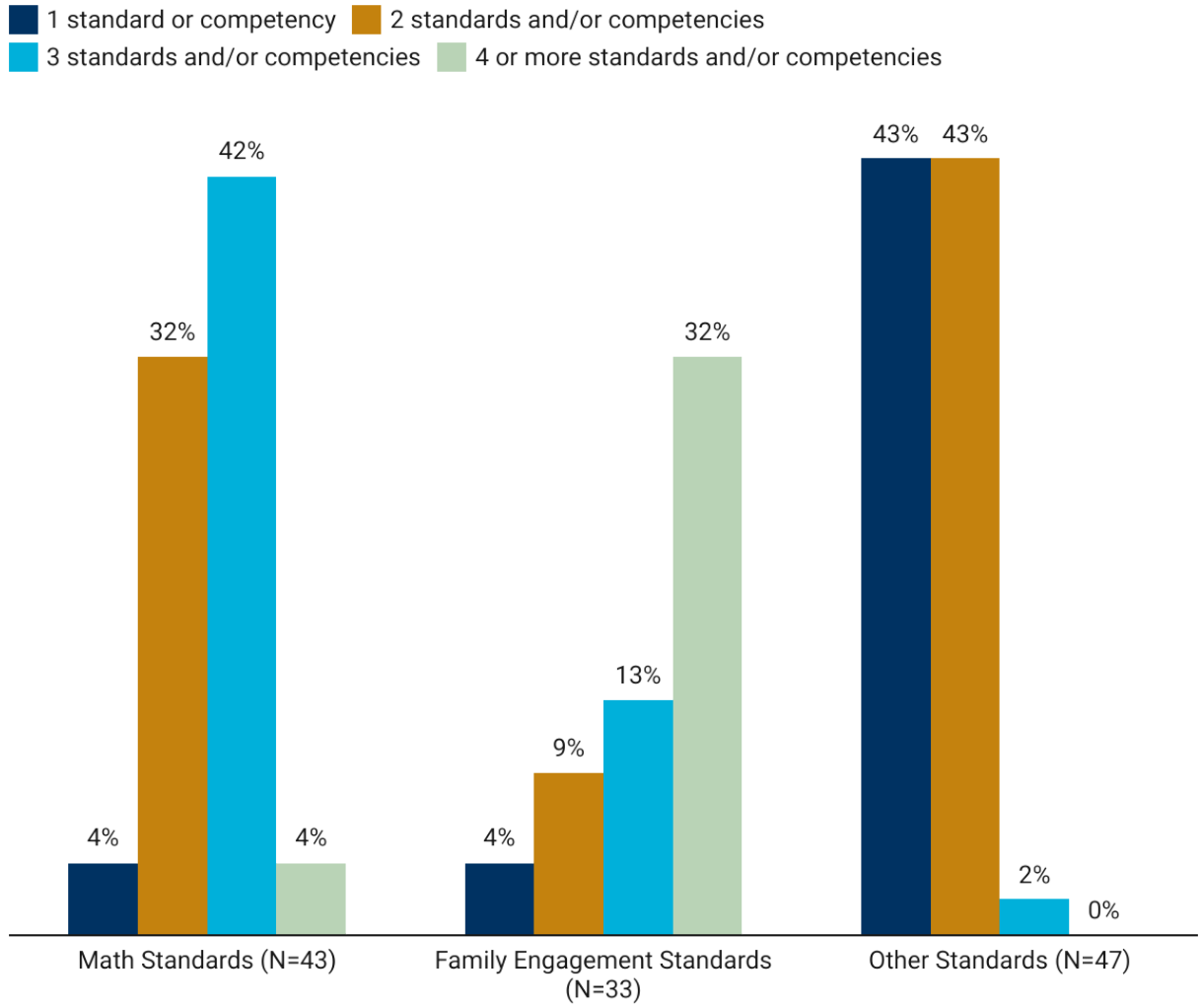
- Pennsylvania Learning Standards for Early Childhood;
- Pennsylvania Keystone STARS;
- Pennsylvania Core Knowledge and Competencies for Practitioners;
- Pennsylvania Family Engagement Birth Through College, Career, Community-Ready Framework;
- Head Start Child Development and Early Learning Framework/Program Performance Standards;
- NAEYC Accreditation Standards;
- NAEYC Program Accreditation Standards: Standard 7-Families;
- NAEYC Professional Preparation Standards/Council for the Accreditation of Educator Preparation (CAEP): Standard 2-Building Family and Community Relationship;
- NAEYC: Effective Family Engagement Principles;
- National Council of Teachers of Mathematics (NCTM) Principles and Standards for School Mathematics; and
- Association for Early Learning Leaders: Family Engagement Framework.

A majority of programs (86 percent) reported incorporating math standards, with nearly three quarters (77 percent) indicating they use the Pennsylvania Learning Standards for Early Childhood and two thirds (68 percent) incorporating the National Council of Teachers of Mathematics (NCTM) Principles and Standards for School Mathematics. Additionally, 62 percent of programs indicated they incorporate family engagement standards, with 55 percent of the programs using the Pennsylvania Learning Standards for Early Childhood and 45 percent incorporating NAEYC Professional Preparation Standards/CAEP: Standard 2-Building Family and Community Relationships.

Furthermore, a majority of programs indicated that they incorporate two or more state competencies or ECE standards into course content (see **Figure 17**). Nearly half of programs reported aligning their curriculum with three or more math standards, and a similar percentage reported aligning with three or more family engagement standards and/or competencies.

> *"The previous person, when she built the coursework, it was based off of both Pennsylvania and NAEYC standards."*
>
> — Program Director

FIGURE 17. NUMBER OF STATE CORE COMPETENCIES OR ECE STANDARDS IN DEGREE PROGRAMS



Source: Center for the Study of Child Care Employment, University of California Berkeley

Degree Program Accreditation Status

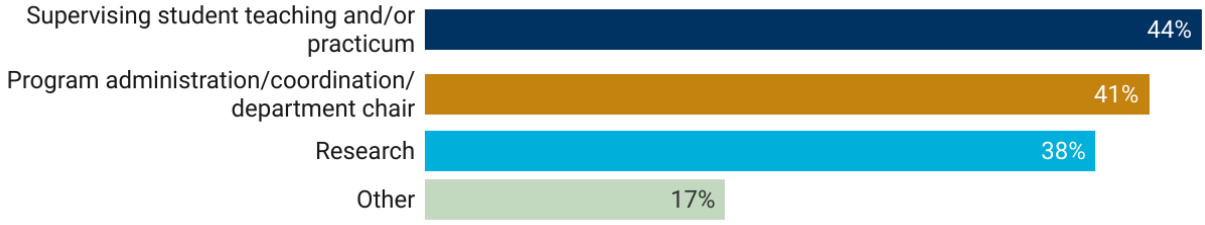
In addition to state and national standards and competencies, programs or departments seeking accreditation through the National Association for the Education of Young Children (NAEYC) or Council for the Accreditation of Educator Preparation (CAEP) must make additional effort to ensure the programs are able to meet accreditation criteria for those entities.

> *"I am in charge of making sure that [NAEYC standards] are all integrated in our curriculum. We heavily teach the NAEYC standards inside of every one of our courses. I need to make sure that my instructors are up to date with all of that.... [T]hat all of our curriculum materials match any kind of changes."*
>
> — Assistant Professor

Ten of the faculty members interviewed stated that their programs were accredited by either NAEYC or CAEP, and three faculty members noted that their programs were in the process of acquiring accreditation. Nine faculty members shared that their programs were not accredited by either association, and five interview participants were unsure of their program's accreditation status. Some stakeholders noted that their programs informally followed NAEYC guidelines regardless of their accreditation status. While accreditation through these two organizations is optional, some programs choose to undergo accreditation in a push for standardizing early childhood education degrees. The process of seeking accreditation can be long, time consuming, and expensive, and faculty members are responsible for carrying out the self-study and participating in the site visits, in addition to their standard workload.

Across survey respondents, a majority of faculty members (78 percent) indicated that they have other areas of responsibility in addition to teaching. Nearly one half (44 percent) of faculty members reported supervising student teaching and/or practicum, and 41 percent engaged in program administration or coordination (see **Figure 18**). Additional areas of responsibility included grant writing, serving on committees or similar work, coordinating field experiences, and supervising the on-campus child development center.

FIGURE 18. FACULTY MEMBERS' ADDITIONAL AREAS OF RESPONSIBILITY



N=139

Source: Center for the Study of Child Care Employment, University of California Berkeley

Part 3: Early Childhood Higher Education, Faculty Profile

This section of the report examines the extent to which the faculty workforce is prepared to provide early childhood practitioners with the necessary knowledge and skills associated with effective teaching practice and program leadership.

Finding Four: Portrait of Faculty Members

Pennsylvania early childhood degree programs are staffed with a mix of part- and full-time faculty. Faculty members are primarily White women who are monolingual (speaking only English) and therefore less diverse than Pennsylvania's child population. Most faculty members across degree levels reported having had academic preparation specific to early childhood, and nearly one half of the faculty members reported having also worked in a professional role in early care and education 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 age, racial/ethnic background, and 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 141 faculty members, out of 731 faculty members who received the Inventory.[8] These faculty responses represent 74 institutions of higher education (11 community colleges, 24 public universities, and 40 private universities).

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

Response rates across degree levels average 14 percent (see **Table 5**). The total number of faculty modules administered and completed is adjusted for email bounces and reflects the eligible sample determined through sample analysis. In this report, data are reported cumulatively except for when findings are additionally highlighted by degree level(s) taught. Because institutes of higher education in Pennsylvania are able to offer multiple degree levels, faculty are grouped as:

- Associate degrees only;
- Associate and bachelor's degrees;
- Bachelor's degrees only;
- Bachelor's and graduate[9] degrees; and
- Graduate degrees only.

[9] While institutes of higher education in Pennsylvania do not offer a doctoral degree in early childhood education or a closely related field, some faculty members reported teaching in a doctoral program such as psychology. Therefore, we refer to faculty members teaching in graduate degree programs in this section.

TABLE 5: FACULTY RESPONSE RATE*

Faculty Type	Number of Faculty Modules Administered	Partial Faculty Responses	Completed Faculty Responses	Total Faculty Module Participation
Type of Institute of Higher Education				
Community College	83	4 4.82%	11 13.25%	18.07%
Public University	271	19 7.01%	38 14.02%	21.03%
Private College/ University	376	16 4.26%	53 14.1%	18.35%
Total	730	39 5.34%	102 13.97%	19.31%
Degree Levels Taught**				
Associate Degree Only	‡	4	11	15
Associate and Bachelor's Degrees	‡	2	13	15
Bachelor's Degree Only	‡	12	35	47
Bachelor's and Graduate Degrees	‡	14	30	44
Graduate Degree Only	‡	5	13	18
Total	‡	39	102	141

*Throughout this report, you will notice the N will fluctuate depending on questions and responses. We wanted to include as much information as possible, and therefore, we included partially completed surveys.

**Degree levels taught are self-reported, and therefore, only faculty members who participated in the Inventory are reported in the table.

‡ Denotes an unknown variable.

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 (CCCSE, 2014). This situation can lead to full-time faculty members 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 et al., 2006; Whitebook et al., 2005).

Among those who participated in the Inventory, 62 percent reported being either tenured or tenure-track, and 20 percent reported being full-time, non-tenured. A smaller proportion of faculty members were in adjunct roles: 40 percent of faculty members teaching in associate degree programs and only 13 percent of faculty members teaching in bachelor's degree programs identified themselves as adjunct faculty or part-time lecturers.[10] Several respondents and interviewees noted that their institutes of higher education have eliminated or are in the process of eliminating tenure.

> *"[T]hey have stopped awarding tenure this year, which was a surprise.... [T]here were a lot of layoffs. A lot of layoffs of staff. There were layoffs of faculty. And it did not matter if you were tenured or not. And so, this has put us in [...] a scary position."*
>
> — Associate Professor

Nonetheless, challenges related to insufficient staffing were cited by program leads and faculty members alike, as discussed in more detail below.

[10] Faculty members at PASSHE institutions are unionized and collective bargaining limits the proportion of part-time faculty at these schools. See https://www.apscuf.org/wp-content/uploads/2020/02/FacultyCBA2019-23final.pdf for more information.

Demographic Characteristics

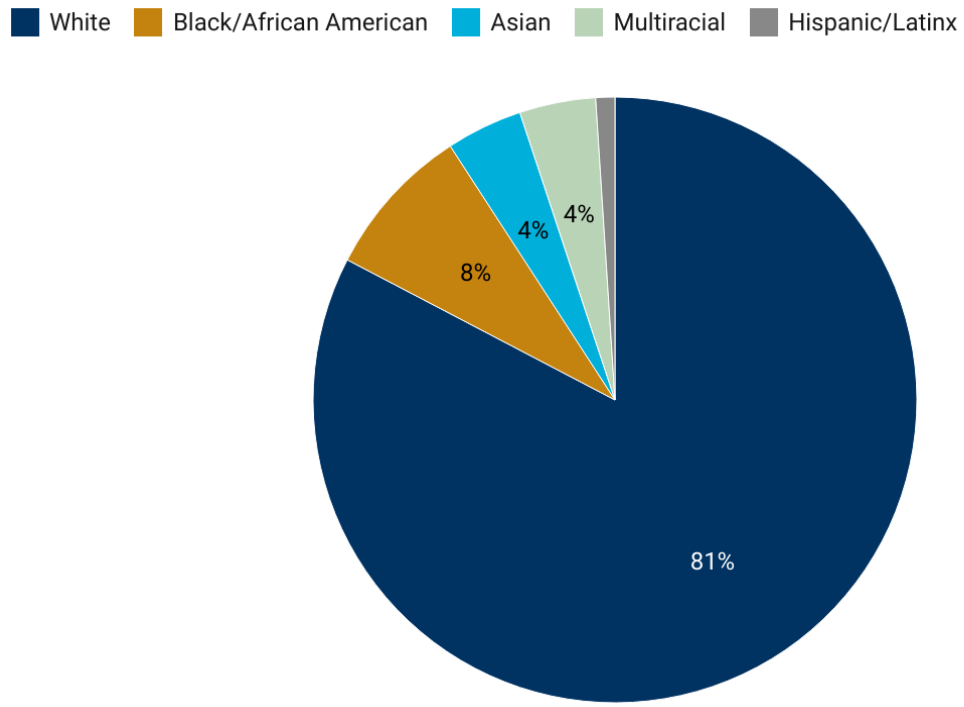
The well-documented lack of racial and ethnic diversity among early childhood higher education faculty—in contrast to their students and the child populations that these ECE professionals will serve—has implications for the degree of focus on diversity in coursework and the availability of role models for students (Bornfreund, 2011; Early & Winton, 2001; Johnson et al., 2010; Lim et al., 2009; Maxwell et al., 2006; Ray et al., 2006; Whitebook et al., 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 et al., 2009).

Racial, Ethnic, and Linguistic Diversity[11]

Most faculty members participating in the Inventory identified as female, White (see **Figure 19**), and monolingual, speaking only English. In general, early childhood higher education faculty were less diverse than the overall population in Pennsylvania. Census data point to an increasingly diverse population in the state, with the child population under the age of five being 66-percent White (non-Hispanic/Latinx), 13-percent Black/African American, 13-percent Hispanic or Latinx, 4-percent Asian, and 4-percent multiracial (Annie E. Casey Foundation, 2019b). Additionally, 12 percent of children under the age of six speak a language other than (or in addition to) English at home, with Spanish being the predominant language (6 percent).

[11] While other terms describing race and ethnicity may have been used in the HEI questionnaire, CSCCE is committed to eliminating oppressive language and using bias-free terms. Under this philosophy, for example, all terms used to describe race are capitalized, and gender neutral terms are used when appropriate.

FIGURE 19. RACE/ETHNICITY OF FACULTY MEMBERS PARTICIPATING IN THE PENNSYLVANIA INVENTORY



N=97
Source: Center for the Study of Child Care Employment, University of California Berkeley

While all faculty members at all degree levels reported fluency in English, only 17 percent of faculty across all degree levels spoke a language other than English. Nearly one half (46 percent) of faculty members across all degree levels reported that it would be helpful to know another language, primarily Spanish, in order to communicate better with their students. Overall, about 24 percent of faculty members who would like to know another language identified Spanish as a language of interest.

Age

The average age of faculty members teaching across associate, bachelor's, and graduate degree programs was 53 years. About one third of faculty were between 40 and 49 years, another third were between 50 and 59 years, and a final third were 60 years or older.

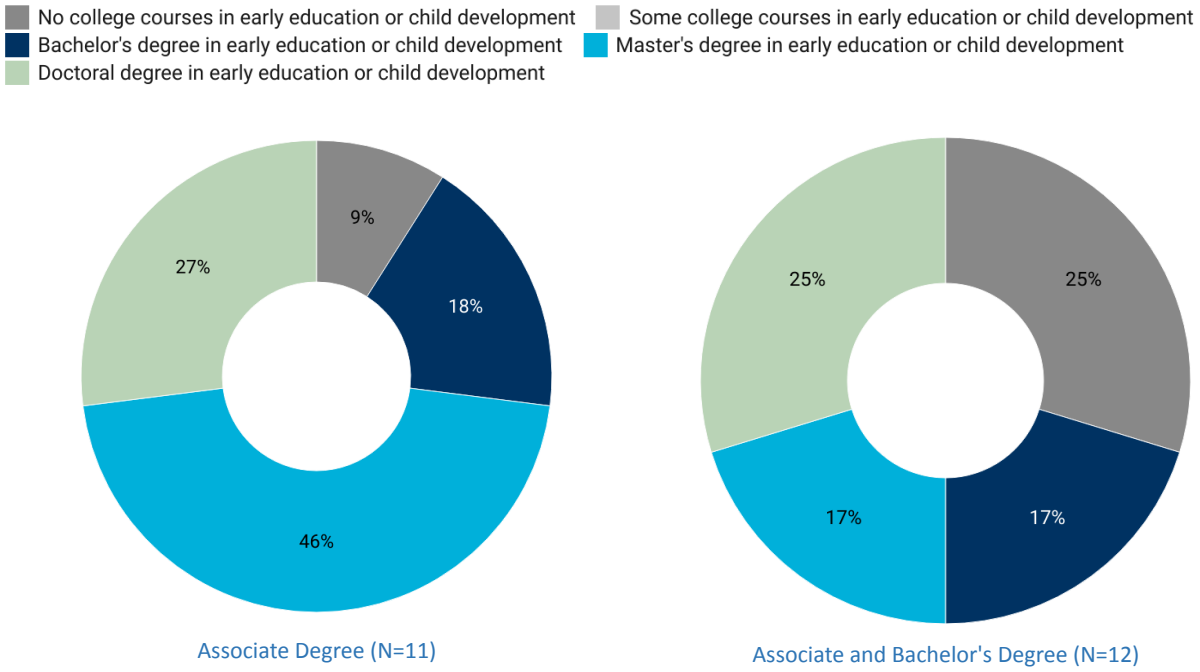
Academic and Professional Background

Like those who teach children, teachers of adults 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 increasingly are called upon to be effective practitioners, preferably having had classroom experience with children in the past decade (NCATE, 2010a & 2010b).

Academic Preparation and Teaching Focus Related to Early Childhood

Faculty members across degree levels had a mix of preparation and teaching focus related to early childhood. Almost all faculty members (91 percent) who teach only in associate degree programs had earned at least a bachelor's degree in early childhood education or child development. Faculty members teaching in other degree program levels were more likely to have no college courses or some college courses in early childhood education (see **Figure 20**). Faculty members teaching in *both* bachelor's *and* graduate degree programs were most likely (43 percent) to have earned a doctoral degree in early childhood education.

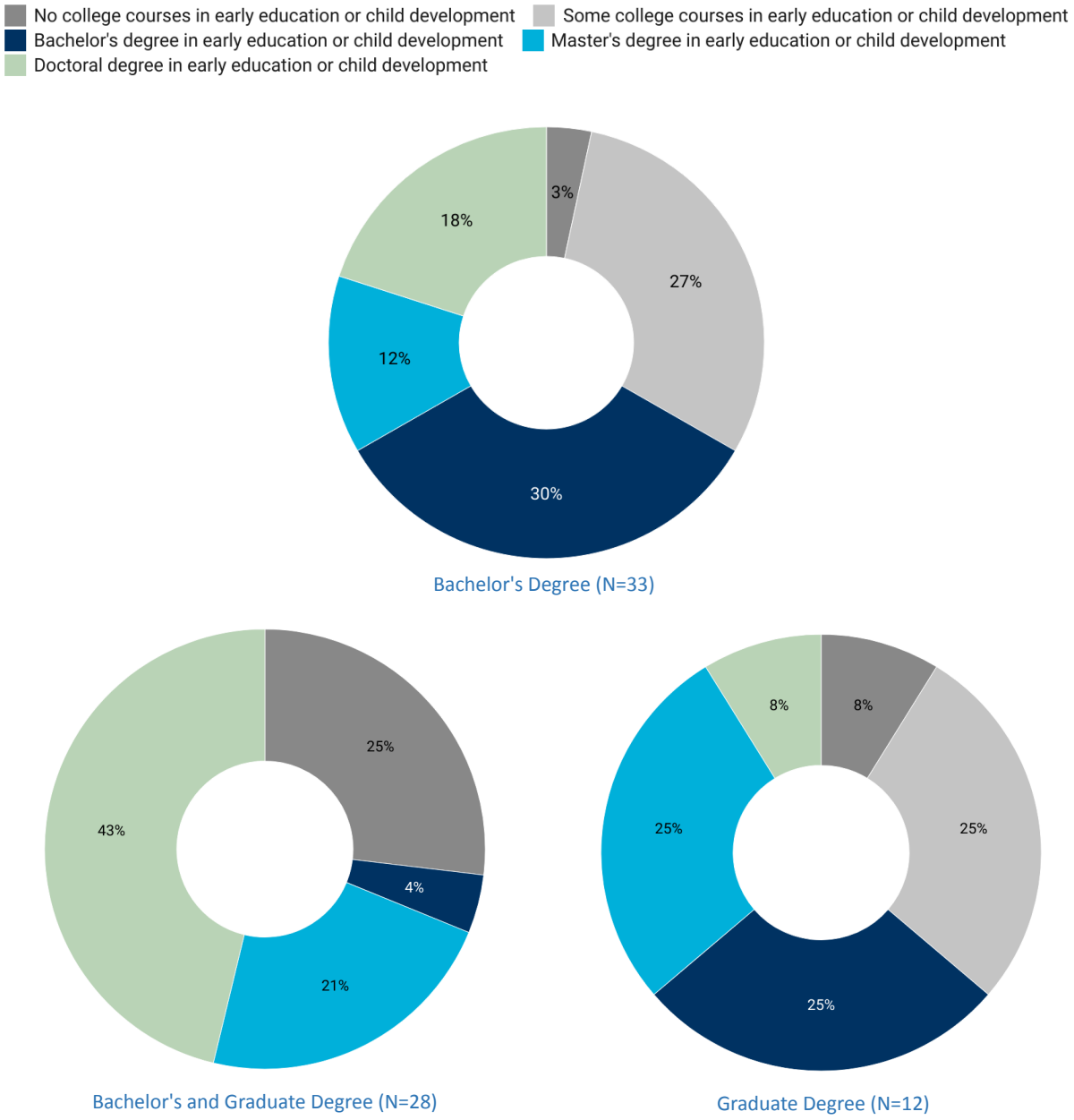
FIGURE 20. PERCENTAGE OF FACULTY MEMBERS ATTAINING DEGREES OR COMPLETING COURSEWORK IN EARLY CHILDHOOD EDUCATION OR CHILD DEVELOPMENT



Associate Degree (N=11)

Associate and Bachelor's Degree (N=12)

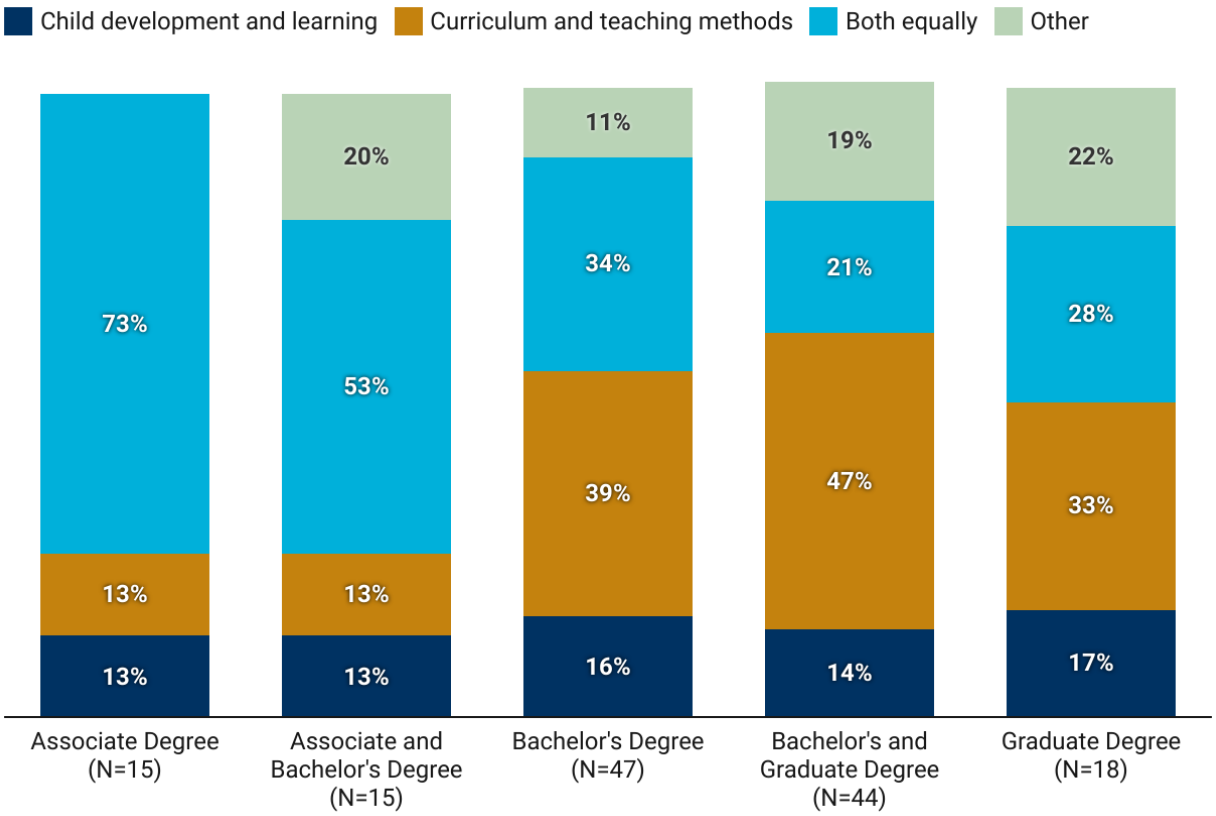
FIGURE 20. PERCENTAGE OF FACULTY MEMBERS ATTAINING DEGREES OR COMPLETING COURSEWORK IN EARLY CHILDHOOD EDUCATION OR CHILD DEVELOPMENT (CONTINUED)



Source: Center for the Study of Child Care Employment, University of California Berkeley

In terms of the content of the coursework they are currently teaching, 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." Faculty members teaching in bachelor's and graduate degree programs were most likely to focus on "curriculum and teaching methods," while faculty members teaching in associate degree programs were most likely to focus equally on "curriculum and teaching methods" and "child development and learning" (see **Figure 21**).

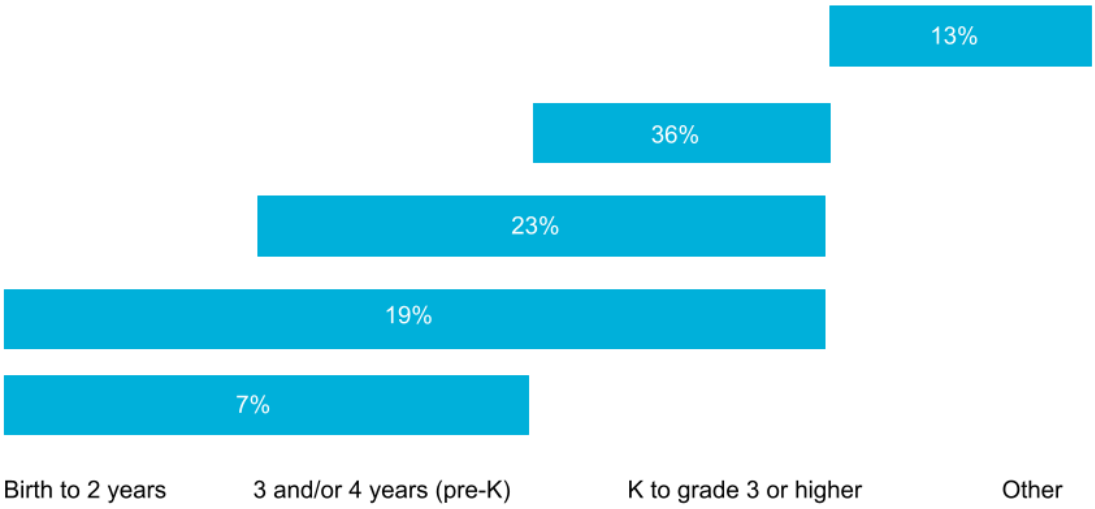
FIGURE 21. PRIMARY FOCUS OF TEACHING, BY DEGREE LEVEL



Source: Center for the Study of Child Care Employment, University of California Berkeley

Faculty were also asked about the age and development spans that represent their primary expertise. Faculty members were most likely to report that their primary expertise was with children beginning in kindergarten. Only 26 percent of faculty noted expertise with infants and toddlers (see **Figure 22**).

FIGURE 22. PRIMARY AGE-GROUP EXPERTISE OF FACULTY MEMBERS PARTICIPATING IN THE PENNSYLVANIA INVENTORY



N=129

Source: Center for the Study of Child Care Employment, University of California Berkeley

Professional Teaching and Administrative Experience

About one half (52 percent) of faculty members across all degree levels reported experience in other professional roles over the past 10 years, with associate degree faculty members significantly more likely than all other faculty to have held additional roles (82 percent). Of those faculty members who reported having worked in other roles, approximately one quarter (23 percent) had worked as ECE professional development providers (e.g., coach, mentor, trainer, consultant). Additionally, 23 percent of faculty members across all degree levels had worked as classroom teachers. Overall, experiences with classroom teaching and providing professional development were most likely to have occurred with children in grade 4 or higher.

Finding Five: Faculty Perspectives and Expertise

Pennsylvania early childhood degree faculty were more likely to consider incorporating inclusive classroom content compared to other course content. In general, faculty members were more likely to report feeling that content areas were "very important" for teachers working with school-age children. Across content areas, faculty members reported feeling least capable of preparing teachers to work with infants/toddlers, as compared to older children. Pennsylvania early childhood degree program faculty reported particular interest in professional development related to working with children from diverse cultural backgrounds and children with disabilities, as well as techniques for engaging families.

What we asked faculty members:

Individual faculty members were asked to indicate:

- Their perspectives on including various domains of development and learning in teacher preparation programs (see **Box 3**);
- Their capacity to teach certain content;
- Recent teaching experiences; and
- Professional development in which they had participated and topics in which they were interested in gaining additional knowledge.

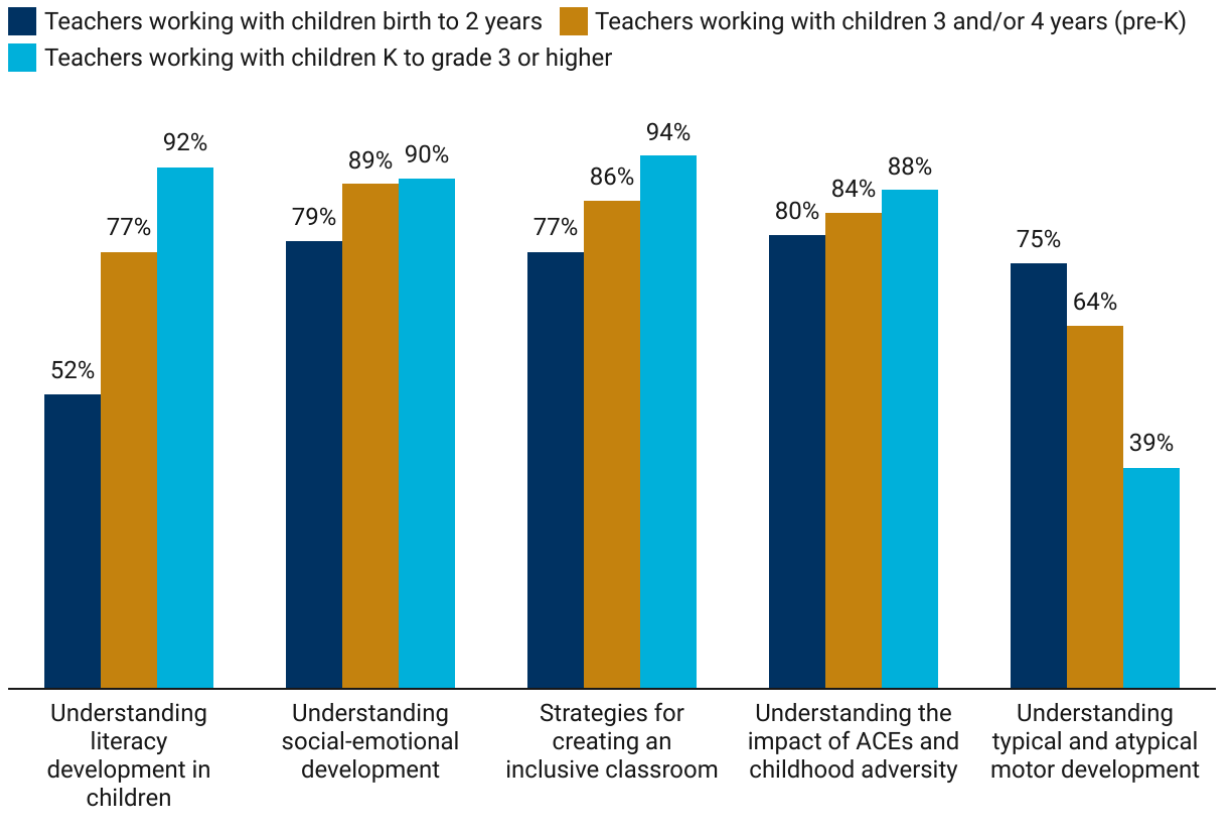
Faculty members' perspectives on the importance of including particular domains of development and assessment of their own teaching capacity are likely to affect their intent or commitment to include specific content in coursework (Hyson et al., 2012). Knowledge about faculty members' capacity to teach certain content areas and their own ongoing 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 topics and domains of content for teachers working with infants and toddlers, preschool-age children, and school-age children (see **Box 3** for a description of how we gathered this information). Content on strategies for creating a classroom environment and implementing teaching strategies that are inclusive and respectful was rated as "very important" by the highest percentage of faculty members. The vast majority of faculty

members (76 percent or more) rated this domain as “very important” for teachers of all three age groups. In general, a higher percentage of faculty members rated the domains as “very important” more often for teachers of older children, as compared with teachers of younger children (see **Figure 23**). The only exceptions were the domains of “understanding typical and atypical motor development in young children and its relationship to learning and how to facilitate their motor skills” and the domain of “understanding and implementing an integrated strategy to engage families in ongoing and reciprocal partnerships and its relationship to outcomes for children,” in which faculty members’ attitudes were inversely correlated with child age.

FIGURE 23. IMPORTANCE OF INCLUDING SELECT TOPICS IN TEACHER PREPARATION PROGRAMS: PERCENTAGE OF FACULTY MEMBERS REPORTING "VERY IMPORTANT," BY AGE GROUP



N=115

Source: Center for the Study of Child Care Employment, University of California Berkeley

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 early childhood degree 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 topics and domains for preparing teachers of 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
Social-Emotional Development	Understanding social-emotional development, its relationship to learning, and how to support children's social-emotional 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
STEM	Supporting children's STEM (science, technology, engineering, and math) development and 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
Dual Language Learners	Supporting the cognitive and social development of young dual language learners

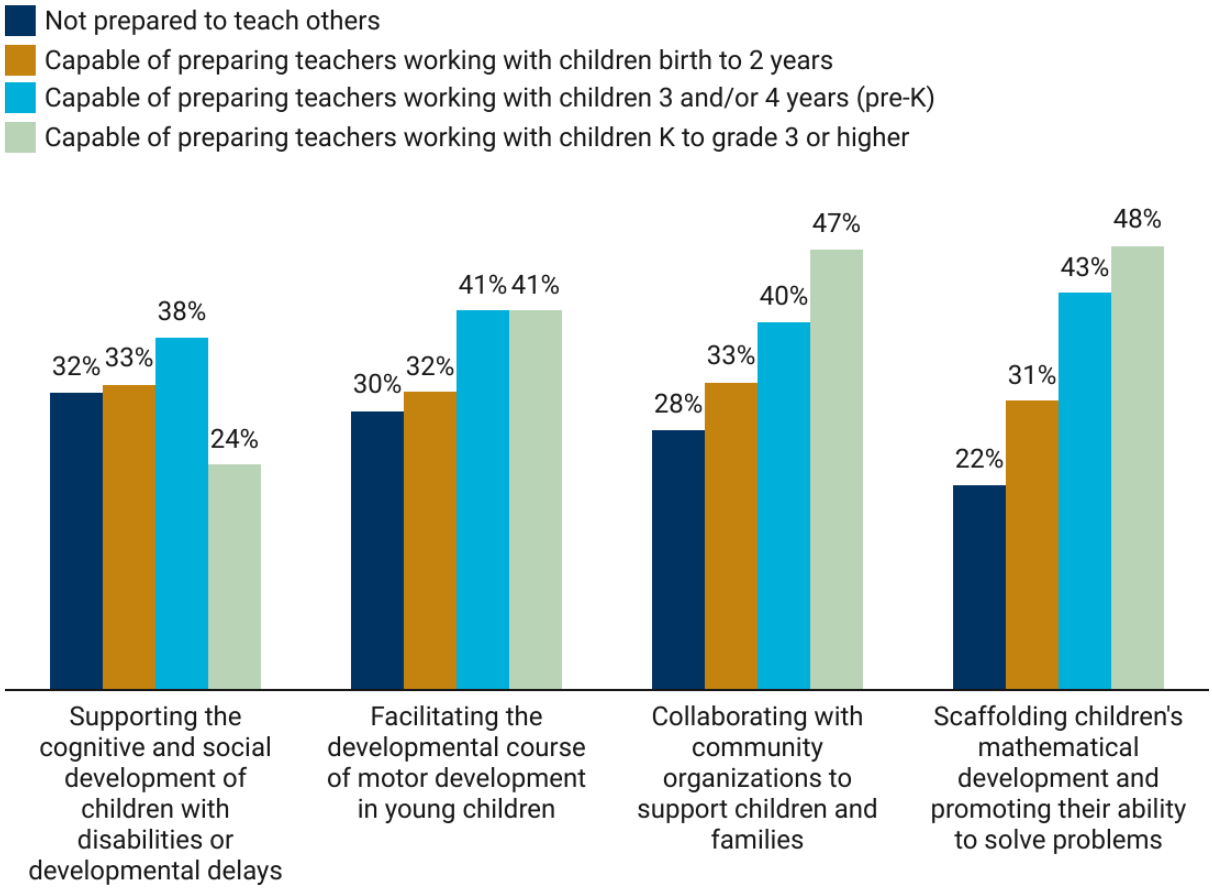
Children With Disabilities	Supporting the cognitive and social development of children with disabilities or developmental delays
Inclusive Classroom	Understanding strategies for creating a classroom environment and implementing teaching practices that are inclusive, respectful, and culturally responsive
ACEs and Trauma	Understanding the impact of adverse childhood experiences (ACEs) and trauma on children's development

Capacity to Teach Content

For each of the 13 development and learning 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.

FIGURE 24. FACULTY MEMBERS' CAPACITY TO TEACH SELECT CONTENT AREAS, BY AGE GROUP



N=135-138

Source: Center for the Study of Child Care Employment, University of California Berkeley

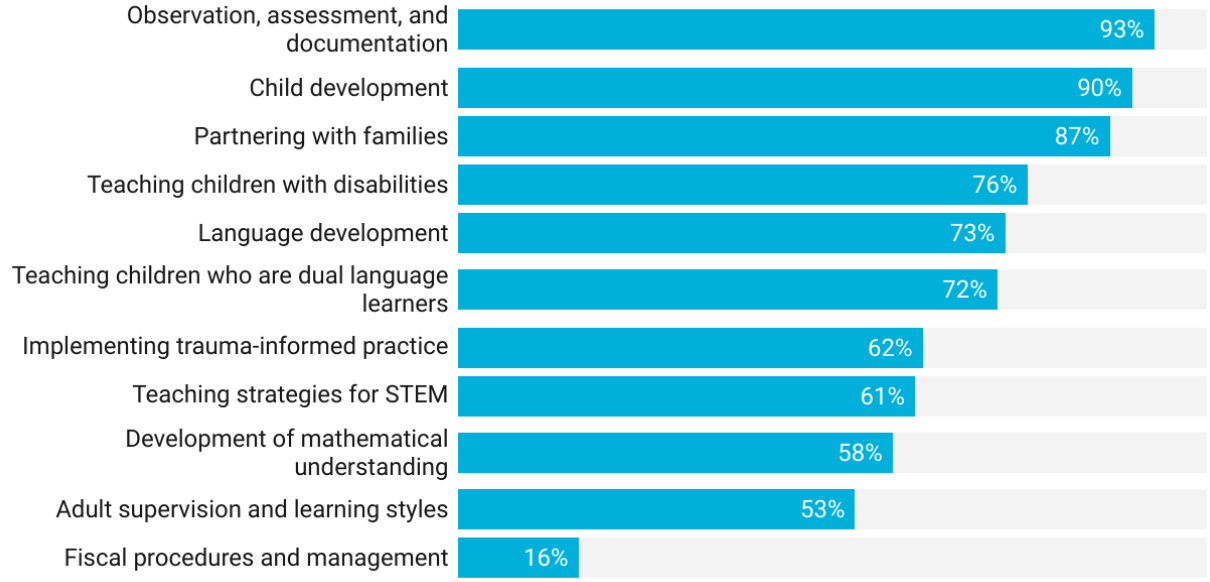
For each topic, at least 68 percent of faculty members across all degree levels reported feeling capable of teaching content to students in at least one age group, with the exception of "supporting children's STEM (science, technology, engineering, and math) development and skills," in which 46 percent of faculty reported either having limited familiarity or feeling knowledgeable, but not prepared to teach others (see **Appendix C** for a complete list of faculty members' teaching capacity). In general, faculty members were most likely to feel capable of preparing teachers to work with school-age children.

Across degree programs, faculty members reported feeling least capable of preparing teachers to work with infants and toddlers. The topics that faculty across all degree levels felt the least capable of teaching were "supporting the cognitive and social development of children with disabilities or developmental delays," "facilitating the developmental course of motor development in young children," and "collaborating with community organizations to support children and families" (see **Figure 24**).

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 these content areas either as a separate course, embedded within a broader course, or both (see **Figure 25**). Nearly all the faculty members participating in the Inventory reported teaching content related to "observation, assessment, and documentation to inform teaching and learning" (93 percent) and "general domains of child development" (90 percent). Faculty members were least likely to report having taught courses related to "fiscal procedures and management" (16 percent) and "adult supervision and learning styles" (53 percent). Faculty members reported that topics listed in the Inventory were most likely taught within a broader course, as opposed to being a separate course.

FIGURE 25. RECENT TEACHING EXPERIENCE: PERCENTAGE OF FACULTY MEMBERS WHO HAVE TAUGHT CONTENT AREA IN PAST TWO YEARS



N=105-111

Source: Center for the Study of Child Care Employment, University of California Berkeley

Professional Development: Participation and Interest

Nearly all faculty members (99 percent) across all degree levels reported participating in professional development during the past three years, with opportunities related to family engagement as the most frequent topic (between 95 and 100 percent). Outside of family engagement, the most frequently reported professional development topics included "teaching practitioners to work with children from diverse backgrounds" (80 percent), "teaching practitioners to work with children who have experienced trauma" (76 percent), and "teaching practitioners to work with children with disabilities" (69 percent). Faculty members were least likely to have participated in professional development related to early mathematical development; only 44 percent of faculty members across all degree levels had participated in professional development on any of the topics related to early math in the past three years. Additionally, only 53 percent of faculty members across all degree levels had participated in professional development on any topic 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 26** for some examples). The most commonly identified topics focused on teaching practitioners to work with specific groups of children (e.g., children from diverse cultural backgrounds, children with challenging behaviors, children who have experienced trauma), as well as teaching practitioners to effectively engage families. Across all degree levels, interest was low in professional development topics related to administration and leadership and those involving teaching skills and assessment.

FIGURE 26. PERCENTAGE OF FACULTY MEMBERS VERY INTERESTED IN PROFESSIONAL DEVELOPMENT RELATED TO DIVERSE CHILD POPULATIONS, BY SELECT TOPICS



N=102

Source: Center for the Study of Child Care Employment, University of California Berkeley

While professional development participation was nearly universal among faculty members, many experienced challenges with participating after the onset of the COVID-19 pandemic. Nearly one half (45 percent) of the faculty members who participated in the Inventory shared that they had difficulty finding time to participate in professional development since March 2020. About one third (30 percent) had difficulty finding time to participate in professional development prior to the COVID-19 pandemic.

Many of the degree programs participating in the Inventory focus their faculty training and professional development opportunities on conference attendance and pedagogical training. Many of the faculty members interviewed shared that their academic departments provide annual funds for conferences and that in-person trainings are largely focused on improving pedagogical skills and are not content-specific. By far, training and professional development on racial and social justice dominated the types of opportunities available to faculty.

> *"[We attend] local and state conferences [...] if approved by the university.... We also have an internal group [...] that works to continue to improve educational practice at the university. They present twice a year, at least full-day things with different strategies and different content for all of the faculty."*
>
> — Full-Time Professor

> *"We have a wonderful diversity head. She does a tremendous job of engaging faculty and students in cultural sensitivity and diversity training. We have a huge social justice response in our community college."*
>
> — Associate Professor

Part 4: Early Childhood Higher Education Program Commitments

This section examines to what extent institutes of higher education are prepared/equipped to support students with degree completion or articulation as well as institutional challenges.

Finding Six: Supporting Students

Pennsylvania early childhood degree programs offer multiple types of support services specifically tailored to help early childhood education students access resources and strengthen their academic skills. Associate degree programs are more likely than bachelor's degree programs to offer blended programs (combining online and in-person courses) as well as other access supports such as alternative class schedules and classes in community locations. Across all degree levels, programs provide little academic support for students and even less support specifically for adult English-language learners. Although most degree programs participating in the Inventory reported having an articulation agreement with at least one other college or university, inconsistent articulation was reported as a challenge by the majority of programs.

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 hail from underrepresented linguistic and/or ethnic groups, and may also be parents of children who are school age or younger (Sakai et al., 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 and increase educator qualifications, 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 et al., 2010; Kipnis et al., 2012; Sakai et al., 2014; Whitebook et al., 2013).

What we asked about services offered to students:

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

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

Services Offered

Program leads were asked whether a range of services were *specifically* tailored for early childhood education 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 early childhood education students had access to dedicated academic counseling to help them plan a course of study that met specific early childhood education certification/licensing requirements. The services offered by degree programs ranged by type of services and degree level.

Skill Support

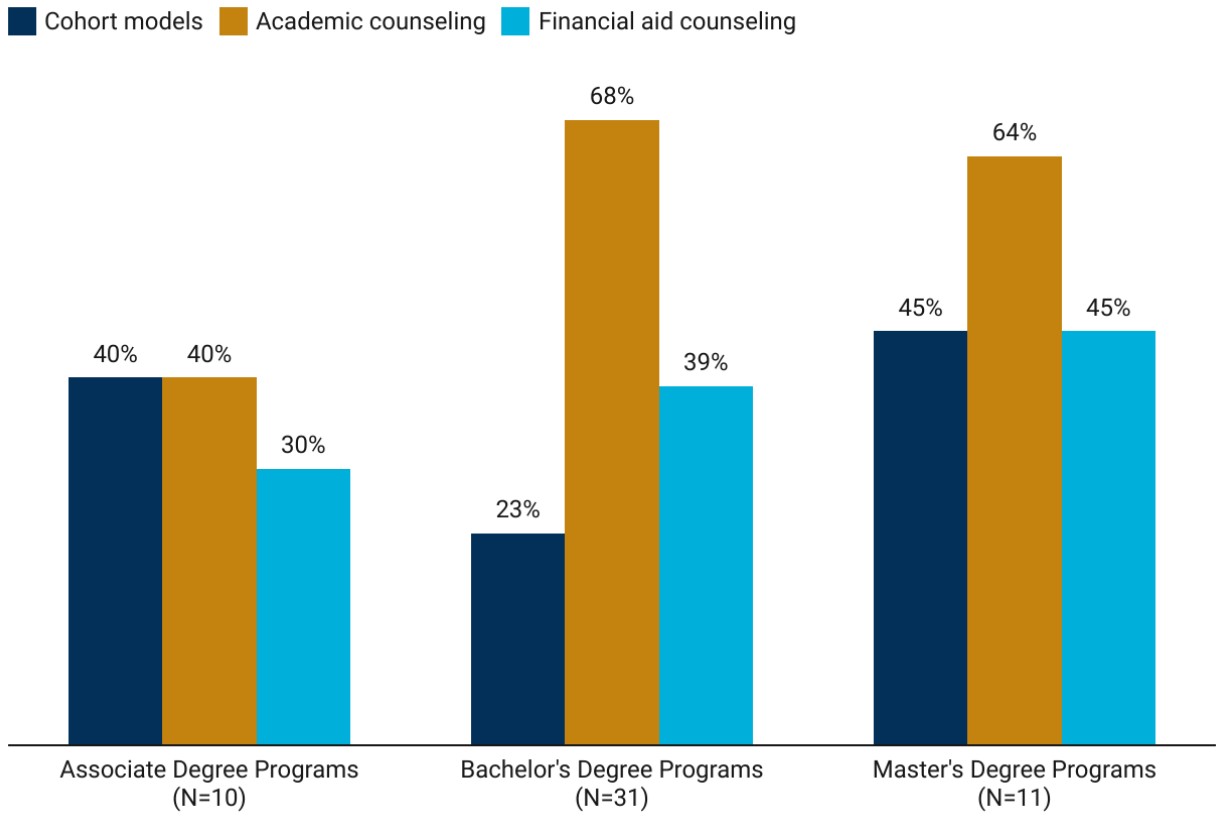
Across all degree levels, approximately 48 percent of programs offered academic tutoring for early childhood education students in math, 50 percent offered tutoring in reading and writing, and 40 percent offered tutoring in other subject areas. Additionally, fewer than one third (29 percent) of programs provided academic assistance for students who are English-language learners, and 21 percent provided training in computers and technology. For each of these five topics, the percent of programs that offered the service was greater for bachelor's degree programs than for associate and master's degree programs.

Counseling and Cohort Models

About one third (31 percent) of degree programs reported offering cohort models tailored to students in the degree program (see **Figure 27**), although associate and master's degree programs were significantly more likely than bachelor's degree programs to do so. Slightly

more than three fifths (62 percent) of programs across all degree levels reported offering tailored academic counseling. Fewer programs offered financial aid counseling: slightly more than one third (38 percent) of programs across all degree levels offered this service specifically dedicated to their early childhood education students, with master's degree programs more likely to do so than associate and bachelor's degree programs.

FIGURE 27. COUNSELING AND COHORT MODELS AVAILABLE TO EARLY CHILDHOOD EDUCATION STUDENTS, BY DEGREE LEVEL



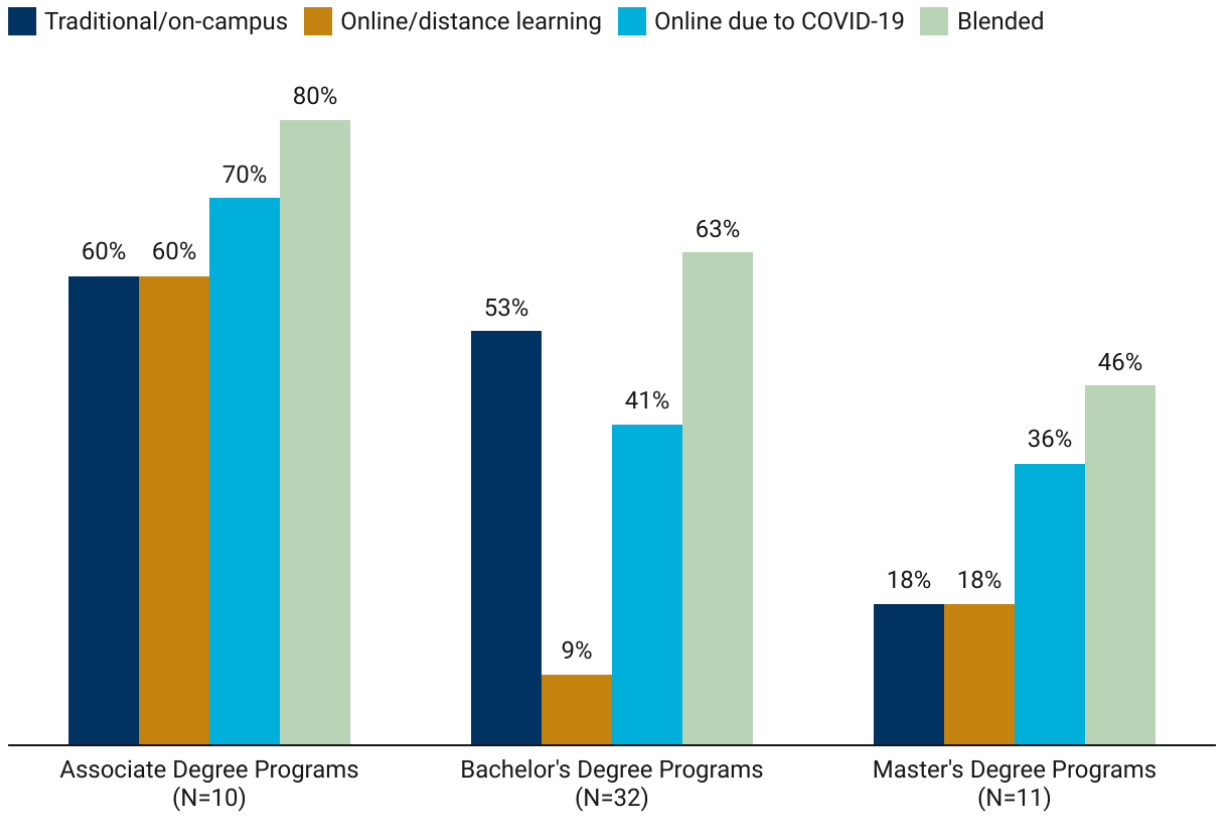
Source: Center for the Study of Child Care Employment, University of California Berkeley

Access Support

As previously noted, surveys were completed in the fall of 2020 at a time when some colleges and universities were first transitioning away from virtual learning in Pennsylvania. We asked program directors to indicate what typical formats their programs follow and how that changed due to the COVID-19 pandemic. Associate degree programs were more likely to offer formats other than (or in addition to) traditional/on-campus programs. The

vast majority (80 percent) of associate degree programs and the majority (62 percent) of bachelor's degree programs offered a "blended" program (combining online and in-person courses), compared to fewer than one half (46 percent) of master's degree programs. All degree levels reported higher frequency of offering coursework online due to the COVID-19 pandemic (see **Figure 28**). Several program leads reported that instruction during the fall of 2020 offered a mix of synchronous and asynchronous coursework or students and instructors were given the choice of format.

FIGURE 28. DEGREE PROGRAM FORMAT, BY DEGREE LEVEL



Source: Center for the Study of Child Care Employment, University of California Berkeley

Fewer than one half (46 percent) of programs across all degree levels offered financial assistance other than federal financial aid to early childhood education students. One half (50 percent) of associate degree programs offered alternative class schedules for working adults; bachelor's (23 percent) and master's degree programs (36 percent) were less likely to report these alternative schedules. Only 20 percent of associate degree programs reported offering classes off campus in community-based settings, and none of the bachelor's or master's degree programs responding to the Inventory offered classes in community-based settings.

Articulation

What we asked about articulation:

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

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

Seventy percent of Pennsylvania's early childhood bachelor's degree programs reported that the majority of their students entered their programs as first-year students, while 10 percent of programs noted that the vast majority of their students began as transfer students. While all associate degree programs reported articulation agreements with one or more bachelor's degree program, one quarter (26 percent) of bachelor's degree programs had no such agreements. Furthermore, one fifth of program coordinators for bachelor's degree programs did not know whether they had an articulation agreement with an associate degree program. Notably, more than one half (54 percent) of programs across both associate and bachelor's degree levels reported that students face challenges in transferring their associate degree credits into bachelor's degree programs.

To support matriculation and student success, some states and institutions throughout 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 et al., 2012).

In Pennsylvania, early childhood associate degree programs are 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. A majority (70 percent) of associate degree programs offer these credentials and accept credentials earned at other institutions or professional development providers. However, one third (33 percent) of bachelor's degree programs do not currently offer or accept these credentials.

Finding Seven: Program Challenges

Pennsylvania early childhood degree programs experience challenges related to the time and resources faculty members require to fulfill their responsibilities, as well as the need for faculty members with specific expertise, such as teaching dual language learners. The majority of program leads indicated that the low pay of the ECE field has led to challenges in recruiting and retaining students.

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

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

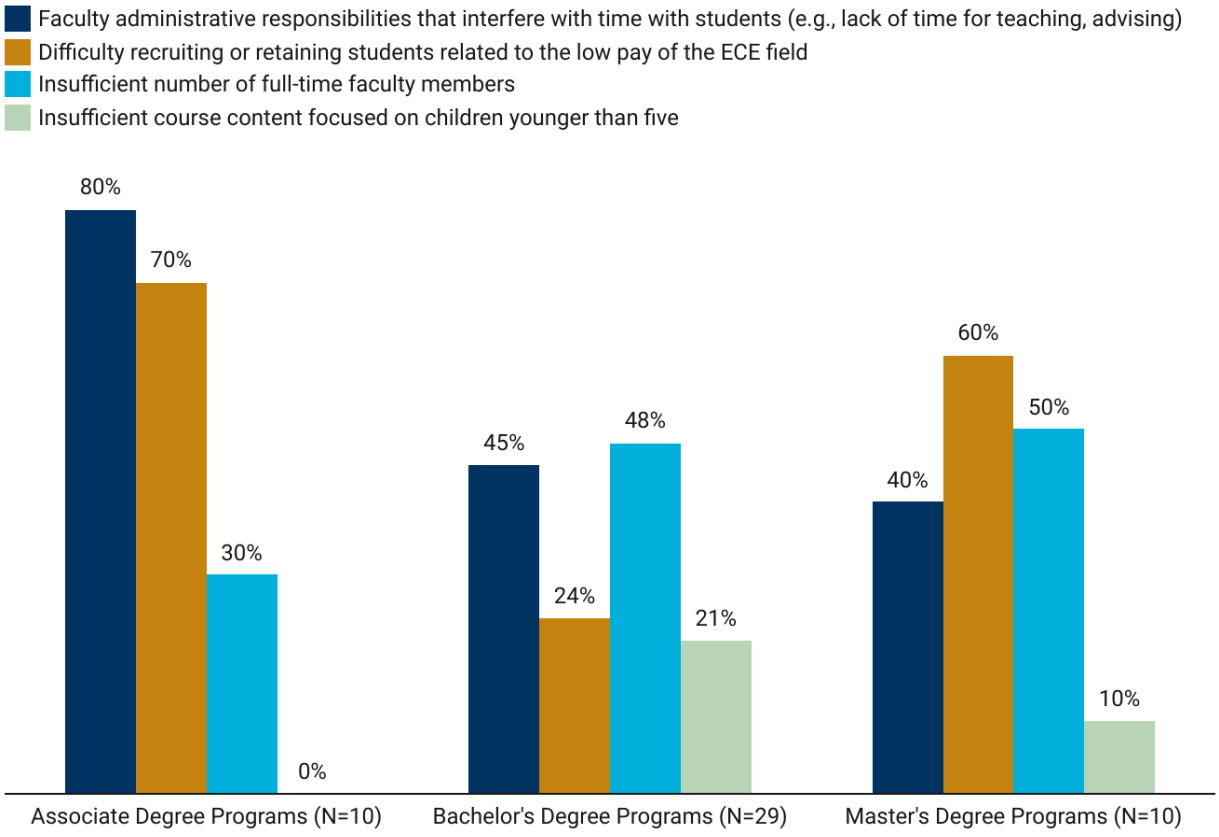
Faculty-Related Challenges

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

Approximately one half (51 percent) of degree program leads indicated that "faculty administrative responsibilities interfere with student time," with associate degree programs more likely to report this issue as a challenge than bachelor's or master's degree programs (see **Figure 29**).

FIGURE 29. SELECT CHALLENGES FACING DEGREE PROGRAMS, AS REPORTED BY PROGRAM LEADS PARTICIPATING IN THE PENNSYLVANIA INVENTORY

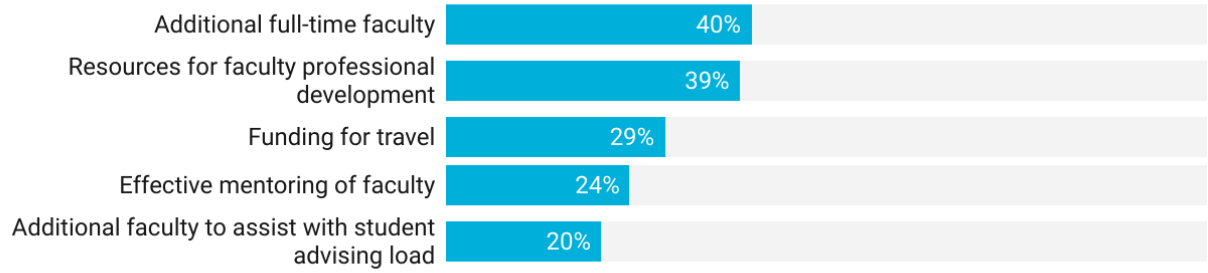


N=49
Source: Center for the Study of Child Care Employment, University of California Berkeley

Among faculty members, the most commonly identified challenges were the need for more resources for faculty professional development and travel and the need for more full-time faculty (**Figure 30**). Most of the study participants reported that professional development

activities are driven by individual faculty members and that most departments place few requirements on the training or professional development opportunities faculty members must pursue. Beyond this, some of the degree programs offer little-to-no access to professional development. Adjunct professors in particular felt isolated and far removed from any professional development efforts.

FIGURE 30. FACULTY-RELATED RESOURCES NEEDED TO IMPROVE EARLY CHILDHOOD DEGREE PROGRAMS, AS REPORTED BY FACULTY MEMBERS PARTICIPATING IN THE PENNSYLVANIA INVENTORY



N=130
Source: Center for the Study of Child Care Employment, University of California Berkeley

> *"The college does not mandate that we go to any specific training. It's up to our discretion.... My administration doesn't necessarily say I need to do any [training]. I do this for my own personal edification."*
>
> — Assistant Professor

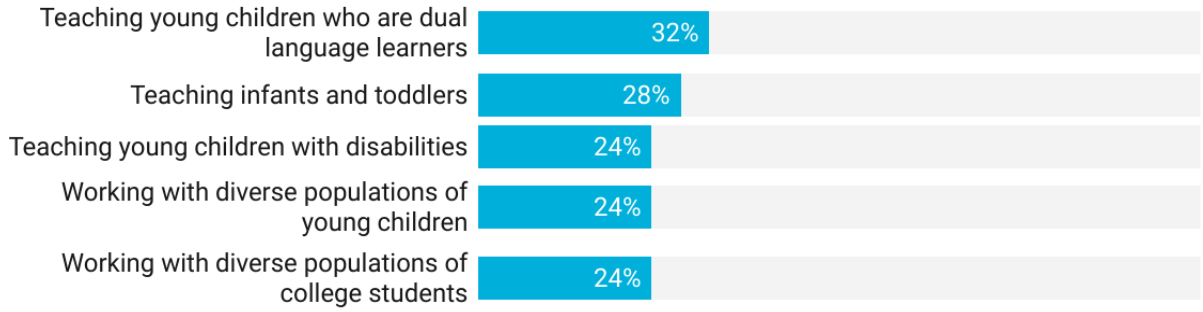
> *"Not a whole lot [of professional development opportunities exist]. It is unfortunate.... You're almost in your own little microcosm teaching your own subject area. And every once in a while you find out what other people are doing."*
>
> — Adjunct Professor

Faculty Expertise

Many degree programs participating in the Inventory lack faculty with expertise in the birth-to-age-three (B-3) span. Some programs do not employ even a single faculty member with such expertise, while others report they would likely not rehire B-3 experts if their current faculty experts left the department. Among needs related to faculty expertise, the

highest percentage (32 percent) of program leads across all degree levels indicated the "need for additional faculty expertise in teaching young children who are dual language learners" (see **Figure 31**). The second most frequently cited topic related to the need for greater faculty expertise was "additional faculty expertise in teaching infants and toddlers" (28 percent). One third of bachelor's degree program leads indicated that there was no need for greater faculty expertise, although faculty teaching in bachelor's degree programs were less likely to report feeling capable of preparing teachers to work with children from birth through pre-K than preparing teachers to work with children in kindergarten and higher.

FIGURE 31. ADDITIONAL FACULTY EXPERTISE NEEDED TO SUPPORT DEGREE PROGRAM GOALS, AS REPORTED BY PROGRAM LEADS PARTICIPATING IN THE PENNSYLVANIA INVENTORY



N=50

Source: Center for the Study of Child Care Employment, University of California Berkeley

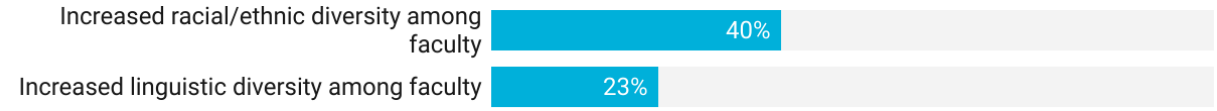
> *"[B-3] is just not in their wheelhouse.... I don't know how many full-time, tenured people would stretch themselves enough to learn the [B-3] content and do it well. I could just hear them saying, 'This is not what I do.'"*
>
> — Adjunct Professor

Faculty Diversity

Across degree programs, a greater percentage of faculty members reported the need for increased racial/ethnic diversity among faculty (40 percent) than the need for increased linguistic diversity among faculty (23 percent; see **Figure 32**). About two thirds (62 percent)

of faculty members teaching in both associate and bachelor's degree programs identified the need for increased racial/ethnic diversity among faculty, compared to 21 percent of associate-degree-only faculty, 12 percent bachelor's degree faculty, 26 percent bachelor's and graduate degree faculty, and 13 percent of master's-degree-only faculty. A similar proportion (62 percent) of associate/bachelor's degree faculty also noted the need for increased linguistic diversity among faculty.

FIGURE 32. DIVERSITY-RELATED NEEDS AMONG FACULTY, AS REPORTED BY FACULTY MEMBERS PARTICIPATING IN THE PENNSYLVANIA INVENTORY



N=127

Source: Center for the Study of Child Care Employment, University of California Berkeley

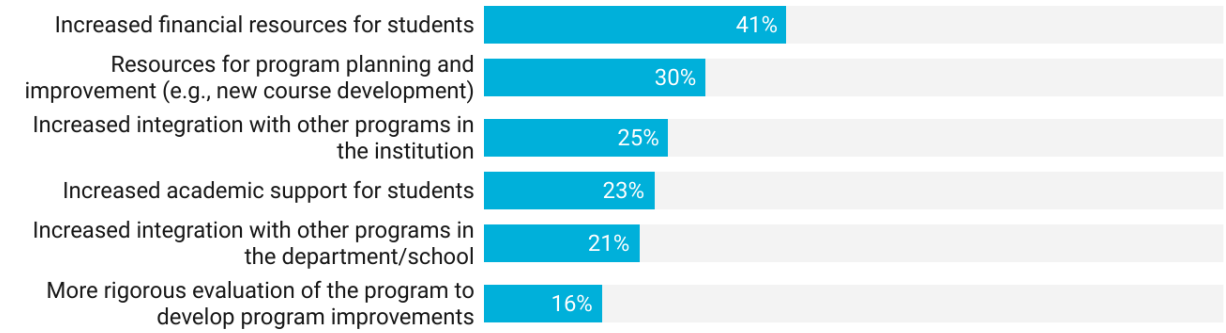
Program-Related Challenges

In addition to the faculty-related challenges noted above, an "insufficient number of full-time faculty" was identified as a challenge by 45 percent of program coordinators. Furthermore, two fifths (41 percent) of program leads across degree levels reported "difficulty recruiting and retaining students related to the low pay of the ECE field" (see **Figure 29**).

> *"I can tell you that in the past few years… nobody wants to work with children under the age of kindergarten. Not really. And that's an economic issue because they just don't make what teachers in the big schools make."*
>
> — Adjunct Professor

Among faculty members, about two fifths of faculty members across all degree levels identified "additional full-time faculty" and "resources for faculty professional development" as a need (40 percent and 39 percent, respectively; see **Figure 30**). Other frequently reported issues among faculty were "increased financial resources for students" (41 percent; see **Figure 33**) and "increased racial/ethnic diversity among faculty" (40 percent; see **Figure 32**).

FIGURE 33. ADDITIONAL RESOURCES NEEDED FOR PROGRAM IMPROVEMENT, AS REPORTED BY FACULTY MEMBERS PARTICIPATING IN THE PENNSYLVANIA INVENTORY



N=127

Source: Center for the Study of Child Care Employment, University of California Berkeley

Many of the institutions of higher education participating in the Inventory are facing severe financial challenges, which have led to reductions in faculty, requests for faculty to do more work for less pay, and on a larger scale, Pennsylvania's State System of Higher Education (PASSHE) redesign. Even universities that have addressed student enrollment decreases are finding it difficult to achieve financial stability.

> *The college really is not in a position to hire a lot of faculty. They've had some financial struggles in the last couple of years. That's why they rely on us [adjunct professors].... [L]ast semester they asked if we would give a donation in-kind and teach a class with no pay. And we did."*
>
> — Adjunct Professor

> *"At this point, we don't have enough students to warrant [more faculty]. We have three full-time positions, and the rest of our faculty are adjuncts. It depends on how many students we have. At one point, when our program was much larger [...] we had five full-time faculty and many more adjuncts."*
>
> — Associate Professor

Many of the program leads mentioned that their programs face roadblocks to being able to prepare a solid cadre of quality early childhood educators. Some respondents noted the ongoing difficulties of attracting students to the early childhood education field, largely because of the historically low salaries. Some respondents have noticed that Pennsylvania's implementation of a teacher basic skills test has impacted the number of students attaining a teacher certification. Yet others are concerned with how prepared students really are to teach in the classroom.

> *"[The new university] administration is trying to increase their [student] enrollment. And so what they're promising graduate students is that they could go to school full-time and continue to work full-time and get their master's degree in a year. And it's tremendously rigorous. And what student feedback to me has been, 'They promised us this, but it's a nightmare. We can't do this.'"*
>
> — Adjunct Professor

Part 5: The COVID-19 Pandemic and Its Lasting Impact on Early Childhood Higher Education

This section highlights several significant impacts of the COVID-19 pandemic on Pennsylvania's institutes of higher education, early childhood degree programs, faculty members, and students.

The emergence of the COVID-19 pandemic in the early part of 2020 drew attention to the need for a highly prepared workforce to support children's learning, while also raising issues faced by students and faculty members operating within the practical field. Initial responses to stay-at-home orders required programs to adapt to virtual learning, with few programs previously having developed a distance-learning system. The online platforms extended to practica experiences, as well. As a result, some 2021 graduates will be entering the ECE workforce with little-to-no in-person teaching experience. As guidelines changed in the 2020-2021 academic year, institutes of higher education adapted to a range of instruction, with some returning to in-person instruction or a hybrid of virtual and in-person instruction and others remaining virtual.

At the time this study was implemented—in the Fall and Winter terms of the 2020-2021 academic year—programs had several months of adaptation to virtual learning to determine best practice for facilitating student learning. However, access to supports for early educators and faculty members varied even as the pandemic continued.

What we asked program coordinators about changes to programs due to the COVID-19 pandemic:

Program leads were asked to describe programmatic changes to degree programs as a result of the COVID-19 pandemic, including:

- Format of the degree program;
- Content offered; and
- Changes made to articulation agreements, required student assessment, certificates, or certification.

Program leads were also asked whether any changes were made to a program's implementation or structure of practicum experiences or student teaching experiences, including whether programs implemented new or innovative methods of incorporating observation of best practices.

Finally, program leads were asked to identify the most significant impacts on programs, including the following:

- Number of students enrolled; and
- Challenges facing the degree program and students.

Finding Eight: Minor Changes to Programs

Pennsylvania early childhood degree programs reported that they switched learning modality to virtual at the start of the COVID-19 pandemic and continued with this instruction type throughout the Fall 2020 term. While the modality of instruction for Pennsylvania early childhood degree programs changed at the start of the COVID-19 pandemic, participants noted that there were few-to-no changes in curriculum or requirements.

Most of the programs transitioned their instruction to either a virtual delivery format (45 percent) or to a hybrid format of virtual and in-person (62 percent) because of the COVID-19 pandemic. One fifth (21 percent) of programs had offered online or distanced opportunities prior to March 2020. Programs and faculty had to adapt coursework to a virtual platform and navigate changing policies from their institute of higher education.

> *"Halfway through the semester in the Spring [of 2020], we went fully remote. We were teaching a combination of synchronous and asynchronous Zoom classes. And then [in] the Fall semester, students were back on campus, and they remained on campus all semester, and I did a hybrid version of my courses. So, we were meeting in person a little less frequently, but we were still seeing each other for about half of the time."*
>
> — Full-Time Professor

For most of the programs, providing instruction virtually or in a hybrid format marked a major departure from traditional in-person instruction. Most faculty reported delivering instruction via distance learning (77 percent). Furthermore, some programs switched their instruction delivery formats multiple times since the onset of the pandemic, as the risk of exposure to the COVID-19 virus changed.

> *"[P]rior to the pandemic the majority [...] of our coursework was face to face.... Since the pandemic, we've had to move all that coursework to remote instruction. [W]e'll do exactly what we [are] doing here for remote coursework.... And I try to give them as robust a classroom experience as possible, but that's very, very different."*
>
> — Assistant Professor

Only Minor Changes to Curriculum

Some of the faculty shared that their programs had made no changes or only minor changes to the curriculum, despite the COVID-19 pandemic. Nearly all programs that participated in the Inventory and faculty members who were interviewed said that program requirements remained the same: students had to meet certain learning objectives regardless of teaching modality.

> *"I don't believe that anybody has altered the learning objectives for students.... It's just how you go about meeting those objectives that's different."*
>
> — Program Director

Those programs that did make changes indicated that they had added content relevant to current pandemic circumstances. Some programs integrated content on virtual learning and using technology with children as a form of instruction. One program lead shared that their program had added "more emphasis on tech tools, remote pedagogy, social-emotional effects of pandemic." Other programs added content to health, safety, and nutrition courses around pandemic policies. In addition to content relating to the COVID-19 pandemic, some programs also added social justice content as racial justice issues permeated the United States.

Most programs also shared that while the modality of instruction changed, the curriculum remained the same. Faculty relied on technology and flexibility in order to effectively meet course requirements. For courses that required an observation assignment, faculty either provided videos for students to watch and reflect on or allowed students to observe a young family member, as access to early learning settings was limited or unavailable at the time.

> *"A lot of my assignments were hands-on, what we would do and learn in the classroom, so changing that to break-out sessions or to doing groups online and just making sure everybody is doing what they need to do."*
>
> — Associate Professor

Changes to Field Experience

Reliance on Virtual Fieldwork Experiences

Most programs relied on virtual experiences to help students fulfill their fieldwork experience requirements. Only a few programs have been able to maintain components of in-person experiences and integrate them with a range of virtual experiences, including video observations and instruction, virtual simulators, and video recordings on teaching practices.

"We are seeing challenges related to experiential learning, which is integral to our program. Our courses all have a field component, and most students are watching videos rather than spending time in classrooms. For our instructional methods courses, we have faculty who have invested in buying and shipping our students sets of math manipulatives, for example, which we wouldn't typically do."

— Program Lead

"So many of our students are doing their field [work] virtually... Many of the schools are still virtual in this area, but some aren't and some are mixed. So, the students might be in person, but they have 10 students on Zoom and 10 in front of them."

— Associate Professor

"I have some videos of teachers teaching math to young children, and I'll say, 'Okay, go watch one of these videos and tell me, what do you think the objective was? What do you think the standards were? What's the assessment? How's the teacher assessing these little children in the classroom?'"

— Associate Professor

Exploring Ways to Maintain In-Person Fieldwork Experiences

Many programs have explored ways through which students can still participate in in-person fieldwork experiences, including at-home learning with young family members, outdoor experiences, after-school tutoring, interviews with current teachers, and creating activity bags for young children in school. Many programs also allowed students currently teaching in an early education setting to use this experience as their practicum or as an opportunity for practicing specific skills.

> *"I do a lot of service learning.... If I'm teaching a methods course, I'll have them go out and find somebody—it could be a family member, their own children—and they teach the concept they're learning with them, and that counts."*
>
> — Associate Professor

> *"We have some students who are actually working in early care and education. So, they're able to use those classrooms."*
>
> — Associate Professor

However, concerns remain as to what extent students are prepared to teach in-person with children. As one director of a bachelor's degree program shared, the student teaching experience "has been both pared down to fit into the new teaching paradigm and redesigned to be executed with little to no practical classroom application." While students are learning skills to design curriculum, they are offered little-to-no opportunity to apply them. This situation remains problematic for students completing practica through only virtual opportunities, as they will have little-to-no experience supporting children face to face. Furthermore, many faculty (42 percent) reported facing challenges related to supervising students in practicum and/or student teaching experiences.

> *"Students do not have hands-on field experience to practice teaching methods connected to coursework. Students do not have the same experience during pre-student teaching or student teaching."*
>
> — Program Coordinator

Students Feel the Loss of In-Person Field Placements

Many of the faculty members interviewed acknowledged that the students in their programs have struggled with the loss of in-person field placements. This shift has been significant, given the critical role such experiences play in the training and development of students' teaching skills. Programs have been unable to find field placements for all of their students, and students have noted that the lack of hands-on experience has had an impact on their teaching preparation.

"I know the students are a little disappointed in [not being in a real classroom], but we just can't find placements for all of our students. The teachers, they're overwhelmed in the districts.... We're all trying to get the same placements with the same teachers [in] the same districts. It's difficult. [The students] are missing out on that interaction in the classroom."

— Associate Professor

"Yeah, it's been hard. I had a student teacher this semester who's [a] dual major in special ed[ucation]. She has not worked in a special education classroom, ever, and she told me when student teaching started.... 'I don't know what to do. I have never worked with [children with disabilities] in a pre-K-4 setting. I don't know how to work with these kids because I haven't seen it.'"

— Associate Professor

Students Struggle With Program Changes

Although faculty members and program coordinators expressed few concerns about the quality of virtual or hybrid instruction, they also noted that students were struggling as a result of reduced in-person learning opportunities. Many faculty members reported that virtual instruction had negatively impacted the quality of the learning experience students are receiving, particularly for applied courses. In shifting courses to distance learning, faculty members have found it challenging to maintain the interaction and engagement with students that typically exists within their courses, causing faculty members to worry about how prepared students will be for future teaching experiences.

"[Students are] just not having the safe place to practice their skills. I feel like I'm turning out students who know the right answer. They're probably going to score just fine on the state test. They'll probably navigate their first year of teaching okay. But I'm not sending them out as well prepared as we were before. I'm just not."

— Associate Professor

"My students are learning the information that they need to learn. And they're figuring out how to present that and teach that in an online situation. But as you know, it's going to be different when they're face to face.... We're just missing that part of the true interaction with kids."

— Full-Time Professor

"[B]efore the pandemic, there was a lot more interaction with the students, a lot more on developing a conceptual understanding by experiences in the classroom. That's not happening now.... [T]hey're not having the experiences they need to have."

— Associate Professor

Furthermore, some faculty members shared that student learning has suffered as a result of instructional changes made in response to the pandemic. Faculty members noted concerns about content and reading comprehension causing frustration among students, as well as an uptick in student requests for one-on-one meetings with and support from their instructors.

"We had a lot of students who just seem to have some reading comprehension issues that we didn't have as many challenges with when we were face to face and we were teaching those constructivist, hands-on principles."

— Assistant Professor

"I found that I was constantly, constantly getting phone calls, requests for Zoom meetings. My office hours were always buzzing. It was just so much more work because the students needed the additional help because they weren't in the classroom."

— Adjunct Professor

Many of the faculty members interviewed noted that many students have had difficulties adapting to virtual learning, and their performance in the coursework has been affected. Some study participants spoke about students dropping out of class or even exiting the program because of their frustration with virtual learning, further exacerbating a decline in student enrollment since the onset of the pandemic.

> *"It became very difficult for some students to be able to be successful [with virtual learning]. Very difficult. We had a lot of students who became frustrated, and a lot of students who didn't complete coursework because they just felt ill-equipped to do that. And their level of frustration [...] you can see it.... [T]hen all of a sudden [students] stop coming and stop attending. And then you try to help and support. Some of them by that point, they gave up and said, 'This isn't for me anymore.'"*
>
> — Assistant Professor

While students struggled to adapt to virtual learning, one quarter (26 percent) of faculty members reported that they, too, struggled in their ability to communicate with students since the onset of the pandemic. Prior to the pandemic, only 1 percent of faculty reported communication with students as a challenge.

> *"I know a lot of my colleagues feel like they don't have the skills or the training to deliver instruction. And they feel like maybe their course engagement or connectivity with students is not the same as face to face."*
>
> — Adjunct Professor

Technical Infrastructure Issues Compounding Students' Problems

Many of the faculty members interviewed also identified technical infrastructure obstacles impeding students' virtual learning experiences. Students, especially those in rural areas, have had difficulties with distance learning because they do not have access to an Internet connection or the connection that they have is unreliable. Others, especially first-generation students, do not have computers, which are necessary for engaging in the virtual course content and completing their course tasks.

> *"I live in Northwestern Pennsylvania, in a rural area. We have more deer and trees than anything else… So just by virtue of the geography, Internet is not always stable. So that, for some of our kids, is still a barrier."*
>
> — Full-Time Professor

> *"Yes, we did have several students [who had problems accessing the online courses]. A large percentage of our students are first-generation college students. And when they went home, a lot of them were trying to access our courses and complete assignments on their cell phones. I had several students who would sit outside McDonald's or gas stations to connect because they didn't have Wi-Fi."*
>
> — Adjunct Professor

> *"It was really difficult to hear how many of our students were utilizing their cell phones to try to do coursework. The majority of students were not prepared for this. They did not have a laptop. They don't have access to a computer. They had to share a computer. Their literacy on the computer and how they navigate online course modules and what they needed to do is very limited."*
>
> — Assistant Professor

What we asked faculty about changes to programs and personal changes due to the COVID-19 pandemic:

Faculty members were asked to describe changes to their workload as a result of the pandemic, including:

- Number of courses taught;
- Modality of instruction; and
- Number of institutions at which they taught.

Faculty members were also asked whether they experienced any personal changes since the onset of COVID-19 and also whether they had any underlying medical conditions that might put them at greater risk of severe illness from COVID-19.

Finally, faculty members were asked how the role of faculty changed since Spring 2020 and whether certain roles and responsibilities were a challenge pre-pandemic or currently during the Fall 2020 instruction.

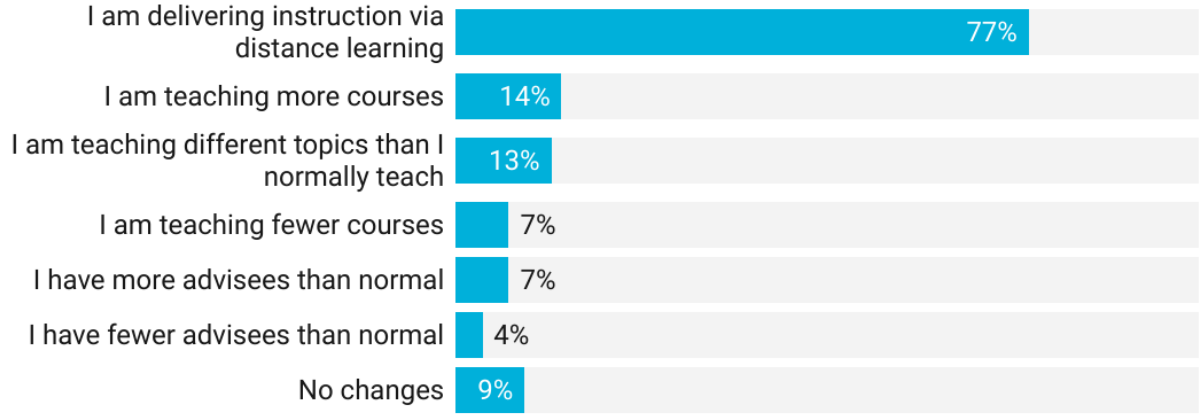
Finding Nine: Faculty Members Face Challenges Adapting

As faculty adapted traditionally in-person coursework to be implemented online, they also saw changes to other work situations. Financial strain caused some institutes of higher education to adapt by doing more with fewer investments. Faculty members were asked to what extent the COVID-19 pandemic had impacted their workload.

Faculty Members' Work Situations Remain Similar to Pre-Pandemic

Aside from changes to the modality of instruction, faculty members reported few changes to their work situation as a result of the COVID-19 pandemic. Three quarters (77 percent) of faculty members reported delivering instruction via distance learning that would have typically been in-person. Fourteen percent of faculty members noted that they taught more courses than their typical course load, and 13 percent of faculty members reported teaching different topics than they normally would teach (see **Figure 34**).

FIGURE 34. FACULTY MEMBERS' WORK SITUATION AS A RESULT OF THE COVID-19 PANDEMIC



N=140
Source: Center for the Study of Child Care Employment, University of California Berkeley

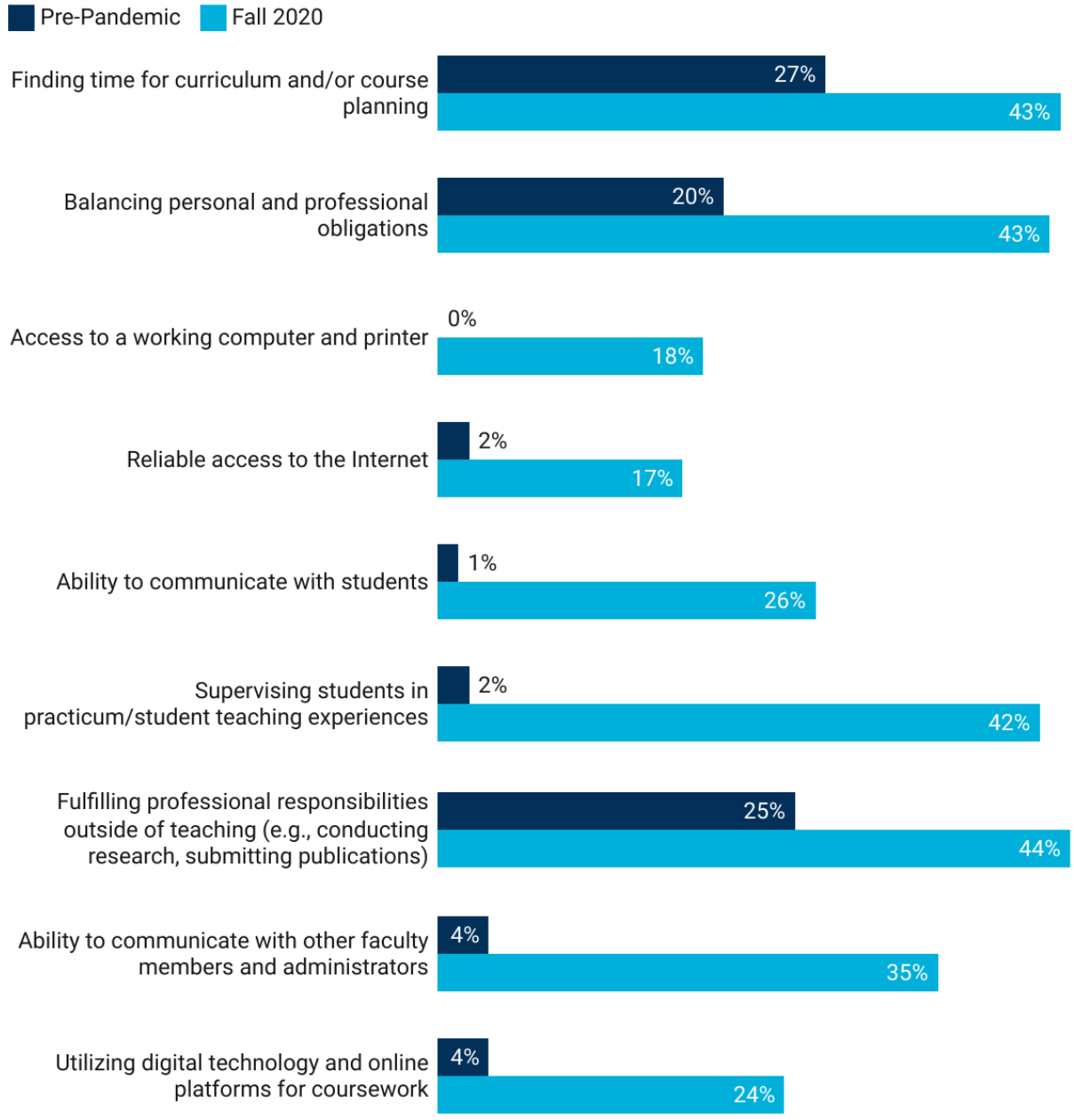
Challenges Have Increased for Faculty Members

Faculty members were asked whether certain job activities and professional obligations were challenges for them prior to the pandemic and/or during the fall of 2020, when the survey was administered. Across all items, a larger proportion of faculty members indicated that these tasks were a challenge at the time of the survey, compared to the proportion who struggled with these activities prior to March 2020 (see **Figure 35** for select topics and **Appendix C** for data on all topics). Many of the faculty members interviewed reported feeling supported by their departments and their universities during the COVID-19 pandemic, particularly related to the issue of technology and teaching remotely.

> *"[The university has] been giving a lot of opportunities for training around online instruction. I signed up for something this summer. They're doing it again this semester and over the summer. If people are interested or want training, the university is definitely making it available to everybody."*
>
> — Associate Professor

Degree programs have relied on robust information technology systems and learning platforms to support faculty members' ability to continue to teach. Nonetheless, nearly one fifth (18 percent) of faculty members reported challenges with accessing a working computer and printer, and 17 percent did not have access to reliable Internet.

FIGURE 35. SELECT CHALLENGES FOR FACULTY MEMBERS PRE-PANDEMIC AND DURING FALL 2020 INSTRUCTION



N=140

Source: Center for the Study of Child Care Employment, University of California Berkeley

Items that were more frequently reported as being a challenge prior to the onset of COVID-19 were even more likely to be seen as a challenge during the pandemic. Nearly one half of all faculty members noted the difficulty of "finding time for curriculum and/or course planning," "fulfilling professional responsibilities outside of teaching," and "balancing personal and professional obligations."

Some of the faculty members outlined the various ways in which the COVID-19 pandemic has impacted the investment of programs in their department and subsequently impacted faculty members' potential workload. Some programs have laid off faculty members, reduced their working hours, or reduced their salaries. Other institutions have frozen tenure or eliminated tenure lines. The COVID-19 pandemic also forced some faculty members into early retirement.

> *"They made one of our faculty members part-time. There have been cuts all across our university.... Some of the messages are that we have declining enrollment, which is a trend that existed before COVID, and as a result, we need to make changes. And then some of the messages are, 'Because of COVID, those changes have rapidly increased, and now the situation is dire, and we need to make changes sooner than we thought.'"*
>
> — Associate Professor

> *"[L]ast week I got an email saying they've eliminated adjuncts for budgetary reasons. And they're going to try and use the full-time people to teach all the courses that adjuncts used to teach."*
>
> — Adjunct Professor

Faculty Members Face Personal Struggles

Faculty members expressed an array of emotions about their professional and personal experiences since the onset of the pandemic. During interviews, faculty members spoke of being fearful for their personal health if they returned to in-person teaching, low morale and feelings of isolation among the campus community, and significant increases to their workloads.

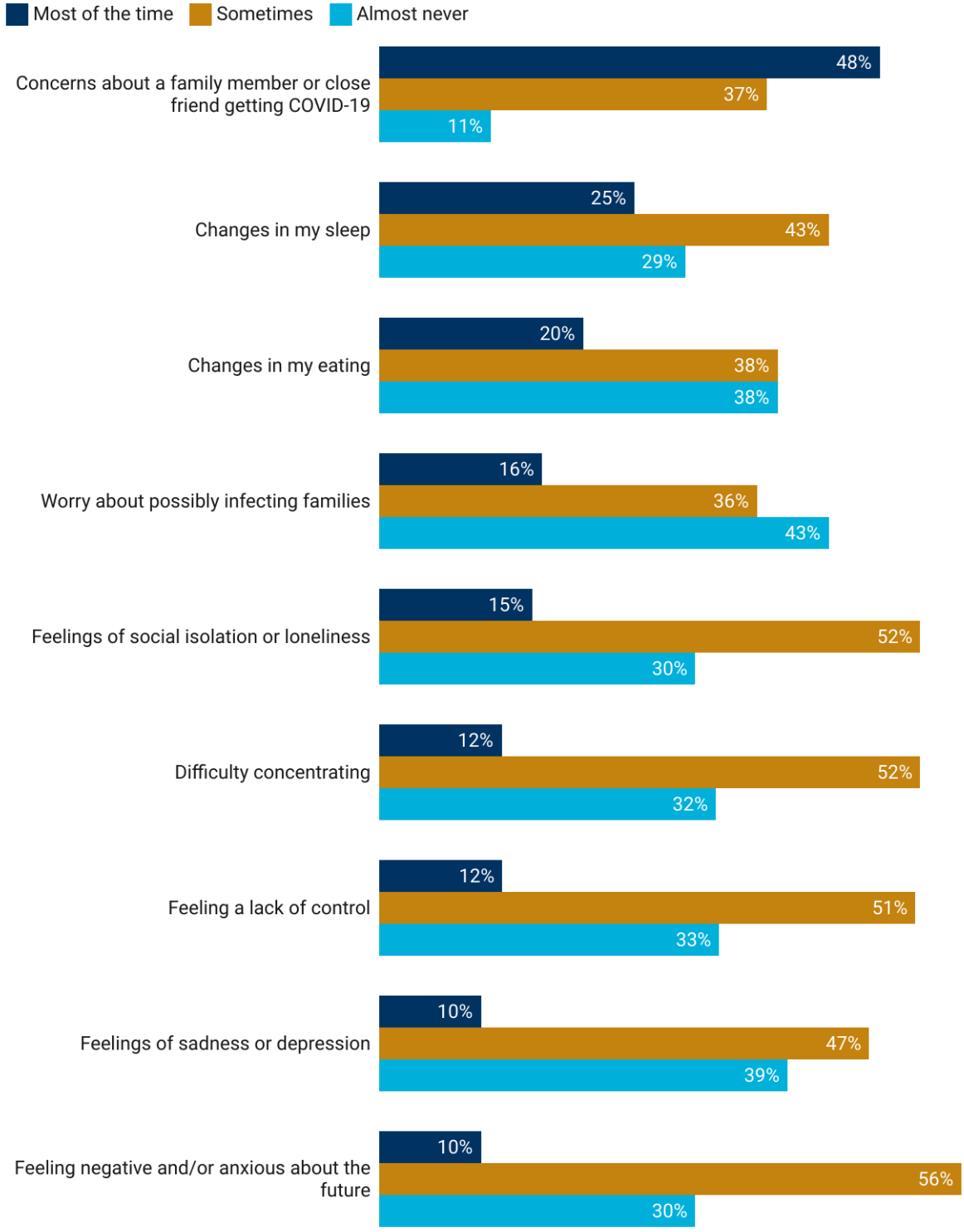
"I think some faculty would definitely say they're feeling more isolated. We tried to do an okay job of staying in contact with one another, of trying to find ways to be social and things like that."

— Adjunct Professor

The faculty survey included items about how frequently faculty members experienced personal changes during the COVID-19 pandemic, including changes to their behaviors and emotions (see **Figure 36**). One quarter of faculty reported consistent changes in their sleep habits, and more than one third (43 percent) noted sleep changes "sometimes." Overall, 58 percent of faculty members responded that they were experiencing changes to their eating habits "sometimes" or "most of the time."

Nearly one half (48 percent) of faculty members said they worried about family or close friends contracting COVID-19 "most of the time," while more than one third (37 percent) were concerned about this risk "sometimes." Two thirds (67 percent) of faculty members said they experienced feelings of social isolation or loneliness "sometimes" or "most of the time." A similar proportion (66 percent) noted feeling negative or anxious about the future "sometimes" or "most of the time" since the beginning of the pandemic.

FIGURE 36. FACULTY MEMBERS EXPERIENCING SELECT PERSONAL CHANGES AFTER THE ONSET OF THE COVID-19 PANDEMIC



N=102

Source: Center for the Study of Child Care Employment, University of California Berkeley

Individuals with certain underlying medical conditions are at higher risk for severe illness from COVID-19 (Centers for Disease Control and Prevention, 2022). Among the faculty members participating in the Inventory, 63 percent reported experiencing at least one condition listed. The most common conditions were asthma (13 percent), hypertension or high blood pressure (12 percent), or obesity (10 percent).

> *"[T]here are some faculty in my department who have underlying conditions. If we go back on campus full time in the fall, they will not be on campus in the fall.... So it's going to be a struggle in the fall if we go back face to face and COVID is still hanging around and a threat to people's health."*
>
> — Associate Professor

Discussion and Recommendations

In this final section, we outline an approach toward strengthening early childhood workforce development in Pennsylvania, 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 learning more about the depth of instruction delivered in early childhood higher education programs, ensuring that the various components be implemented in unison, and calling for a research agenda to measure progress and challenges over time. The efforts should be coordinated among key stakeholders in Pennsylvania, including the Office of Child Development and Early Learning, the Office of Postsecondary and Adult Education, and the many institutes of higher education tasked with preparing early educators in the state. The success of stakeholder efforts is 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 in the state to advance the following approach.

1. Develop a mentor teacher program to support new teachers and students

The COVID-19 pandemic significantly impacted teacher preparation, particularly hands-on experiences such as practica and student teaching. Local and state COVID guidelines restricted in-person instruction for much of the 2020-2021 and 2021-2022 school years. In response to a lack of in-person field experiences, we recommend that Pennsylvania expand its educator induction program to include non-certified early educators, or develop a mentor teacher program to support new teachers and students entering into early learning settings from birth to grade 4 (e.g., New Mexico's Early Childhood Mentor Network, California's Early Childhood Mentor Program). If expansion of the current program is not feasible, we recommend that Pennsylvania's IHEs partner with OCDEL to develop a mentor teacher program and recruit currently certified teachers who:

- Hold a bachelor's degree in early childhood education or an equivalent field;
- Have a minimum of three years of experience; and
- Are recommended by their site director/principal.

Federal relief funds may be utilized to help in the development of such a program.

2. Unify expectations 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 learning experiences. As evidence and experts identify the need to focus early childhood teacher preparation on ages prior to pre-kindergarten (IOM & NRC, 2015), Pennsylvania's inclusion of an early childhood education (pre-K-4) licensure endorsement option in their teacher credentialing system is a step in the right direction toward preparing future educators to work more effectively with students prior to kindergarten. To build on this progress, we recommend:

- Expanding the pre-K-to-grade-4 endorsement to begin at birth to ensure that educators working in early childhood and early elementary have an understanding of development and learning taking place prior to pre-kindergarten.

Additionally, standards that apply to early childhood teachers and administrators in private settings throughout Pennsylvania vary according to program type and, in general, are minimal (e.g., many positions only require minimal experience or early childhood-related college courses), while more rigorous licensure standards and higher education degree requirements apply to early childhood teachers working in public preschool settings. Thus, institutions of higher education in Pennsylvania offer programs that vary widely in course content and field experiences required for student learning, making it challenging to ensure that all early childhood education students have opportunities to engage in the type of content and field experiences recommended by the Institute of Medicine and National Research Council.

Clarity among degree programs as to their purpose and scope is required in the effort to align with the IOM/NRC recommendations and to ensure that all children receive the same quality of education, regardless of their education setting. In Spring 2022, Pennsylvania adopted the Pennsylvania Professional Standards and Competencies for Early Childhood Educators (PA PSCECE) as a way to align early education degree program course requirements with state standards and competencies. This transition offers an opportunity for IHEs to align content offered for a more unified teacher preparation system. However, it is important to note that some degree programs may be required to change coursework to meet these new standards and competencies. As the PA PSCECE continues to develop, we look forward to seeing how it is implemented and enforced.

3. Strengthen program content and equity across the age span

Many ECE stakeholders emphasize the importance of relying on research 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. The majority of degree programs in Pennsylvania noted a strong emphasis on preparing educators to work with preschool-age children, yet a significant proportion of bachelor's degree programs reported a lack of content on infants and toddlers. Additionally, the diversity of the child population in Pennsylvania underscores the need to prepare teachers to work with a broad range of children, including those learning more than one language, and the importance of ensuring that all content is culturally and linguistically responsive to the children and families served by the ECE programs.

To strengthen required content and align it with child development and teacher preparation research and to equitably adjust 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. Faculty members across degree programs and institutions would thus be enabled 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;

- **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 social-emotional 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 and/or adverse childhood experiences (ACEs).

4. Strengthen the application of field-based learning experiences

Although most early childhood degree programs in Pennsylvania require students to participate in at least one practicum course, and the vast majority of bachelor's degree programs require student teaching, there is great variation in the characteristics of these experiences particularly in the context of the COVID-19 pandemic. Because fewer than one half of programs require students to work with infants and toddlers, dual language learners, or children with disabilities during their student teaching and practica, graduates from Pennsylvania degree programs may participate in highly disparate field-based learning experiences that may not reflect the realities of their current or future environments.

To strengthen the content and 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 the early elementary grades;
- Developing differentiated field experiences for pre- and in-service students. For pre-service students, extend more opportunities for in-depth student teaching experiences, and for in-service students, explore and implement models that accommodate those already working in classrooms, while also providing quality experiences (e.g., the California Early Childhood Mentor Program); and
- Providing field-based learning opportunities for students to engage with:
    - Infants and toddlers;
    - Children with disabilities;
    - Children who are dual language learners;
    - Families from diverse backgrounds; and
    - Community organizations that support children and families.

5. Provide increased access and supports for students in attaining their degrees

Because many early childhood education students in Pennsylvania are non-traditional students, particularly in associate degree programs, a focus on providing access to higher education and effective supports to current students is imperative. Today, given the COVID-19 pandemic impact on in-person learning, the need for effective student support is greater than ever. Pennsylvania's Early Care and Education Professional Development Organizations (ECE PDOs)[12] are a statewide system of education and professional development that supports early educators in reaching their career and educational goals, including through financial assistance and access to low- or no-cost courses and credentials. We recommend implementing or expanding the following supports for early childhood students throughout the state to ensure that a diverse in-service and incoming workforce can successfully meet standards and attain competency:

- Increased financial and technical support for students enrolled in blended or fully online degree programs;
- Alternative class schedules and locations;
- Academic counseling;
- Cohort models; and
- Financial resources for students.

6. Establish partnerships among and improve articulation agreements between two- and four-year institutions

In Pennsylvania and throughout the country, increasing numbers of students are entering the higher education system as community college students with the intent to transfer to bachelor's-granting colleges or universities. As one step to streamlining the transfer process, the state allows certain bachelor's-granting institutions to confer associate degrees in addition to bachelor's and graduate degrees in early childhood education or related fields. While the majority of associate and bachelor's degree programs note an existing articulation agreement in place with at least one other institution, inconsistencies

[12] For further information on Pennsylvania's Early Care and Education Professional Development Organizations, please see https://www.pakeys.org/pdos/.

currently exist in the practice and perception of articulation agreements between two- and four-year institutions. We recommend:

- Ensuring that all community colleges have a comprehensive articulation agreement with a bachelor's-granting college or university that is geographically accessible to students;
- Expanding the opportunities for students to earn associate degrees at bachelor's-granting institutions to facilitate more seamless transfer between degrees; and
- Offering dedicated advising staff who can provide students with the necessary guidance to take full advantage of articulation agreements, including information on the transfer process, required courses, and accepted credits.

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

In Pennsylvania schools serving students from pre-kindergarten through grade 12, principals are required to have more than three years of professional experience "in an educational setting that is related to the instructional process," complete a graduate-level principal certification program or a Pennsylvania Inspired Leadership Induction Program, and achieve a qualifying score on the state-required test (Pennsylvania Department of Education, 2022). In contrast, minimum requirements for directors of center-based ECE programs vary according to the ages and number of children enrolled. The most stringent requirements ask directors to have earned an associate degree with early childhood coursework and have some additional administrative training and at least one year of experience (The Pennsylvania Key, 2020).

In light of these inconsistent and nominal expectations for ECE leadership positions and the lack of a pipeline from the classroom to leadership, it is not surprising that, across degree levels, program course content is not routinely offered to prepare practitioners for early childhood supervisory, administrative, or other leadership roles. Studies of ECE work environments reveal that a significant proportion of early educators (ranging from 25 to 32 percent) are responsible for supervising other teaching staff in their classroom or center (Whitebook et al., 2016; Whitebook et al., 2018). This gap in coursework suggests a need for increased attention to preparing educators to succeed in these roles.

To create a clearer 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 specific skills and knowledge;
- Ensuring training and ongoing professional opportunities for faculty members 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 graduate and undergraduate level that offer the appropriate course content.

In addition to gaps in course content related to leadership development, the demographics of the faculty members participating in the Inventory indicate a faculty workforce that is primarily monolingual and lacks the capacity to prepare teachers to work with children who are dual language learners. To increase the diversity of Pennsylvania's early childhood higher education faculty, we recommend:

- Investigating strategies used in other professions (e.g., health, education, social welfare) to create faculty development programs—such as a fellowship or grant—intended to increase diversity among faculty members, particularly in key leadership positions;
- Identifying options to increase faculty members' expertise in working with college students, young children, and families of diverse racial, ethnic, and linguistic backgrounds; and
- Providing opportunities for faculty members to pursue professional development related to teaching dual language learners, including strategies to develop the language, literacy, mathematical, and cognitive abilities of this population.

8. 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. Early childhood degree programs in Pennsylvania rely heavily on faculty members to perform program

administrative duties, which constrains the time they have to dedicate to students. 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 workload on faculty, 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.

To facilitate improvements in program offerings and to support faculty members 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;
- Strengthening faculty expertise in science, technology, engineering and math (STEM) pedagogy to better prepare educators to support children's STEM development and skills;
- Developing additional opportunities for faculty professional development in the areas of preparing practitioners to work with infants and toddlers, children with disabilities, children from diverse backgrounds, and children who have experienced trauma; 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 Pennsylvania's early childhood higher education landscape amid efforts to invest in, strengthen, and coordinate early childhood workforce development. A strong preparation system for Pennsylvania's early childhood teachers and administrators is central to these efforts aimed at ensuring that all young children in Pennsylvania 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 by supporting students in the pursuit and attainment of early childhood higher education degrees.

However, while it is crucial that early educators receive the education and training they need, the preparation of the early care and education workforce must go hand in 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.

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

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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