Teaching the Teachers of Our Youngest Children

The State of Early Childhood Higher Education in Arkansas

2018

Bethany Edwards, Abby Copeman Petig, Lea J.E. Austin, & Elena Montoya

Center for the Study of Child Care Employment
Institute for Research on Labor and Employment
University of California, Berkeley

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Suggested Citation:
Edwards, B., Copeman Petig, A., Austin, L.J.E., & Montoya, E. (2018). *Teaching the Teachers of Our Youngest Children: The State of Early Childhood Higher Education in Arkansas*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley.

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.

Acknowledgements

Teaching the Teachers of Our Youngest Children: The State of Early Childhood Higher Education in Arkansas was funded by the Bill & Melinda Gates Foundation.

Special thanks to the program leads and faculty members who gave generously of their time to participate in the *Arkansas Early Childhood Higher Education Inventory.*

Additional thanks to the Arkansas Division of Child Care and Early Childhood Education and the Arkansas Early Childhood Cohort for providing expertise and sharing knowledge about Arkansas's early childhood system.

We are also grateful to Lisa Qing and Erendira Di Giuseppe for their assistance in preparing this report.

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

Editor: Deborah Meacham

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Introduction

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

As noted in the *Early Childhood Workforce Index* (Whitebook, McLean, & Austin, 2016), progress toward an equitable, efficient, and effective early childhood system requires advancing preparation, workplace supports, and compensation of 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. Further sources of public funding are needed to stimulate the incubation and testing of sustainable policies to resolve compensation and other issues that have gone largely unaddressed. Data on the early childhood workforce, across all settings and ages of children, must be collected in order to test the effectiveness of policies for preparation, support, and reward. All five ingredients are essential — each one individually cannot advance effectively without the others — but quality data and sufficient resources are fundamental.

The *Early Childhood Higher Education Inventory II* (CSCCE, 2016) is an effort 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).

Through research, observation, and experience, we know 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* (Institute of Medicine [IOM] & National Research Council [NRC], 2015) 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

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

of interdisciplinary higher education programs for early care and education professionals, including practice-based and supervised learning opportunities.

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

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

Arkansas is home to more than 217,000 children under the age of six, and 64 percent of these young children have all available parents in the workforce (U.S. Census Bureau, 2016). Despite the need for high-quality early care and education in Arkansas and the recommendations in the IOM/NRC report, in 2012 the state replaced its P-4 and 4-8 certifications with a single K-6 certification. Although this change has given elementary school principals more flexibility in hiring, it has also caused early childhood higher education programs to emphasize instructional strategies most compatible with teaching children in the later elementary grades and to de-emphasize the education of children before they enter the public-school system (Bornfreund, 2011; Orenstein, 2016).

Nonetheless, stakeholders and advocates in Arkansas remain 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 prepare and support an incoming generation of educators, while also strengthening the skills of the existing early education workforce. Institutions of higher education are crucial to meeting the evolving and increasing demands identified as improving developmental and learning outcomes for the state's young child population.

In light of the recent licensure changes in Arkansas, great variability in ECE degree programs across the country, and the evolving expectations for effective teacher preparation recommended by the Institute of Medicine and National Research Council, it seemed the appropriate time to examine the status of early childhood higher education offerings in Arkansas in order to allow policymakers, institutions of higher education, and other stakeholders to assess the capacity of the state's higher education system and to inform policy, practice, and investment.

The totality of the data collected through the *Inventory* allows stakeholders to identify gaps and opportunities in the available offerings and to assess the capacity of the state's higher education system over time.

The *Inventory* was implemented in Arkansas during the 2016-2017 academic year. This report summarizes major findings collected by implementing program and faculty modules of the *Inventory* (CSCCE, 2016) and provides recommendations for policy changes that could lead to more effective teacher practices to support children's learning. More detailed findings can be found in the Appendices of this report.

The Early Childhood Higher Education Landscape in Arkansas

A network of 14 community colleges and nine public and private universities offers a complex array of early childhood degree programs. The 14 community colleges offer a total of 15 associate degree programs, and the seven public and two private universities offer a total of three associate degree programs,[2] seven bachelor's degree programs, and five master's degree programs. In the current study, approximately four out of five associate degree programs (82 percent) and more than one in three upper-level degree programs (38 percent) reported serving a mix of those already working in the early childhood field as well as more traditional pre-service students.

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

- Offer the knowledge, skills, and experiences associated with effective teaching practice and program leadership;
- Have a faculty workforce prepared to provide early childhood practitioners with the necessary knowledge and skills associated with effective teaching practice and program leadership; and
- Have the resources to support student and faculty success.

The second section of this report, "Early Childhood Higher Education, An Evolving Landscape," examines how these institutions of higher education are adapting to emerging knowledge about children's learning and development. Specifically, the report explores the extent to which Arkansas ECE higher education programs have incorporated recent findings related to the importance of:

- Promoting early mathematical understanding;

[2] Arkansas Tech University offers an online associate degree, and the University of Arkansas – Fort Smith and the University of Arkansas at Monticello offer traditional, in-person associate degree programs.

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

Box 1. Study Design

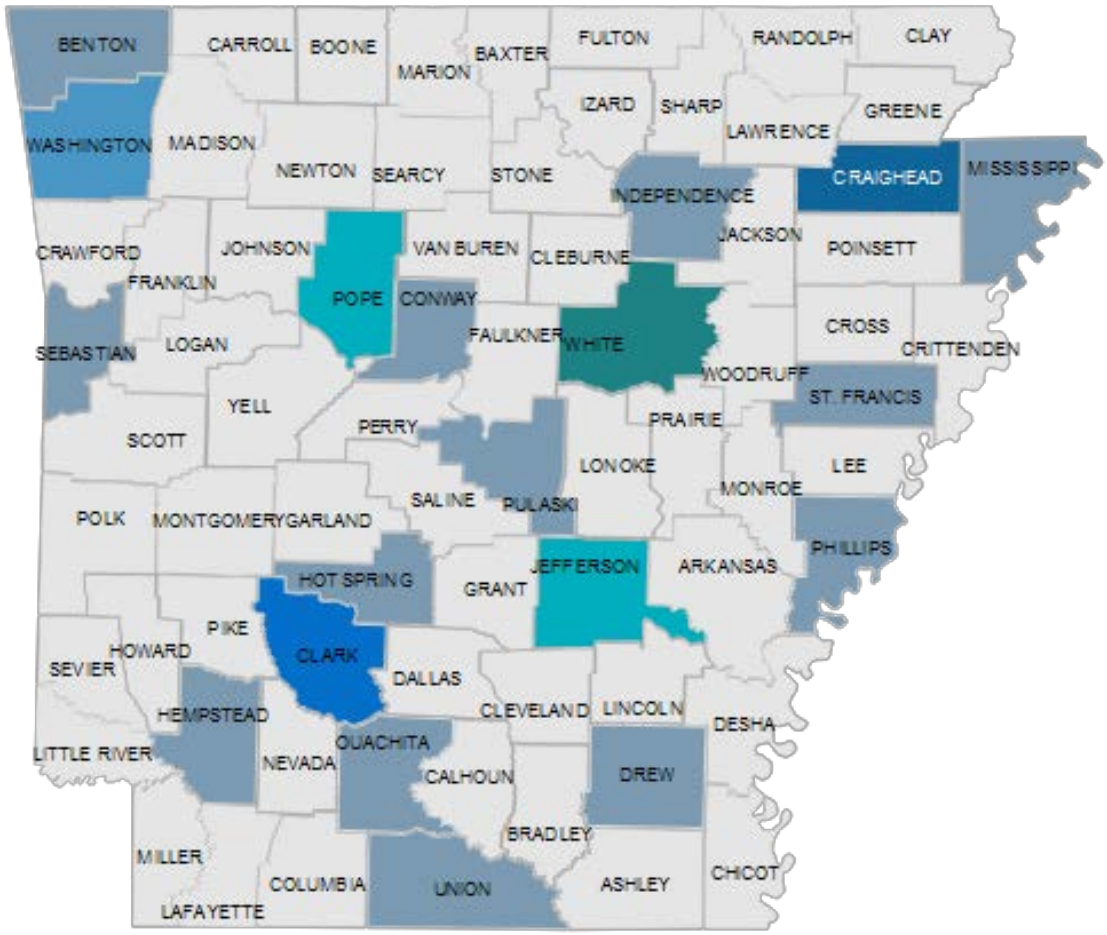
During the 2016-2017 academic year, researchers from CSCCE implemented the *Early Childhood Higher Education Inventory II*, which consists of three modules: a mapping of the population of higher education programs within a state; an online program survey completed by the degree program leader (e.g., 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 11 associate and eight upper-level degree programs.[3]

The faculty findings are drawn from a final sample of 25 faculty members. Seventeen of these faculty members teach in associate degree programs, and eight teach in bachelor's degree programs.

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

[3] The category of upper-level degree programs consists of five bachelor's degree programs and three master's degree programs. Due to the small sample size and in order to protect the identity of these institutions, all analyses of upper-level degree programs will be reported out of the total of all eight programs.

Distribution of Arkansas Early Childhood Degree Programs



Legend:

- No ECE Degree Program
- Associate
- Bachelor's
- Master's
- Associate and Bachelor's
- Bachelor's and Master's
- Associate, Bachelor's, and Master's

Part 1: Early Childhood Higher Education, Mapping the Scene

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

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

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

1. To prepare students for teaching and/or administrative roles in early childhood education settings *only*;
2. To prepare students for teaching and/or administrative roles in early childhood *and* elementary education settings;
3. To prepare students for the role of early interventionist or early childhood special educator;
4. To prepare students for multiple roles involving young children, working in many types of settings; and
5. To prepare students for a career as a researcher or a college-level faculty member.

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

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

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

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

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

Most Arkansas early childhood degree programs identify their primary goal as teacher preparation. While these programs offer a range of topics related to child development and approaches to teaching, both associate and upper-level degree programs tend to require more content focused on preschool-age children than infants and toddlers or school-age children. Across degree levels, the availability of content related to administration and leadership is inconsistent.

Like most states across the country, education requirements in Arkansas for those administering or teaching in early care and education programs vary and depend more on the program's funding source than children's developmental needs (Whitebook, McLean, & Austin, 2016). Requirements vary across settings, with public-school preschool teachers needing a bachelor's degree, but teachers in center- and home-based private settings needing only a high school diploma or GED (Arkansas Department of Human Services, 2015; Arkansas Department of Education, 2015).

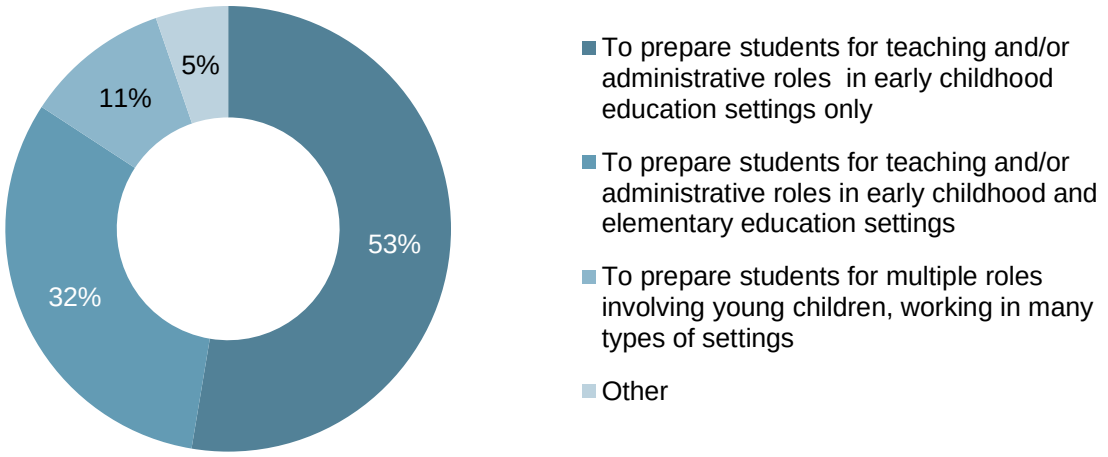
It is likely, however, that many early childhood teaching staff in Arkansas mirror their counterparts nationally and possess higher levels of education and training than are required (Whitebook, McLean, & Austin, 2016). Additionally, other initiatives encourage and support many professionals in the ECE workforce to pursue further training/education. For example, Arkansas Better Beginnings, Arkansas's statewide Quality Rating and Improvement System (QRIS), requires higher levels of staff training to achieve higher ratings.

Program Goals

Not all early childhood higher education degree programs are alike, nor should they be. However, it is important to distinguish between programs that have an intent to prepare teachers and administrators and those that are related to preparing students for careers in the early childhood field. Reflecting the inconsistent qualifications required of early educators, across the country there has been a default acceptance of "early childhood-related" programs as acceptable for preparing early educators (Whitebook et al., 2012). This reality has resulted in wide variation in the goals and content of programs, though graduates of these different programs are often held to the same expectation of what they should know and be able to do upon degree completion (Whitebook & Ryan, 2011).

In contrast, the Arkansas higher education programs that participated in the *Inventory* were aligned in their goals. The majority of early childhood higher education degree programs in Arkansas reported a primary focus on teacher preparation, although the child age focus varies depending on the program (see **Figure 1**). Approximately one-half (53 percent) of degree programs reported that their primary goal was to prepare students to work as teachers and/or administrations in early childhood education settings exclusively. Approximately one-third (32 percent) of degree programs reported that their primary goal was to prepare students to work as teachers and/or administrations in both early childhood and elementary education settings, and another 11 percent reported that their primary goal was to prepare students for multiple roles in many types of settings. It was most common for associate degree programs to focus solely on early childhood settings, while most upper-level programs had broader program goals.

Figure 1. Primary Goal of Arkansas Early Childhood Degree Programs (N=19)



Course Content

There is broad consensus that early childhood education degree programs should include course content that encompasses theories of development and learning, subject matter content (e.g., literacy), and methods of teaching and pedagogy (IOM & NRC, 2015). In addition, leadership preparation, program administration and principles, and practices related to adult learning are considered key content for creating high-quality experiences for children (IOM & NRC, 2015; Whitebook et al., 2012; Whitebook & Ryan, 2011).

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

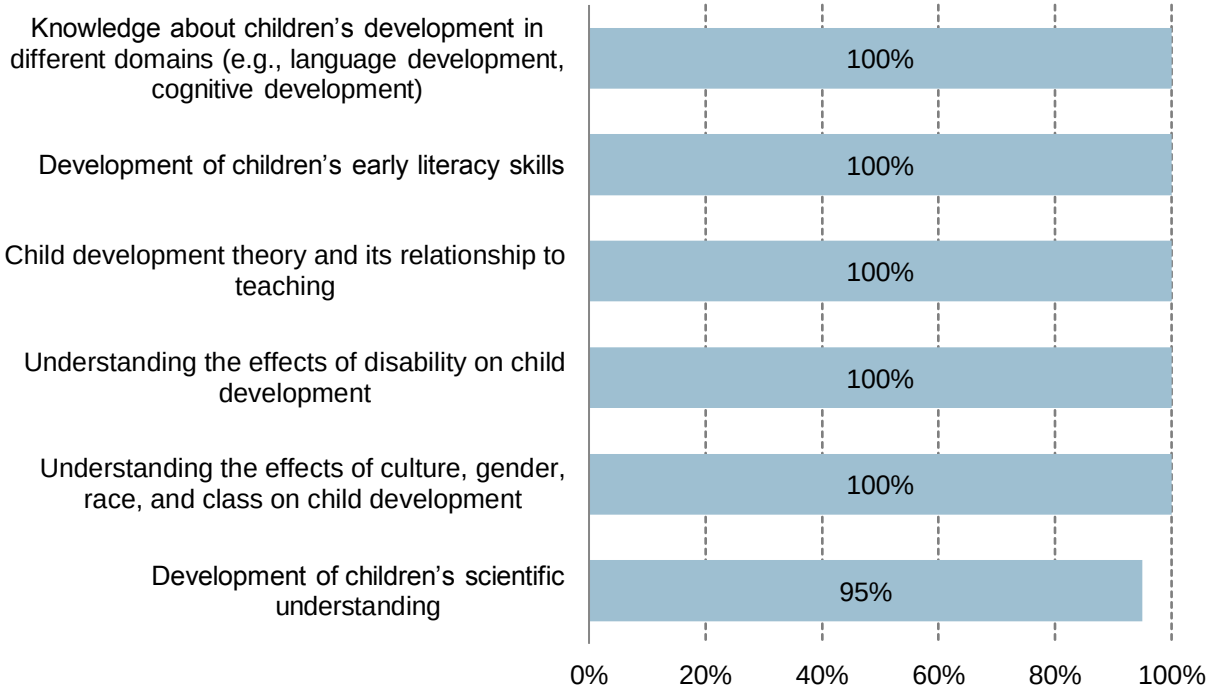
Domains	Topics
Child Development and Learning	Domains of development
	Understanding the effects of culture, gender, race, and class on child development
	Understanding the effects of disability on child development
	Development of children's early literacy skills
	Child development theory and its relationship to teaching
	Development of children's scientific understanding
Teaching	*Teaching Diverse Child Populations*: Teaching children who are living in poverty, who have special needs, who exhibit challenging behaviors, or who have experienced trauma
	Teaching and Curriculum: Using integrated curriculum and play in teaching; implementing inclusion strategies; supporting social and physical development; and teaching art, literacy, science, and social studies

	Teaching Skills in Early Childhood Settings: Using observation, assessment, and documentation to inform teaching and learning; different teaching techniques; and classroom management
Leadership and Administration	*Supervision and Operations*: Building relationships with other teachers and/or early childhood professionals; guiding practitioners in implementing curriculum and appropriate teaching strategies; adult supervision; strategies to support ongoing adult learning; assessment and documentation to inform teaching and learning; assessment and documentation to inform program quality; program planning, development, and operations; and preparation to provide professional development services
	Organization and Systems: Human resources/personnel policies; fiscal procedures and management; grant management and proposal writing; organizational development and change; the early childhood system and public policy; effective advocacy, policy analysis, and development; and building community partnerships and developing familiarity with community resources for children and families

Child Development and Learning: Content Knowledge and Teaching

The vast majority of degree programs reported requiring all six of the course content topics related to the domain of child development and learning (see **Figure 2**). All associate degree programs require students to take coursework on "development of children's scientific understanding," while 88 percent of upper-level degree programs do so.

Figure 2. Required Coursework Related to Child Development and Learning (N=19)



Administration and Leadership

Course content was not consistently offered to prepare practitioners for early childhood supervisory, administrative, or other leadership roles. The topics most often offered in associate degree programs were "building relationships with other teachers and/or early childhood professionals," "assessment and documentation to inform teaching and learning," and "guiding practitioners in implementing curriculum and appropriate teaching strategies," each of which was offered by at least 80 percent of associate degree programs.

Among upper-level degree programs, the most commonly offered topics were "building relationships with other teachers and/or early childhood professionals" and "assessment and documentation to inform program quality," both of which were offered by at least 85 percent of programs. Associate degree programs were much more likely than upper-level degree programs to prepare students in "strategies to support ongoing adult learning," while upper-level degree programs were significantly more likely than associate degree programs to offer course content in "effective advocacy, policy analysis, and development." About one-half of programs across degree levels reported offering courses related to adult supervision.

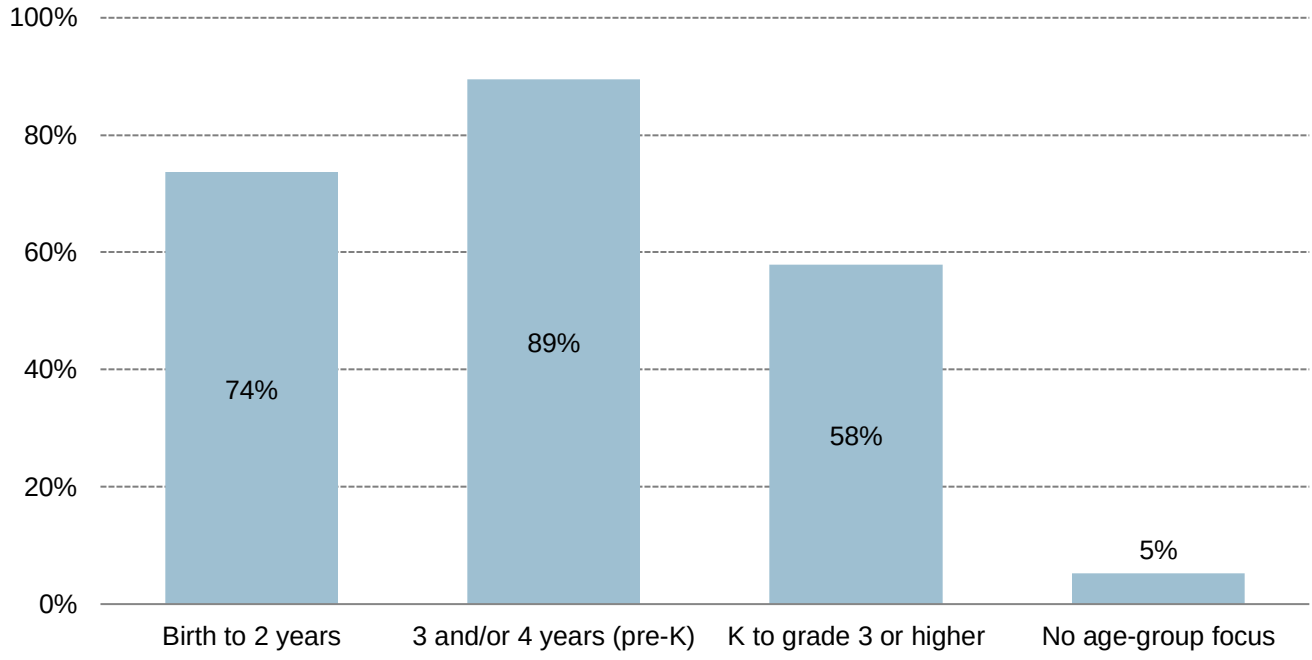
In addition, the *Inventory* asked if programs offered coursework designed to prepare students to provide professional development services (e.g., mentoring, coaching, or training other ECE professionals). About 30 percent of programs across degree levels reported offering courses related to the provision of professional development services.

Age-Group Focus

Depending on the ages of children they serve and the setting in which they work, teachers of young children are often perceived as requiring different levels of skill and knowledge and are expected to meet significantly more or less rigorous qualifications. These differing expectations contribute to long-standing variations in content and design among early childhood higher education programs (Whitebook et al., 2012; Whitebook & McLean, 2017). The Institute of Medicine and the National Research Council conclude that educators working with children at any age from birth to eight require equivalent levels of education and training, and this variability in preparation is both inconsistent with the science of early development and learning and unlikely to produce consistently effective preparation of teachers and administrators for early learning programs serving children in this age span (IOM & NRC, 2015).

Thus, creating an integrated birth-to-age-eight early care and education system, inclusive of the institutions preparing the ECE workforce, has emerged as a major goal and as a metric by which to measure progress toward it. The *Inventory* intentionally sought to examine differences among programs in preparing students to work with children of different ages. For child development and learning and teaching topics, degree programs were most likely to require an age-group focus on preschool-age children (see **Figure 3** for an example). In general, a greater percentage of upper-level degree programs required a focus on school-age children compared to associate degree programs, except in the domain of Teaching Diverse Child Populations. In contrast, associate degree programs were much more likely than upper-level programs to focus on infants and toddlers.

Figure 3. Development of Children's Early Literacy Skills: Age-Group Focus of Programs Participating in the Arkansas Early Childhood Higher Education Inventory (N=19)

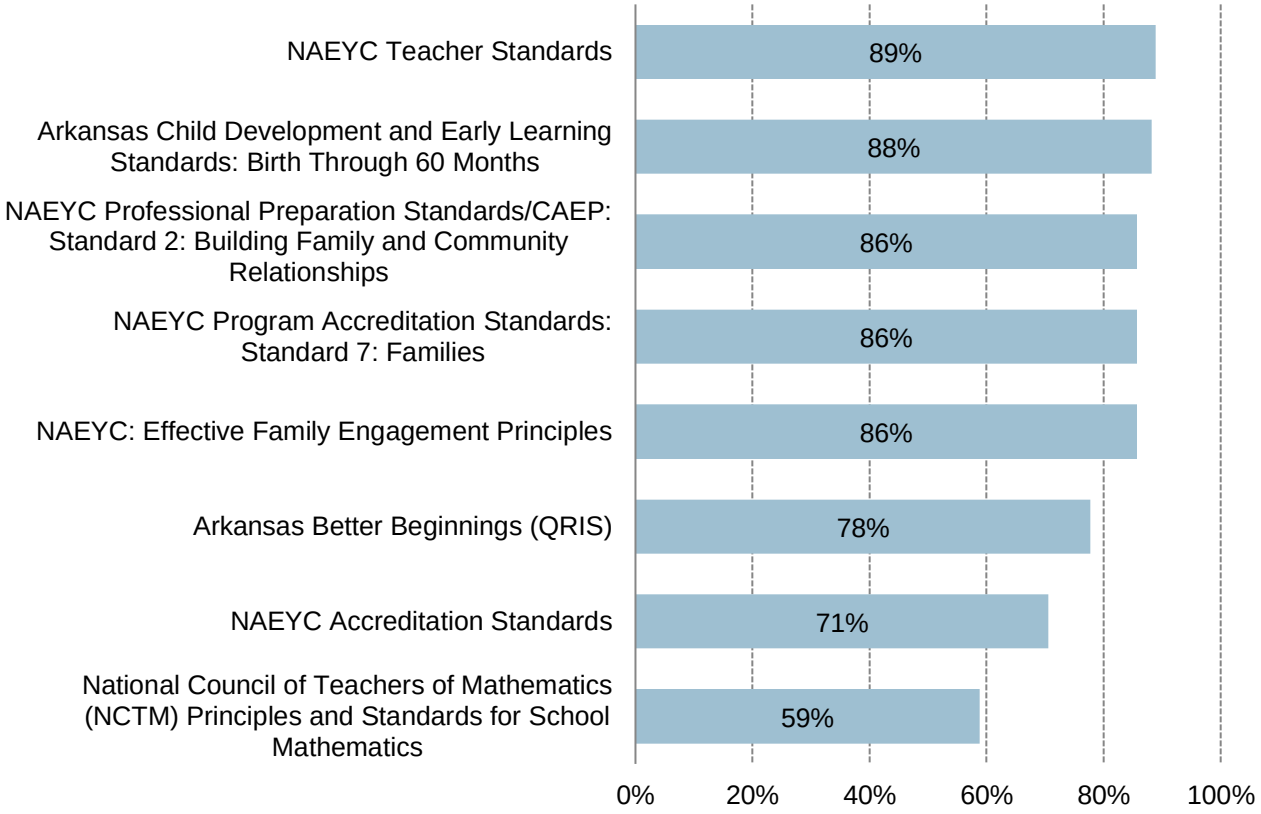


Integration of Standards and Competencies Into Coursework

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

The Arkansas Child Development and Early Learning Standards, the National Association for the Education of Young Children (NAEYC) standards, and Arkansas Better Beginnings (QRIS) were the most commonly reported standards that early childhood degree programs integrated into coursework (see **Figure 4**). Approximately one-half of degree programs reported integrating the Arkansas Better Beginnings standards into coursework. This finding was consistent across both associate and upper-level degree programs. The vast majority of programs across degree levels reported incorporating state or national math standards into their course content related to early childhood mathematics. However, only about one-half of programs reported incorporating state or national family engagement standards.

Figure 4. Standards Integrated by at Least 50 Percent of Programs in the Arkansas Early Childhood Higher Education Inventory
(N=7-18)



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

Students earning both associate and bachelor's degrees in early childhood are required to complete practicum experiences. In contrast, students across degree levels are far less likely to be required to complete a student teaching experience. There is little consistency with regard to the duration and frequency of either type of field-based learning experience.

What we asked about field-based experiences:

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

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

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

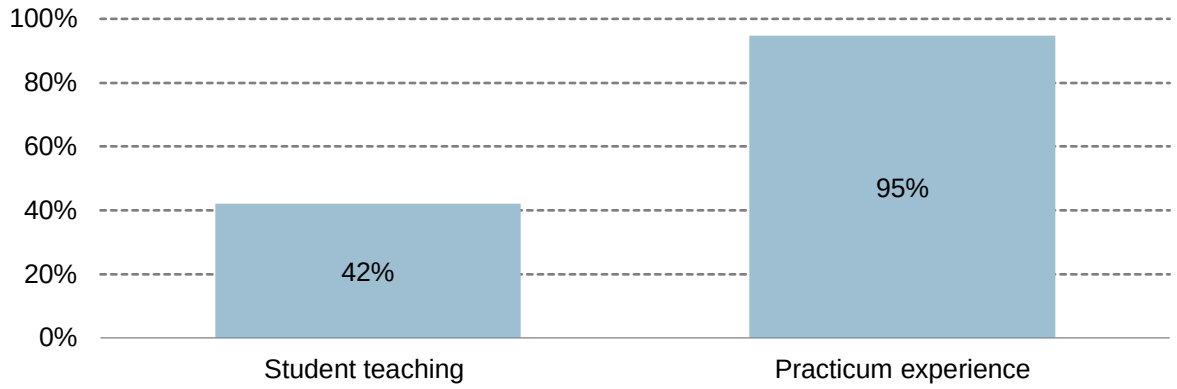
- Scaffolding children's mathematical development and promoting their ability to solve problems;
- Scaffolding children's literacy development and promoting their oral and written skills;
- Supporting children's socioemotional development and skills;
- Facilitating the developmental course of motor development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

There is widespread agreement that field-based learning experiences for teachers working with children of all ages are critically important for developing new teaching skills or improving existing ones (IOM & NRC, 2015; NCATE, 2010b; Whitebook et al., 2012). In the K-12 community, this recognition has led to efforts to increase the length of student teaching, to introduce it earlier into a program of study, and to strengthen student supervision during field experiences (CSCCE, 2017; Whitebook et al., 2012). In early childhood, however, there is no widely implemented standard of field experience, such as student teaching (Whitebook, 2014; Whitebook & Ryan, 2011). This structural divide in educator preparation runs counter to the call by many ECE experts, policymakers, and other stakeholders for a more integrated birth-to-age-eight educational system (IOM & NRC, 2015).

Required Field Experiences

The vast majority of programs across degree levels require students to participate in at least one practicum course. In contrast, less than one-half of degree programs require student teaching (see **Figure 5**).

Figure 5. Field Experiences Required in Arkansas Early Childhood Degree Programs (N=19)



Number, Duration, and Timing of Practica

Practica are the most common (and for many students, the only) type of field-based learning experience required across Arkansas early childhood degree programs.[4] The total number of practica and total hours that students were engaged in practica is difficult to assess; the number of experiences varied, as did the number of hours per practicum (see **Table 2**).

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

Degree Level	One practicum required	Two practica required	Three practica required	Four or more practica required	Mean number of hours typically required to complete a practicum course
All Degree Programs (N=17-18)	33%	33%	22%	11%	156

Perhaps reflecting the differences in the total number of practica required, the first practicum experience occurred at different times for students at different degree levels. Most associate degree programs require that the first practicum occur at the beginning of the course of study, while most students in upper-level degree programs do not undertake their first practicum until the end of their course of study. The majority

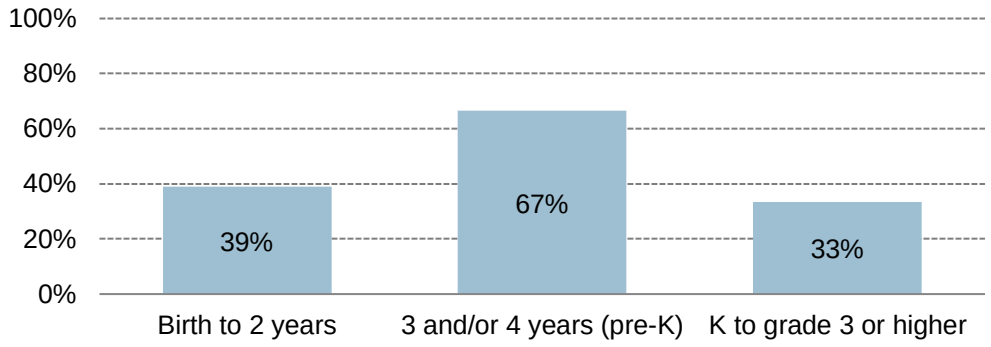
[4] Because practica were the primary strategy for field experiences required by degree programs and due to small sample sizes of programs requiring student teaching, practica are the focus of this section of the report.

of programs across degree levels do not structure practica differently for pre-service and experienced teachers.

Requirements of Practicum Experiences

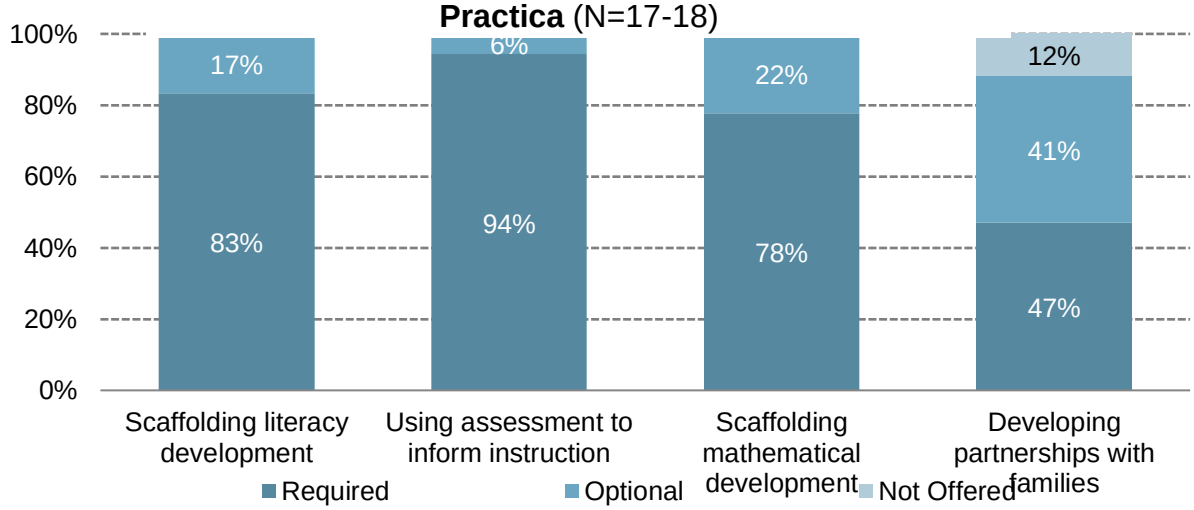
Both associate and upper-level degree programs were most likely to require an age-group focus on preschool-age children within the practicum experience, as compared to infants and toddlers and school-age children (see **Figure 6**).

Figure 6. Required Age-Group Focus in Practicum Experiences (N=18)



The majority of programs reported requiring students to complete practica that involve guiding early math and literacy development, supporting children's socioemotional development and skills, facilitating the developmental course of motor development, and utilizing assessment. However, less than half of programs reported requiring students to complete practica that involve developing partnerships with families and collaborating with community organizations (see **Figure 7** for select practices).

Figure 7. Select Practices Required for Students in their Practica (N=17-18)



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

Arkansas early childhood degree programs are staffed with a mix of part-time and full-time faculty, primarily women, white/Caucasian, and monolingual English speaking. Most faculty members reported having had academic preparation specific to early childhood, and faculty reported having worked in an array of ECE professional roles in the past decade.

What we asked about and of faculty members:

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

Individual faculty members were asked to identify:

1. Their employment status;
2. Their demographic characteristics, including: a) age; b) race/ethnicity; and c) linguistic capacity;
3. Their academic background;
4. The primary focus of their teaching and expertise related to children across the birth-to-age-eight continuum;
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 25 faculty members, out of 51 faculty who received the *Inventory*.[5] Seventeen of these faculty members teach in associate degree programs, and eight teach in bachelor's degree programs.[6]

Employment Status

Part-time faculty members constitute two-thirds or more of faculty in colleges and universities nationwide (Center for Community College Student Engagement [CCCSE], 2014; Curtis & Thornton, 2014), and this reality can pose multiple challenges for both faculty and students. Part-time faculty members are often not as integrated into the department in which they teach and not engaged in curriculum planning; furthermore, they are typically paid to teach particular courses and are not paid for additional responsibilities, such as student advising or program evaluation (CCCSE, 2014). This situation can lead to full-time faculty taking on a greater share of administrative, institutional, and student-advising responsibilities in addition to their teaching load (CCCSE, 2014; Curtis & Thornton, 2014; Early & Winton, 2001; Maxwell, Lim, & Early, 2006; Whitebook, Bellm, Lee, & Sakai, 2005).

[5]The faculty members included in the *Inventory* represent a portion of faculty who are currently teaching in early childhood degree programs in Arkansas. Nonetheless, these findings can provide insight into the experiences and needs of the wider population of early childhood faculty in the state.
[6] Two early childhood master's degree faculty members completed the *Inventory*. However, their responses are not included in this report. Additionally, two faculty members reported working in both a bachelor's degree and master's degree program. They were included in the bachelor's degree faculty in this report.

Among those who participated in the *Inventory*, nearly 40 percent of associate degree faculty members identified themselves as adjunct faculty members or part-time lecturers. While this figure is lower than the national average of 46 percent (U.S. Department of Education, 2017), challenges related to staffing were nonetheless identified by respondents, as discussed in more detail in Finding Six, below.

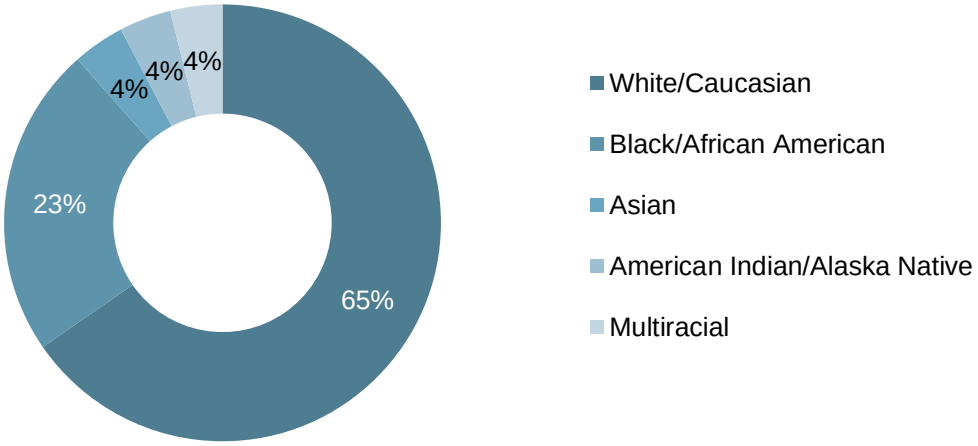
Demographic Characteristics

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

Racial, Ethnic, and Linguistic Diversity

Most faculty members participating in the *Inventory* identified as female and white/Caucasian (see **Figure 8**). The racial/ethnic makeup of the early childhood higher education faculty members who participated in the *Inventory* (65 percent white/Caucasian) is similar to that of the early childhood teaching workforce (71 percent white/Caucasian), as well as the general population of Arkansas (73 percent white/Caucasian) (McKelvey, Forsman, & Ward, 2018). While all faculty members at all degree levels reported fluency in English, few reported fluency in another language. However, almost 70 percent of faculty members reported that it would be helpful to know another language in order to communicate better with their students. Overall, more than 90 percent of faculty members who would like to know another language identified wanting to learn Spanish. Additionally, multiple faculty members identified American Sign Language and French as languages they would like to know.

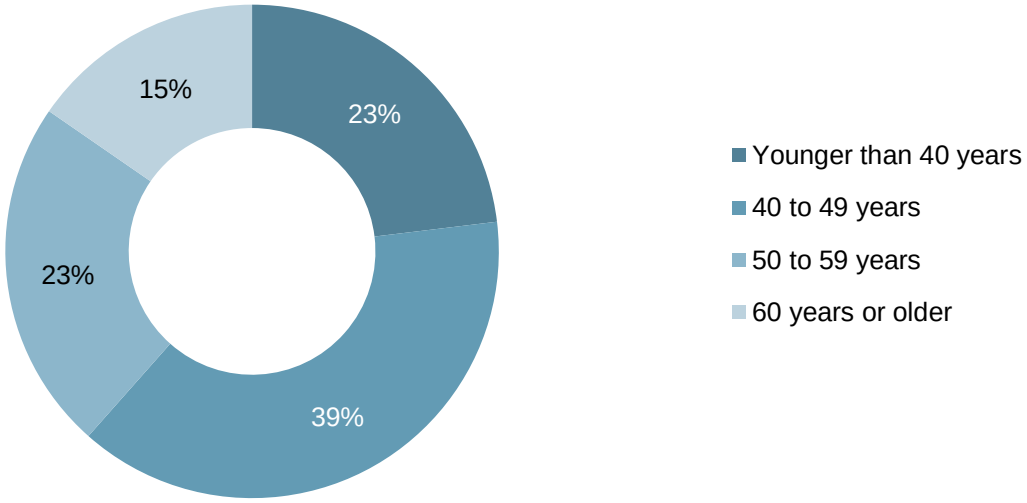
Figure 8. Race/Ethnicity of Faculty Members Participating in the Arkansas Inventory (N=26)



Age

The average age of faculty members was 48 years. Fifteen percent of faculty were 60 years or older, and 23 percent of faculty were younger than 40 years old (see **Figure 9**).

Figure 9. Age of Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory (N=26)



Academic and Professional Background

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

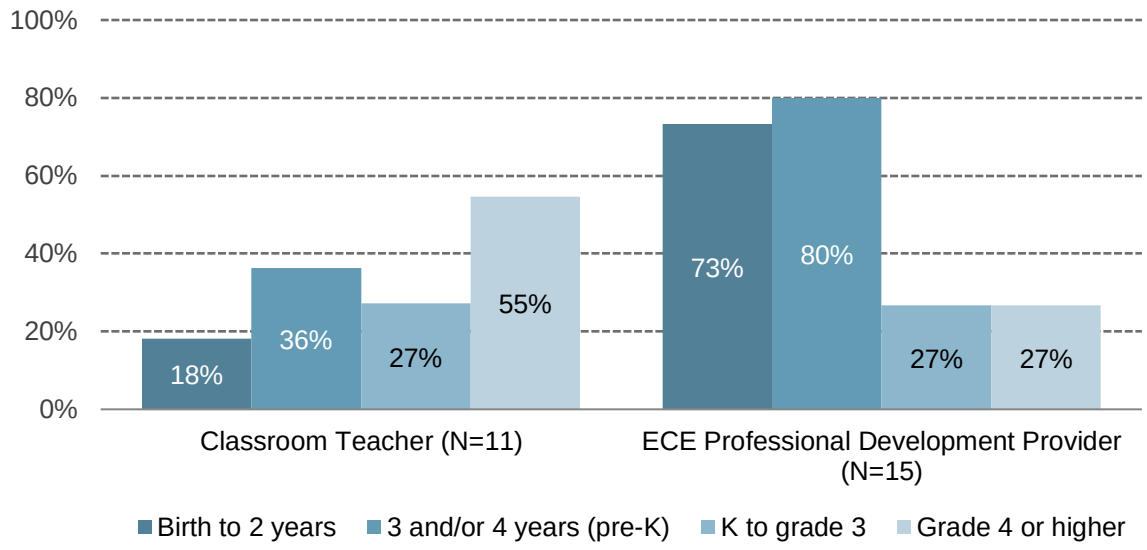
Academic Preparation and Teaching Focus Related to Early Childhood

Eighty percent of faculty members had earned at least a bachelor's degree in early childhood education or child development. While we did not ask faculty members about the primary focus of their own early childhood degrees, faculty were asked to indicate whether the primary focus of their teaching in the degree program was "child development and learning," "curriculum and teaching methods," or "both equally." They were also asked about their expertise related to various age groups of children. The majority of faculty members reported focusing on both "curriculum and teaching methods" and "child development and learning." About one-half of faculty members reported that their primary expertise was on children birth through before kindergarten, and about 20 percent reported that their primary expertise was on children in preschool and elementary school. Few faculty considered infants and toddlers to be their primary area of expertise.

Professional Teaching and Administrative Experience

About three-fourths of faculty members reported experience in other professional roles over the past 10 years. Of those faculty members who reported having worked in other roles, three-fourths had worked as ECE professional development providers (e.g., coach, mentor, trainer, consultant). Additionally, about one-half of faculty members had worked as classroom teachers, and more than one-third (37 percent) of faculty members reported having worked as early childhood administrators (see **Figure 10**). Classroom teaching experience was most likely to have occurred with children in grade 4 or higher. Only 18 percent of faculty members who had classroom teaching experience had taught infants and toddlers.

Figure 10. Age-Group Focus of Select Job Roles in Past 10 Years



FINDING FOUR: FACULTY PERSPECTIVES AND EXPERTISE
Faculty Perspectives on Course Content, Teaching Experience and Capacity, Professional Development Background, and Professional Development Interests

Arkansas early childhood degree faculty were more likely to consider important content related to preparing teachers to work with families of various ethnic, racial, and cultural backgrounds, compared to other course content. In general, faculty members reported feeling most capable of preparing teachers to work with preschool-age children. Arkansas early childhood degree program faculty are particularly interested in professional development related to early childhood systems and policy, teaching practitioners developmentally appropriate practices in infant and toddler settings, teaching practitioners to work with children with special needs, strategies to supervise adult students in clinical/field experiences, and using child assessment effectively.

What we asked faculty members:

Individual faculty members were asked to indicate:

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

Faculty members were also asked about:

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

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

Perspectives on Program Content

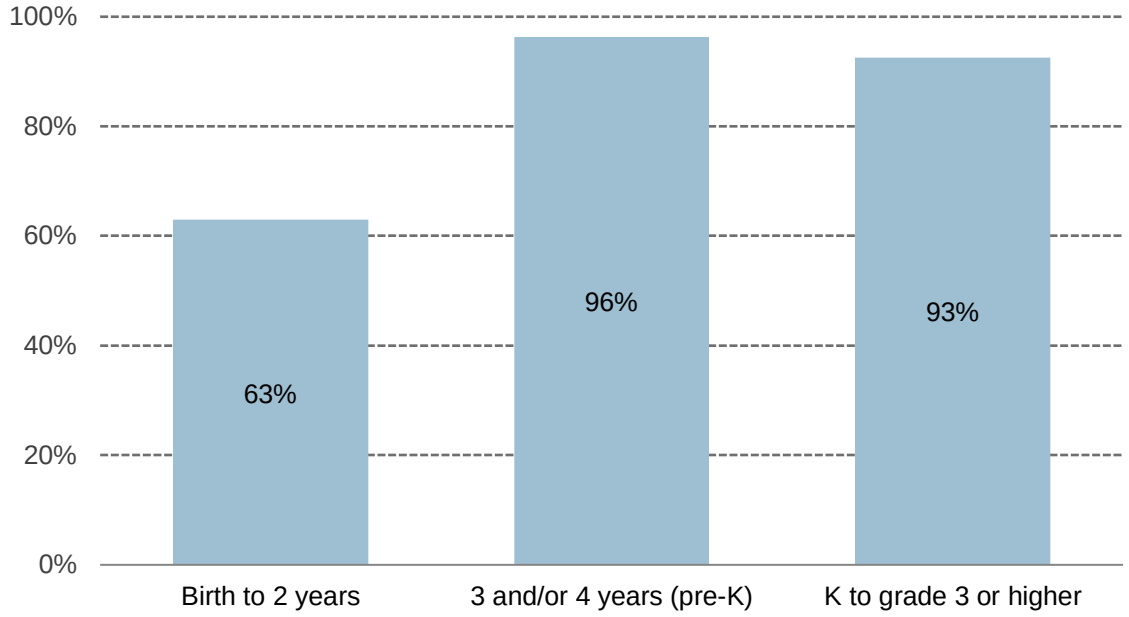
We asked faculty members their opinions about the importance of including particular domains of development and learning in early childhood degree programs for infants and toddlers, preschool-age children, and school-age children (see **Box 3** for a description of how we gathered this information). On average, almost 85 percent of faculty members rated these domains as "very important" for teachers working with preschool-age children, and more than 75 percent of faculty members rated these domains as "very important" for teachers working with children in kindergarten or higher. For teachers working with children birth to age two, the percentage of faculty members rating domains as "very important" decreased to an average of less than 70 percent (see **Figure 11** for an example). The exception was for the domain of "working with families of various ethnic, racial, and cultural backgrounds," which was rated as "very important" by more than 85 percent of faculty across all age groups and was the highest-rated domain overall.

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

The *Inventory* assessed faculty perspectives on the relative importance of various domains of development and learning in teacher preparation programs. Faculty members were asked to use a Likert scale of 1 to 4, with 1 meaning "not important" and 4 meaning "very important," to indicate their views on including various domains in preparing teachers to work with different age groups of children. The domains were:

- Literacy Development: Understanding the components and sequence of literacy development in young children and how to promote children's skills related to oral and written language;
- Socioemotional Development: Understanding socioemotional development, its relationship to learning, and how to support children's socioemotional skills;
- Motor Development: Understanding normal and atypical motor development in young children, its relationship to learning, and how to support the development of children's motor skills;
- Assessment: Utilizing assessment effectively to inform and individualize instruction;
- Collaboration: Collaborating with community organizations to support children and families;
- Diverse Families: Working with families of various ethnic, racial, and cultural backgrounds;
- Family Engagement: Understanding and implementing an integrated strategy to engage families in ongoing and reciprocal partnerships and the relationship of such partnerships to outcomes for children;
- Early Mathematics: Understanding the domains and sequence of mathematical knowledge in young children and how to promote children's mathematical understanding and ability to solve problems; and
- Dual Language Learners: Supporting the cognitive and social development of young dual language learners.

Figure 11. Importance of Including "Understanding the Components and Sequence of Literacy Development in Young Children" in Teacher Preparation Programs: Percentage of Faculty Members Reporting "Very Important" (N=27)



Capacity to Teach Content

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

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

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

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

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

For each topic, at least 80 percent of faculty members reported feeling capable of teaching content to students.[7] In general, faculty were most likely to report feeling capable of preparing teachers to work with preschool-age children. Not surprisingly, this is the same age group that members of the Arkansas early childhood teaching workforce feel most prepared to teach; 67 percent of teachers have reported feeling "generally prepared" or "totally prepared" to work with preschoolers, compared with 53 percent for infants and toddlers and 48 percent for school-age children (McKelvey, Forsman, & Ward, 2018).

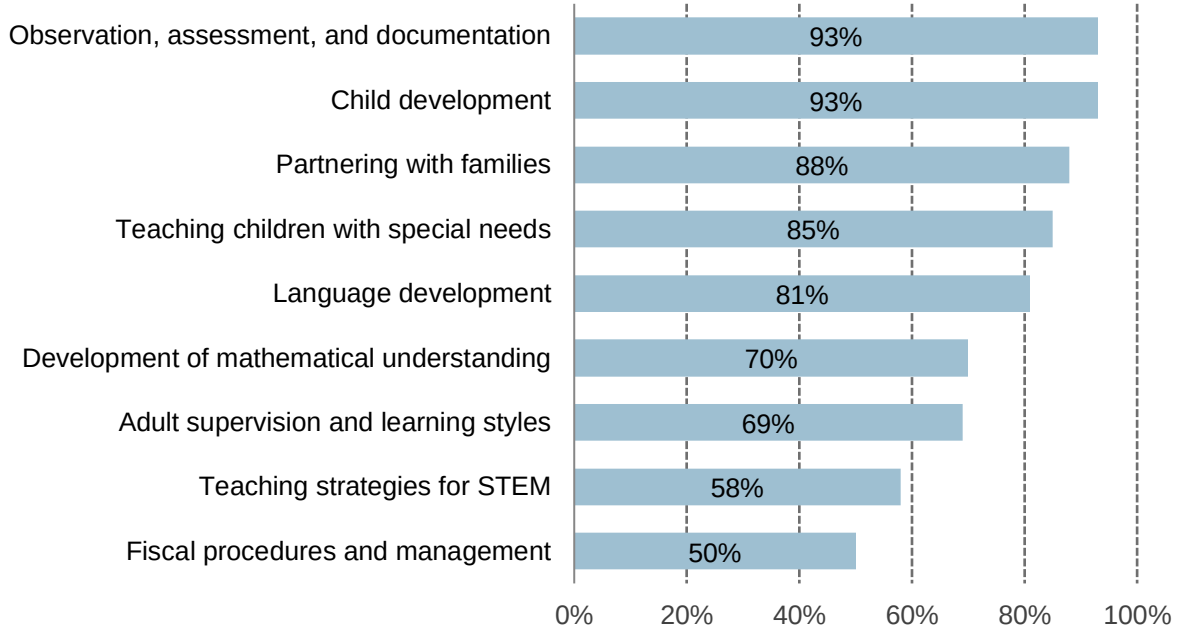
The topics that the fewest faculty members felt capable of teaching were "supporting the cognitive and social development of young dual language learners," "utilizing assessment effectively to inform and individualize instruction," and "scaffolding children's mathematical development and promoting their ability to solve problems."

Recent Teaching Experience

Faculty were asked about their experience teaching a variety of topics during the past two academic years and whether they taught the following content areas either as a separate course, embedded within a broader course, or both. At least 85 percent of faculty members participating in the *Inventory* reported teaching content related to "general domains of child development," "partnering with families to enhance children's learning in school and at home," "teaching children with special needs," and "observation, assessment, and documentation to inform teaching and learning" (see **Figure 12**). Faculty members were least likely to report having taught courses related to "fiscal procedures and management" and teaching strategies for science, technology, engineering, and math (STEM) content. Faculty members reported that topics listed in the *Inventory* were most likely taught within a broader course or within a broader course *and* as a separate course (rather than *only* as a separate course).

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

Figure 12. Recent Teaching Experience: Percentage of Faculty Members Reporting Having Taught Content Area in Past Two Years (N=26-27)



Professional Development Participation and Interest

All faculty members reported participating in professional development during the past three years.[8] The most frequently reported professional development experiences, participated in by 50 percent or more of faculty members, included the following topics:

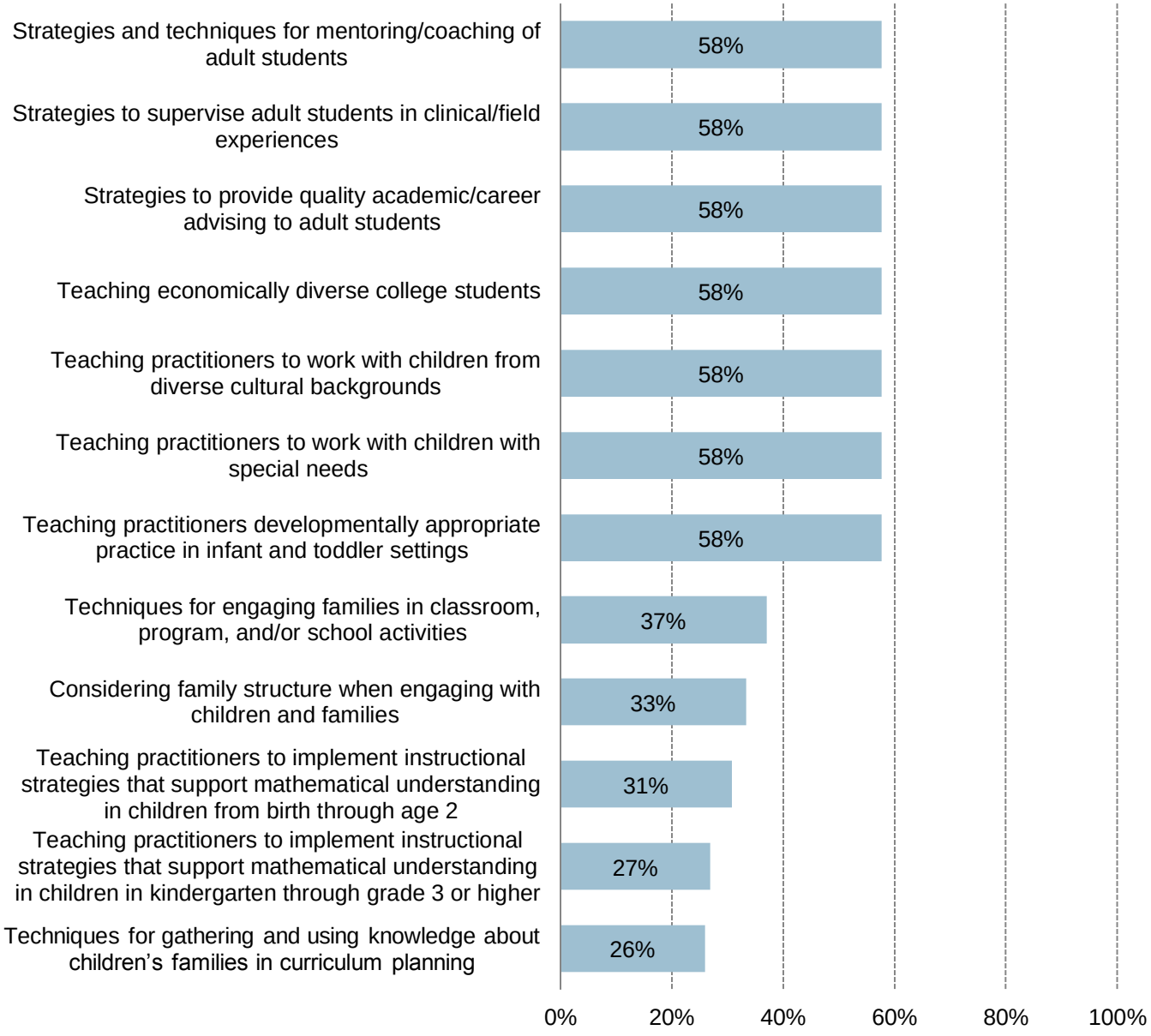
- Teaching practitioners to work with children from diverse cultural backgrounds;
- Strategies and techniques for mentoring/coaching of adult students;
- Teaching practitioners to work with children with special needs;
- Teaching practitioners developmentally appropriate practice in infant and toddler settings;
- Evidence-based research on the importance and value of building respectful and trusting relationships with families;
- Techniques for engaging families in classroom, program, and/or school activities; and
- Strategies to effectively communicate with families.

Faculty were least likely to have participated in professional development related to early mathematical development; one-half of faculty members had not participated in professional development on any of the topics related to early math in the past three years.

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

Faculty members indicated a number of areas in which they were interested in gaining additional knowledge or training (see **Figure 13**). The most commonly identified topics included strategies and techniques for mentoring/coaching of adult students, strategies to supervise adult students in clinical/field experiences, teaching practitioners to work with children from diverse cultural backgrounds, teaching practitioners to work with children with special needs, and teaching practitioners developmentally appropriate practice in infant and toddler settings.

Figure 13. Professional Development Topics With Highest and Lowest Percentage of Faculty Members Reporting "Very Interested" (N=26-27)



FINDING FIVE: SUPPORTING STUDENTS
Services Offered and Articulation

Arkansas early childhood degree programs offer multiple types of support services specifically tailored to help ECE students access resources and strengthen their academic skills. Associate degree programs are more likely than upper-level programs to offer computer and technology training, tailored academic counseling, blended programs (combining online and in-person courses), and alternative class schedules for working adults. Across degree levels, programs offer little support for dual language learners and rarely utilize cohort models. Inconsistent articulation was reported as a challenge, and agreements appear to be limited to select colleges and universities.

Typically, higher education students who work in early childhood settings are classified as "non-traditional" students because, in addition to working full-time, they are frequently older than recent high school graduates, may be among the first in their families to attend college, often represent linguistic and/or ethnic minorities, and may also be parents of children who are school age or younger (Sakai, Kipnis, Whitebook, & Schaack, 2014). In addition, increasing numbers of students are entering the higher education system as community college students with the intent to transfer to four-year colleges and universities, making the issue of articulation between associate and bachelor's degree programs ever more important (T.E.A.C.H. Early Childhood National Center, 2015). As states and locales seek to align with *Transforming the Workforce* recommendations, it is critical to attend to supports for students and infrastructure supports, like articulation to support student success. Programs that offer support specifically designed for non-traditional early childhood students are associated with greater-than-average success in helping students achieve their educational goals in a timely fashion (e.g., transferring to a four-year institution or completing a degree) (Chu, Martinez-Griego, & Cronin, 2010; Kipnis, Whitebook, Almaraz, Sakai, & Austin, 2012; Sakai et al., 2014; Whitebook, Schaack, Kipnis, Austin, & Sakai, 2013).

What we asked about services offered to students:

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

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

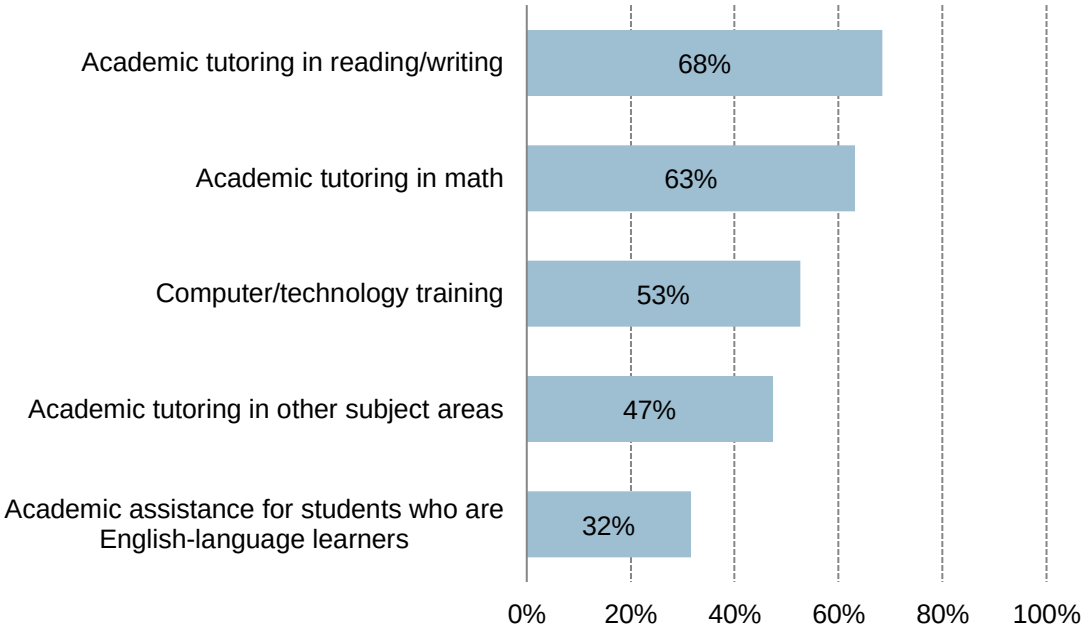
Services Offered

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

Skill Support

More than six in 10 programs offer tutoring tailored to ECE students in math and/or reading and writing. About one-half of all programs offer computer and technology training, but associate degree programs are almost three times more likely to offer this service than upper-level programs. Approximately one-third of all programs offer academic assistance for students who are English-language learners (see **Figure 14**).

Figure 14. Services Specifically Tailored to ECE Students in Programs Participating in the Arkansas Early Childhood Higher Education Inventory (N=19)



Counseling and Cohort Models

Only about one-fifth (21 percent) of degree programs reported offering cohort programs tailored to students in the degree program. Although the vast majority (91 percent) of associate degree programs reported offering tailored academic counseling, only one-half of upper-level programs reported offering this service. About 70 percent of all programs offered financial aid counseling specifically dedicated to their ECE students.

Access Supports

The majority (63 percent) of degree programs offered a "blended" program (combining online and in-person courses), although associate degree programs were much more likely to do so than upper-level programs. Approximately one-third (32 percent) of associate degree programs offered the degree as an "online/distance learning" program, compared to only 11 percent who offered the degree as a "traditional/on-campus" program.

More than one-half of all degree programs (63 percent) offered financial assistance other than federal financial aid to ECE students. While more than 90 percent of associate degree programs offered alternative class schedules for working adults, only about one-third of upper-level degree programs did so. Approximately one-quarter (26 percent) of all programs reported offering classes off-campus in community-based settings.

Articulation

What we asked about articulation:

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

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

Most of Arkansas's upper-level degree programs reported that their incoming students entered as an even mix of freshman and transfer students.

Three-quarters of bachelor's degree programs participating in the *Inventory* reported articulation agreements with early childhood associate degree programs, but only one-half of associate degree programs reported articulation agreements with bachelor's degree programs.

When asked to identify challenges facing their degree program, more than one-half of associate degree program leads indicated that there are articulation issues between two-year and four-year early childhood degree programs. One associate degree program lead said, "When students finish here and want to transfer, none of the courses are online [but] are four days a week during the day. Most students can't do this because they are single moms or have to work a job during the day, so when they hit this roadblock, they sometimes change majors or just stop." In contrast, only one-fourth of upper-level program leads believed articulation was an issue.

The *Inventory* also asked program leads what specific challenges students faced in transferring their associate degree credits into bachelor's degree programs. Almost one-third of programs reported that lower-division ECE courses did not transfer into bachelor's degree programs. Of note, more than one-third of program leads were not aware whether students experienced issues in transferring or not.

FINDING SIX: PROGRAM CHALLENGES
Faculty and Program Needs

Arkansas early childhood degree programs experience challenges related to time and resources required to fulfill faculty responsibilities, as well as the need for faculty members with specific expertise, such as teaching dual language learners. The majority of program leads, especially those teaching at the associate degree level, 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:

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

Faculty-Related Challenges

Half of upper-level program leads indicated that "faculty administrative responsibilities that interfere with time with students" is an issue in their program. One program lead stated that they are "overloaded with advising and other institutional things, so teaching extra courses strains [their] time." More than one-third of associate degree program leads also identified this issue.

More than one-half of both associate and upper-level degree program leads reported that the "need for additional faculty expertise in teaching young children who are dual language learners" was an issue in their program. Additionally, almost three-fourths of faculty members reported that there was inadequate funding for faculty travel, and more than one-half of faculty members identified a lack of resources for faculty professional development.

Program-Related Challenges

The most frequently reported challenge among degree programs was "difficulty recruiting and retaining students related to the low pay of the ECE field," identified by more than one-half of all degree programs.[9] However, program leads of associate degree programs were about twice as likely to identify this challenge as upper-division program leads.

More than 40 percent of program leads identified "lack of recognition of the value of early childhood from within the department or school" as a challenge. One program lead described the building debt on their lab school and noted that "unlike other lab schools, we feel that we are under-supported by the university.

[9] In 2015, the median wage for child care workers was $8.80, a 1-percent decrease since 2010 (Arkansas State Profile in Whitebook, McLean, & Austin, 2016).

Tuition is high and teacher pay is low because the cost of the lab school is not supported by the university, other than maintenance."

Among faculty members, about three-fourths identified "increased financial resources for students" as a need. Additionally, about one-half of faculty members reported that "resources for program planning and improvement," such as new course development, was needed.

Part 2: Early Childhood Higher Education, An Evolving Landscape

This section of the report examines how institutions of higher education are adapting to emerging research related to three key domains: family engagement, early mathematics, and dual language learners.

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

Faculty members consider the inclusion of family engagement to be important in the preparation of early childhood teachers. Multiple topics related to family engagement are embedded in degree programs, with a consistent age-group focus on preschoolers. Associate degree programs also focus on infants and toddlers, while upper-level degree programs also focus on school-age children. Faculty members expressed varied levels of interest in professional development in this topic area.

What we asked about family engagement:

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

We asked faculty members about:

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

The family engagement learning domain focuses on the environment of young children's relationships and the knowledge and skills that early childhood educators need in order to help families support children's development and learning. Over the past two decades, mounting evidence has demonstrated how family involvement in children's learning at home and school contributes to school success (Dearing & Tang, 2010; Reynolds & Shlafer, 2010). As a consequence, the importance of including family engagement in teacher preparation has gained traction, particularly in light of research suggesting limited attention in teacher education programs to building student competence in this area (Epstein, Sanders, & Clark, 1999; Nathan & Radcliffe, 1994; Shartrand, Weiss, Kreider, & Lopez, 1997).

Required Family Engagement Topics in Degree Programs

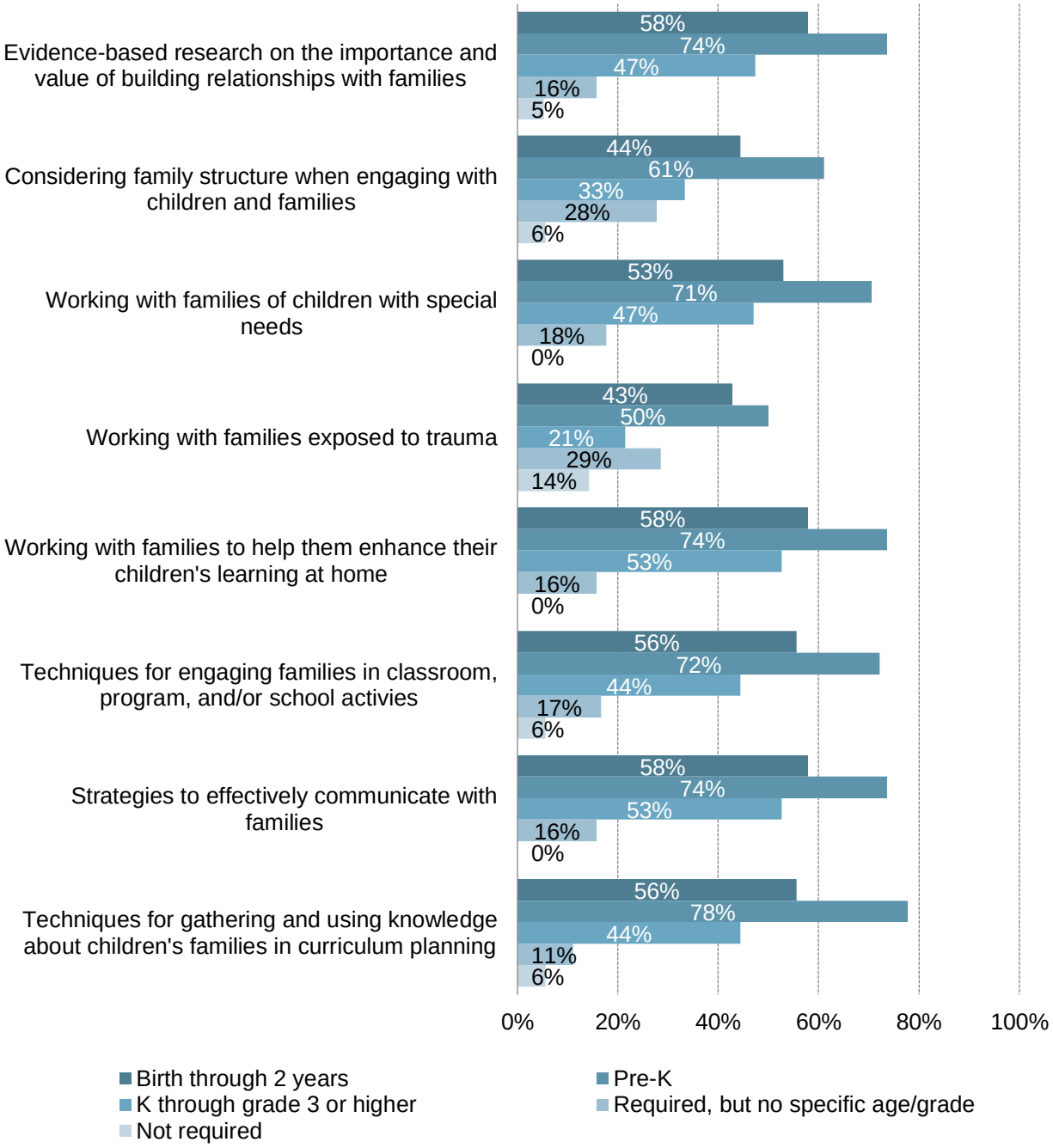
Program leads were asked about required course content and age-group focus related to eight topics of family engagement (see **Table 3** for the list of topics).

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

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

Across the eight topics, at least 85 percent of programs reported requiring the topic. Among the total programs that participated in the *Inventory*, the age group with the highest focus was preschool for each of the topics. For example, 71 percent of programs require course content on working with families of preschool-age children with special needs, but only 53 percent require this topic focused on infants and toddlers, and 47 percent require this topic specifically for school-age children (see **Figure 15**). Associate degree programs are as likely to focus on infants and toddlers as they are on preschoolers, but they are not likely to focus on school-age children. In contrast, upper-level degree programs are as likely to focus on school-age children as they are on preschoolers, but they are not likely to focus on infants and toddlers.

Figure 15. Required Coursework Related to Family Engagement
(N=14-19)



Faculty Attitudes About the Importance of Family Engagement in Degree Programs

The importance of understanding and implementing integrated strategies to engage families to support children's development and learning was considered "very important" by more than 80 percent of faculty members for practitioners working with infants and toddlers and preschool-age children. For practitioners working with school-age children, this topic was considered "very important" by fewer faculty members (69 percent).

Faculty members were about equally likely to give a "very important" rating to the inclusion of family engagement content in higher education programs for practitioners working with infants and toddlers as they were to give this same rating to content on socioemotional development. However, they were more likely to rate family engagement content as "very important" for those working with infants and toddlers than they were content regarding dual language learners and early math or literacy. For practitioners preparing to work with preschoolers, faculty members believed understanding family engagement topics was on par with supporting dual language learners, socioemotional development, and early math. Faculty rated the inclusion of family engagement content in higher education programs for practitioners working with school-age children less important than content related to other issues asked about in the *Inventory.*

Teaching Capacity and Experience Teaching Coursework on Family Engagement

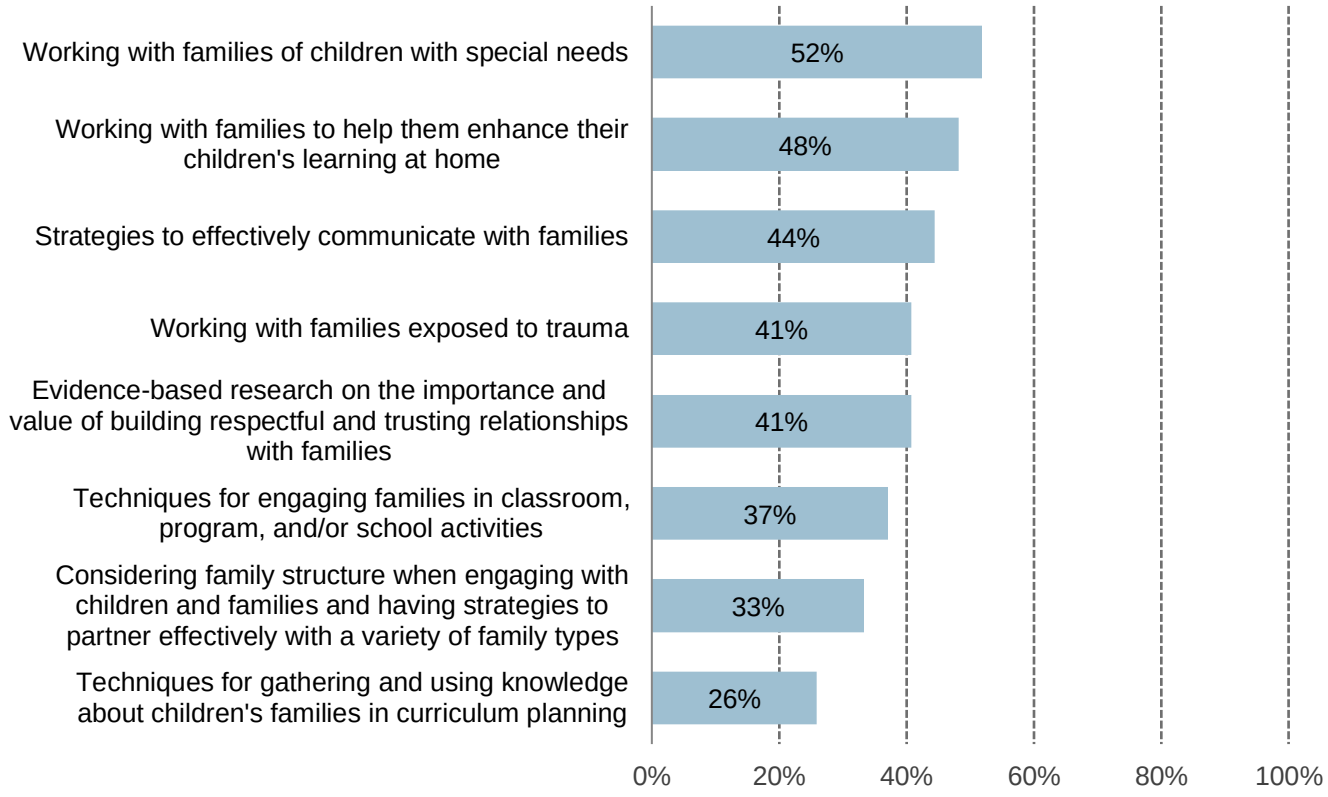
In addition to noting the importance of this topic, faculty members reported feeling capable of teaching content related to engaging with families. Almost 90 percent of faculty members noted that they felt capable of preparing teachers to "integrate families in partnerships to support children's learning." When asked about their current and recent experience teaching courses related to family engagement, almost 90 percent of faculty members reported that they had taught coursework related to "partnering with families to enhance children's learning in school and at home" during the past two years. Most often, faculty reported teaching this content embedded within a broader course, rather than as a separate course.

Faculty Participation and Interest in Professional Development on Family Engagement

About three-fourths (78 percent) of faculty members reported having participated in professional development related to family engagement in the past two years. The topic most commonly covered was "evidence-based research on the importance and value of building respectful and trusting relationships with families."

Using a Likert scale of 1 to 5, with 1 being “not at all interested” and 5 being “very interested,” faculty members were asked to rate their interest levels in eight topics related to family engagement. Interest varied across topics, with faculty members most interested in “working with families of children with special needs,” and “working with families to help them enhance their children’s learning at home” (see **Figure 16**).

Figure 16. Interest in Professional Development Related to Family Engagement Reported by Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory: Percentage Reporting "Very Interested" (N=27)



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

Faculty were equally likely to rate the inclusion of early mathematics "very important," compared to other content areas for practitioners working with preschoolers to school-age children. However, they were far less likely to consider early mathematics as very important for infants and toddlers. Most faculty members considered themselves prepared to teach early math content to practitioners working with preschoolers, but faculty were less likely to be confident in their ability to teach early math to practitioners working with infants, toddlers, and elementary-age children. Interest in ongoing math-related professional development varied by specific topic area.

What we asked about early mathematics:

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

We asked faculty members about:

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

The early mathematics domain addresses key areas of children's cognitive development and important foundational knowledge and intellectual skills associated with school success. The link between school success and math competency in young children has been documented in recent research, yet there is concern that teachers of our youngest children are not adequately prepared by institutions of higher education to assess or facilitate children's mathematical understanding and skills (Ryan, Whitebook, & Cassidy, 2014).

Required Early Mathematics Topics in Degree Programs

Program leads were asked about required course content and age-group focus related to 11 topics of early mathematics (see **Table 4**). All 11 early math topics were required by the vast majority of degree programs. When an age-group focus was required, programs were more likely to require a focus on preschool-age children than on infants and toddlers or school-age children. This finding was especially true for topics related to teaching children specific math skills, such as measurement and geometry skills.

Table 4. List of Early Mathematics Topics Included in the Arkansas Early Childhood Higher Education Inventory

Topic
Teaching children number sense
Teaching children operations and algebraic thinking
Teaching children measurement skills
Teaching children geometry skills
Teaching children mathematical reasoning/practices
Building on children's natural interest and using everyday activities to develop children's mathematical knowledge
Encouraging children's inquiry and exploration to foster problem solving and mathematical reasoning
Introducing explicit mathematical concepts through planned experiences
Creating a mathematically rich environment
Developing children's mathematical vocabulary
Assessing children's mathematical development to inform and individualize instruction

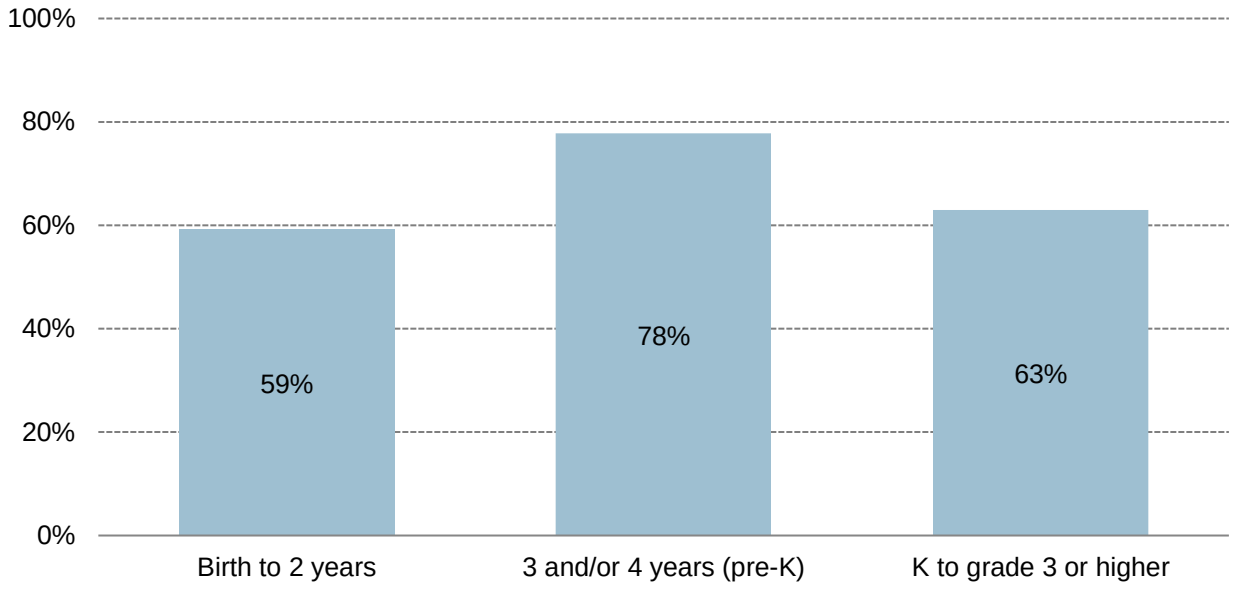
Faculty Attitudes About the Importance of Early Mathematics in Teacher Preparation Degree Programs

Faculty members were less likely to consider it "very important" to include the early mathematics domain in teacher preparation programs for practitioners working with infants and toddlers (44 percent) than for those working with preschoolers (81 percent) and school-age children (85 percent). Faculty members were far less likely to consider mathematics topics important for infants and toddlers than they were to consider socioemotional development (81 percent) or support for dual language learners (70 percent) important for the same age group.

Teaching Capacity and Experience Teaching Coursework on Early Mathematics Topics

In addition to the broad question regarding capability of preparing teachers to scaffold children's mathematical development, the *Inventory* also asked more specific questions related to faculty members' capacity to teach early-math related content. For each of the 11 specific math topics (see **Table 4**), three-fourths or more of faculty members reported being capable of preparing teachers working with preschool-age children. Fewer faculty members reported being capable of teaching the topics to practitioners working with infants and toddlers or the elementary grades (see **Figure 17** for an example).

Figure 17. Teaching Children Measurement Skills: Capability of Preparing Teachers Working With Children of Various Ages, as Reported by Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory (N=27)



Faculty members were asked whether they had taught "development of mathematical understanding" in the past two years and, if so, whether it was taught as a separate course or embedded within a broader course. Seventy percent of faculty members reported teaching "development of mathematical understanding" in the past two years. When taught, mathematical understanding was more likely to be embedded within a broader course rather than taught as a separate course.

Faculty Participation and Interest in Professional Development on Early Mathematics

Faculty members were asked if they had participated in professional development opportunities focused on early math development in the past three years (see **Table 5**). Although all faculty reported participating in some type of professional development, one-half of faculty members participating in the *Inventory* did not participate in professional development related to any of the early mathematics topics listed. Almost all faculty who reported participating in early mathematics professional development had attended professional development on the topic "teaching practitioners to implement instructional strategies that support mathematical understanding in children ages three and four." Participation in other professional development topics was reported less frequently.

Using a Likert scale of 1 to 5, with 1 being "not at all interested" and 5 being "very interested," faculty members were asked to rate their interest levels in five topics related to early mathematics. The topic in which the highest percentage of faculty members reported being "very interested" was "strategies to help

practitioners who struggle with mathematics build confidence in their ability to facilitate children's mathematical understanding and skill." The topic of "teaching practitioners to implement instructional strategies that support mathematical understanding in children in kindergarten through grade 3 or higher" garnered the least amount of interest, with only 27 percent of faculty members reporting they would be "very interested' in this topic.

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

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

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

Faculty members consider the inclusion of teaching young dual language learners (DLLs) to be important in the preparation of teachers; however, not all faculty members feel prepared to teach this topic. Similarly, while faculty members have an interest in participating in professional development related to DLLs, many of them have not recently done so. Various DLL topics are required in degree-program curricula, but there is a higher focus on preschool-age children than on infants and toddlers and school-age children.

What we asked about dual language learners:

Program leads were asked to identify course content topics related to teaching dual language learners and diverse families[10] that were required for the degree.

We asked faculty members about:

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

The dual language learning domain focuses on the knowledge and skills early educators need in order to support the development of young dual language learners.[11] Young DLLs are a rapidly growing population in the United States, as well as in Arkansas specifically. From 2006 to 2015, the growth in English-language learner enrollment in Arkansas public schools increased by roughly 85 percent (Bureau of Legislative Research, 2015). Most early educators will work with young DLLs at some point during their careers and need to understand effective teaching practices that support English language acquisition and the development of children's home language (National Academies of Sciences, Engineering, and Medicine, 2017). Despite the crucial role of early educators for this population and the growing recognition of the benefits of bilingualism, there is concern that many early educators are not adequately prepared to support dual language learners' development and learning critical to later success in school.

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

Required Dual Language Learner Topics in Degree Programs

Program leads were asked about required course content and age-group focus related to 10 topics concerning dual language learners (see **Table 6**). At least 90 percent of programs required each of the DLL topics besides "strategies to support the development of mathematical knowledge and understanding," which was required by 88 percent of programs. For each of the DLL topics, the most commonly reported age-group focus was preschool-age children. There were fewer requirements surrounding infants and toddlers who are dual language learners. For example, less than one-third of programs required content on using appropriate teaching strategies within various classroom language models for infants and toddlers. Across programs, there was an even smaller focus on DLLs in elementary school.

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

Topic	Focus on infants and toddlers is required by at least 50% of programs (N=16-17)
Importance and benefits of bilingualism for young children's development	✓
Role of home-language development in helping young children learn English	✓
Strategies to support the cognitive development of young DLLs	
Strategies to support the language development of young DLLs	✓
Strategies to support the literacy development of young DLLs	✓
Strategies to support the development of mathematical knowledge and understanding of young DLLs	
Strategies to support the socioemotional development of young DLLs	
How to use appropriate teaching strategies for young DLLs within various classroom language models	
How to use observation, assessment, and documentation to inform strategies for teaching DLLs	
Strategies for engaging families from linguistically diverse backgrounds	✓

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

The importance of understanding and implementing strategies to support dual language learners was considered "very important" by about three-fourths of faculty members (see **Box 3** in the previous section for information about how this assessment was conducted). However, faculty members were less likely to consider it as important as the domain of socioemotional development. Faculty members were more likely to consider the inclusion of teaching dual language learners "very important" for those teaching preschool-age children than for those teaching school-age children and infants and toddlers.

Teaching Capacity Related to Dual Language Learning

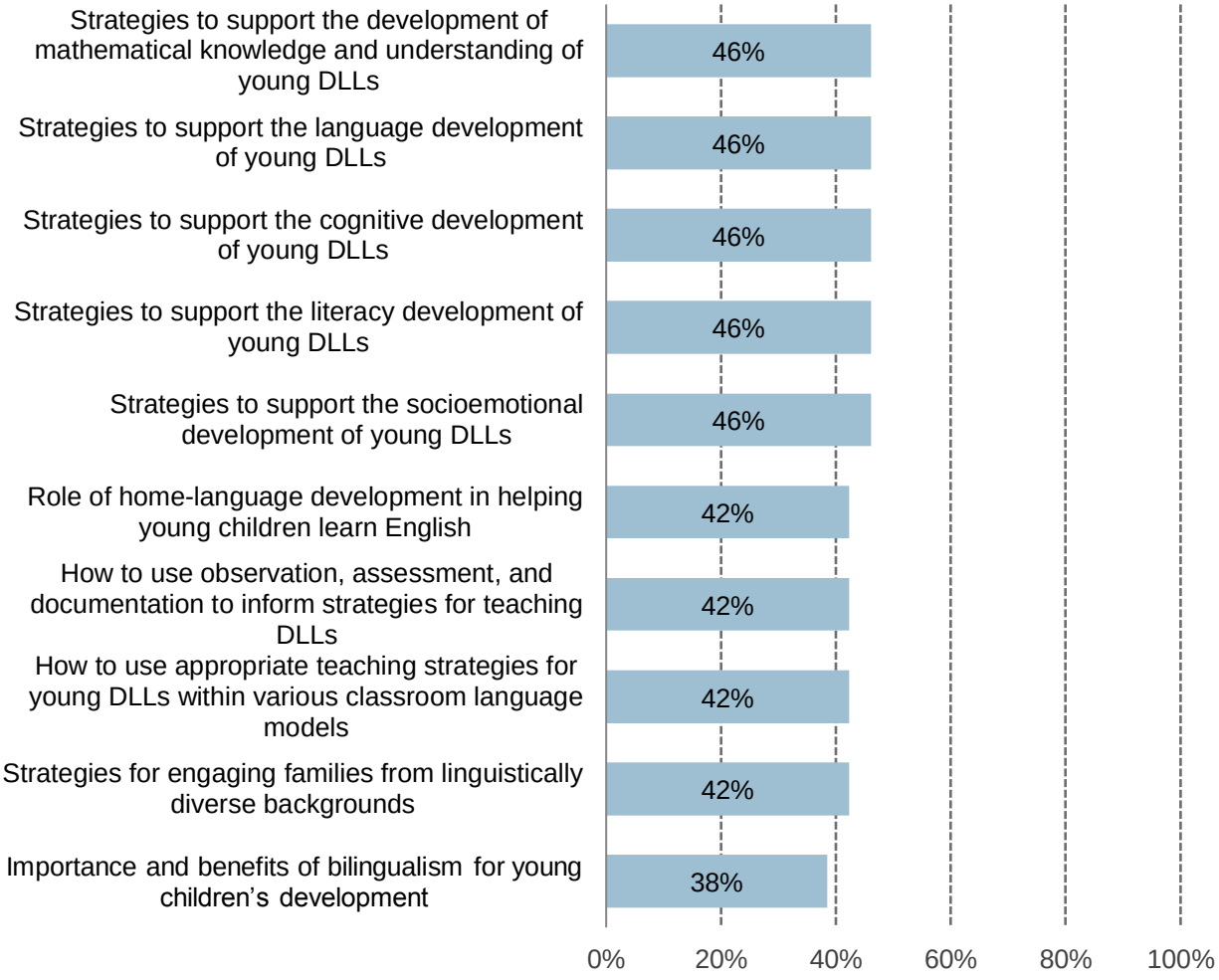
While the vast majority of faculty members across degree levels noted the importance of supporting dual language learners, faculty members felt the least prepared to teach this topic, compared to all the other topics asked about in the *Inventory*. Almost three-quarters of faculty noted that they felt capable of preparing teachers to "support the cognitive and social development of young DLLs" for those working with preschool-age children. This percentage decreased for those working with infants and toddlers and was even lower for those working with school-age children.

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

Faculty members were asked if they had participated in professional development opportunities focused on any of the 10 topics related to teaching dual language learners and diverse families in the past three years. The participation rate in professional development related to dual language learners was low; about four in 10 faculty members had not participated in professional development related to any of the 10 topics. Faculty members were most likely to have participated in professional development concerning the "role of home language development in helping young children learn English" and "strategies for engaging families from linguistically diverse backgrounds" and were least likely to have participated in professional development concerning "strategies to support the development of mathematical knowledge and understanding of young DLLs."

Using a Likert scale of 1 to 5, with 1 being "not at all interested" and 5 being "very interested," faculty members were asked to rate their interest levels in the 10 topics related to teaching dual language learners and diverse families. Although faculty participation in professional development focused on DLLs was low, faculty members expressed an interest in participating in future professional development opportunities. Interest was fairly consistent across the 10 topics related to teaching DLLs. Overall, about one-third to one-half of faculty members identified being very interested in professional development topics related to teaching DLLs (see **Figure 18**).

Figure 18. Interest in Professional Development Related to Dual Language Learners (DLLs) Reported by Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory: Percentage Reporting "Very Interested" (N=26)



Discussion and Recommendations

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

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

1. 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 practice. Until 2012, Arkansas's P-4, 4-8, and 9-12 certifications allowed early childhood higher education students to learn the unique developmental stages, pedagogical approaches, and teaching methods for specific ages of children. As is true with other states that administer one certification to teach all elementary grades, the transition to the K-6 and 7-12 licenses in Arkansas has likely influenced the higher education programs to emphasize instructional strategies most compatible with teaching children in the later elementary grades (Bornfreund, 2011; Orenstein, 2016). While evidence and experts identify the need to focus early childhood teacher preparation on ages prior to prekindergarten (IOM & NRC 2015), Arkansas's licensure change in 2012 moves the state further away from this goal. To rectify this regression, we recommend:

- Establishing a certification that begins at birth and goes through preschool, with the potential option to overlap with the early elementary grades. To support this effort, we suggest drawing upon existing information and lessons learned from other states regarding changes they have made to early education and overlapping credentials.

Additionally, standards that apply to early childhood teachers and administrators in private settings across Arkansas vary according to program type and, in general, are minimal (e.g., many positions only require minimal experience or ECE 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 Arkansas offer programs that vary widely in course content and field experiences required for student learning, making it a challenge to ensure that all degree program students have opportunities to engage in the type of content and field experiences recommended by the Institute of Medicine (IOM) and National Research Council (NRC).

Clarity among degree programs as to their purpose and scope is required in the effort to align with the IOM and NRC recommendations and to ensure that all children receive the same quality of education regardless of their education setting. To initiate this process, we recommend:

- Establishing a more uniform system for certifying teachers and administrators throughout the state that reflects foundational knowledge for early educators across age groups and auspices aligned with the Arkansas Child Development and Early Learning Standards, the Arkansas Academic Standards for Math, and the Arkansas Guide for Promoting Family Engagement and that articulates a streamlined pathway for lead and advanced teacher, administrator, and professional support roles; and
- Aligning early education degree program course requirements with state standards and competencies, such as the Arkansas Child Development and Early Learning Standards.

2. Strengthen program content and equity across the age span

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

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

- **Child development and pedagogy,** preparing teachers to work with children of different ages, including infant development and learning across multiple domains.

- **Early mathematics,** addressing:

    - Children's mathematical understanding from infancy through early elementary grades; and
    - Developmentally appropriate pedagogy for early mathematics instruction, in particular for infants, toddlers, and preschool-age children; and

- **Dual language learners,** emphasizing:

    - Recognition of the value and importance of supporting children's home-language development as they also learn English, with an emphasis on very young children;
    - Strategies for using observation and assessment in teaching young dual language learners and strategies to support the mathematical, literacy, language, cognitive, and socioemotional development of young dual language learners; and
    - An understanding of the strengths and needs of adults from diverse linguistic, racial/ethnic, and cultural backgrounds to support their entry into and retention in the ECE field.

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

Because most early childhood higher education students in Arkansas are non-traditional students, a focus on providing access to higher education and effective supports to current students is imperative. We recommend implementing or expanding the following supports for early childhood students across the state to ensure that a diverse current and incoming workforce can successfully meet standards and attain competency:

- Blended and non-traditional formats for degree programs;
- Alternative class schedules and locations;
- Academic counseling;
- Cohort models; and
- Financial resources for students.

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

In Arkansas and across the country, increasing numbers of students are entering the higher education system as community college students with the intent to transfer to four-year colleges and universities. However, there are inconsistencies in the practice and perception of articulation agreements between two- and four-year institutions. We recommend:

- Guaranteeing that all community colleges have an articulation agreement with at least one four-year institution that is geographically accessible to students attending the community college; and
- Referencing successful articulation agreements in other states to ensure that Arkansas articulation agreements are comprehensive and that students have all the support needed to take full advantage of the agreements.

5. Strengthen the application of field-based learning experiences

Although most early childhood higher education degree programs in Arkansas require students to participate in at least one practicum course, there is great variation in the characteristics of those practicum experiences. Because less than one-half of programs require students to work with infants/toddlers, families, dual language learners, or children with disabilities during their practica, graduates from Arkansas degree programs have had highly disparate field-based learning experiences that may not reflect the realities of their current or future environments.

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

- Providing resources and support to faculty members across degree programs and institutions to develop degree program standards for the timing, frequency, and duration of field-based experiences, with opportunities focused on children from infancy through preschool and the differentiation of experiences for pre- and in-service students; and

- Providing field-based learning opportunities for students to engage with:

    - Infants and toddlers;
    - Children with special needs;
    - Children who are dual language learners;
    - Families; and
    - Community organizations that support children and families.

6. Build a leadership pipeline

In Arkansas, K-12 principals are required to have four years of teaching experience, hold a master's degree, and pass an administrator assessment (Arkansas Department of Education, 2015). In contrast, child care and preschool center directors in private settings may satisfy the qualification requirements by holding multiple combinations of education and experience (Arkansas Department of Human Services, 2015). Mentors and coaches in K-12 are typically drawn from the teaching ranks and receive specific training (Isner et al., 2011), yet there are no widely applied qualifications for mentors and coaches working with teachers of younger children. Similarly, educational requirements for early childhood teachers vary and, in general, are minimal, often requiring only minimal experience or coursework. In light of these inconsistent and nominal expectations for ECE leadership positions and a lack of a leadership pipeline from the classroom to leadership positions, it is not surprising that across degree levels, program course content was not routinely offered to prepare practitioners for early childhood supervisory, administrative, or other leadership roles.

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

- Identifying the appropriate course of study and degree level (associate, bachelor's, graduate) for each leadership role based on specific skills and knowledge;
- 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 participating in the *Inventory* indicate a faculty workforce that is primarily monolingual and unprepared to prepare teachers to work with children who are dual language learners. Due to the rapidly growing population of dual language learners in Arkansas schools (Bureau of Legislative Research, 2015), there is a need for early childhood educators to understand effective teaching practices that support English-language acquisition and the development of children's home language (National Academies of Sciences, Engineering, and Medicine, 2017). To increase the diversity of the ECE faculty, we recommend:

- Investigating strategies used in other professions (e.g., health, education, social welfare) to create faculty development programs — such as a fellowships or grants — intended to increase diversity among faculty, particularly in key leadership positions; and
- Establishing required professional development experiences focused on working with children and families from linguistically diverse backgrounds.

7. Increase faculty supports

Early childhood degree programs report being under resourced and requiring additional support to allow faculty members to engage individually with students, support student success, and engage in program planning and improvement. Early childhood degree programs in Arkansas rely heavily on faculty to perform program administrative duties, which constrains the time they have to dedicate to students. Faculty 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, particularly regarding dual language learners.

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 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;
- Cultivating professional development opportunities that align with faculty interests and areas of identified need, such as early mathematics and developmentally appropriate practice in infant and toddler settings; 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. Many factors contribute to a system of early childhood education that provides high-quality, equitable education for all children. Ensuring economic security, a healthy workplace environment, and adequate teacher preparation for early childhood educators, as well as compiling comprehensive workforce data, all play a role in providing a high-quality education for our youngest learners. Reformation of the early childhood higher education system in Arkansas must go hand in hand with the review and improvement of all areas of the early childhood system.

However, the current early childhood service system and infrastructure — of which higher education is a cornerstone — is poorly integrated, ascribing differing expectations for teacher preparation across the birth-to-age-eight continuum and assigning different resources to teachers across settings. In addition, the infrastructure and financing levels of the current early education system undervalues and poorly compensates its workforce, requiring innovative solutions to attract and retain skilled and stable teachers. An early care and education system that is fully prepared to support the well-being of both young children and the adults who educate them calls for coordinated efforts on multiple fronts.

This report provides a portrait of Arkansas's early childhood higher education landscape amid efforts to invest in, strengthen, and coordinate early childhood workforce development efforts. A strong preparation system for Arkansas's early childhood teachers and administrators is central to these efforts aimed at ensuring that all young children in Arkansas have access to high-quality early learning experiences.

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Appendices

Appendix A: Methodology

Mapping

Through an extensive document review, CSCCE identified Arkansas's early childhood higher education degree programs by collecting information on each college or university, the departments in which the programs are housed, and the degrees and certificates offered.

During the winter of 2016-2017, CSCCE compiled a comprehensive list of institutions offering early childhood degrees. To identify community colleges and universities for participation in the *Inventory*, our research team conducted an Internet search of early childhood education-related degree programs in the state of Arkansas. This search included terms such as "early childhood education," "child studies," and "human development and family studies."[12] We also referenced the National Association for the Education of Young Children (NAEYC) Early Childhood Higher Education Directory, the Arkansas Department of Higher Education website, the Arkansas Community Colleges website, and a list of institutions provided by staff from the Arkansas Department of Human Services, Division of Child Care and Early Childhood Education.

For each college and university identified, we conducted an extensive Internet search to identify:

- Early childhood degree offerings;
- Departments in which early childhood degree programs were housed;
- Early childhood certificates and other programs offered; and
- Additional contact information for the dean or program coordinator.

After compiling information about the programs, CSCCE shared the list with the Arkansas Higher Education Cohort for assistance in confirming or clarifying the above information.

A letter was emailed to each contact, introducing CSCCE, describing the purpose of the *Inventory*, and identifying the Bill & Melinda Gates Foundation as the funding source for the *Inventory*. We then attempted to contact, via email and telephone, the identified deans or program coordinators to verify the information gathered through our various sources. Institutions that actually did not offer an early childhood degree were excluded from the sample (e.g., an identified program focused on developmental psychology, but with no mention of early education or of preparing students to work as classroom teachers, or programs that were no longer active).

[12] Since the *Inventory* is focused on formal degree offerings available at institutions of higher education, programs that solely offered a credential or certificate were not included in the *Inventory*. In addition, programs offered exclusively online by national, for-profit institutions of higher education were also excluded.

Arkansas's Population of Early Childhood Higher Education Programs

During our initial research of early childhood higher education degree programs in Arkansas, we identified 29 institutions of higher education offering a total of 46 early childhood degree programs. Among these, 16 were community colleges, which offered 19 early childhood associate degree programs. Thirteen universities (nine public and four private) offered three associate degree programs, seven bachelor's degree programs, and five master's degree programs in early childhood. We then emailed the dean or coordinator of each program – for the remainder of this report, we will refer to these faculty and staff members as "program leads" – and scheduled phone interviews. During these phone calls and/or with more in-depth Internet research, we confirmed 23 institutions of higher education currently offering a total of 30 early childhood degree programs (see **Table A-1**). **Tables A-2** and **A-3** display the early childhood degrees offered by these institutions.

Program Module

Using an online survey tool completed by each degree program lead, this module collects information on: program content and age-group focus; connections to state standards; methods of student assessment; types, sequencing, duration, and supervision of field-based experiences; student supports; and challenges currently faced by the institution.

Sample Development

During the telephone call with the program leads, CSCCE identified the appropriate person to respond to the Program Module of the *Inventory*. Typically, this was a department chair or program coordinator. We then asked the potential respondent whether they were willing to participate. Of the 23 institutions of higher education offering early childhood degree programs, 78 percent of the institutions agreed to participate in the *Inventory*, including 79 percent of the community colleges (n=11) and 78 percent of the public and private universities (n=7) (see **Table A-1**).

Table A-1: Population of Institutions of Higher Education (IHE) in Arkansas Offering Early Childhood Education Degrees

Program Type	Number of IHE Identified as Offering ECE Degree	Number of IHE Agreeing to Participate in the Inventory	Number/Percentage of IHE That Completed at Least One Survey	
			Number	Percentage
Community Colleges	14	11	8	73%
Universities	9	7	7	100%

For those institutions offering early childhood degree programs at multiple levels (e.g., bachelor's and master's degrees), these programs were surveyed separately. For those institutions offering more than one degree program at the same level (e.g., a bachelor's degree in early childhood education and a bachelor's degree in child and adolescent development), a member of our research team engaged in a phone conversation with the identified program lead prior to sending the online survey, in order to determine the degree of variability among these different degree programs (e.g., some differed only with respect to elective courses) and whether more than one version of the Program Module should be sent for them to complete. As a result, some institutions were sent one Program Module to be completed for multiple degree programs at the same level.

Table A-2: Early Childhood Associate Degree Programs in Arkansas

Name of Institution	Associate Degree Program(s)
North West Arkansas Community College	A.A.S.
University of Arkansas Community College at Morrilton	A.A.S.
University of Arkansas at Montecello	A.A.S.
University of Arkansas Community College at Hope	A.A.S.
College of the Ouachitas	A.A.S.
University of Arkansas Community College at Batesville	A.A.S.
Southeast Arkansas College	A.A.S.
Arkansas Northeastern College	A.A.S./A.S.
Southern Arkansas University Tech	A.P.S.
Phillips Community College of the University of Arkansas	A.A.S.
Arkansas Tech University	A.S.
Pulaski Technical College	A.A.S.
Shorter College	A.A.
University of Arkansas – Fort Smith	A.A.S.
East Arkansas Community College	A.A.S.
South Arkansas Community College	A.A.S.
ASU-Beebe	A.A.S.

Table A-3: Early Childhood Bachelor's and Graduate Degree Programs in Arkansas

Name of Institution	Bachelor's Degree Program(s)	Graduate Degree Program(s)
Henderson State University	B.S. (2)	M.A.T. M.S.E.
Ouachita Baptist University	B.A.	
Arkansas State University – Jonesboro		M.S.E. M.S.
University of Arkansas at Pine Bluff	B.A.	
Arkansas Tech University	B.P.S.	
University of Arkansas – Fayetteville	B.S.	
Harding University	B.A.	M.A.T.

Data Collection

The Program Module was emailed to all respondents using Qualtrics, an online survey software program. The Program Module was open for respondents for approximately 40 days during the spring 2017 semester.

Response Rate

A total of 23 program surveys were emailed to the degree programs: 14 to associate degree programs; five to bachelor's degree programs; and four to master's degree programs. The final sample consisted of 11 associate and eight upper-level degree program surveys.[13] The response rate for associate degree programs was 79 percent, and for upper-level degree programs, it was 89 percent (see **Table A-4**).

Table A-4: Response Rate for the Program Module of the Arkansas Early Childhood Higher Education Inventory

Program Type	Number of Program Modules Administered*	Program Module Response Rate	
		Number	Percentage
Associate	14	11	79%
Upper-level	9	8	89%

*This includes only institutions that agreed to participate in the *Inventory*. See **Table A-1**.

[13] The category of upper-level degree programs consists of five bachelor's degree programs and three master's degree programs. Due to the small sample size and in order to protect the identity of these institutions, all analyses of upper-level degree programs will be reported out of the total of all eight programs.

Program Module Content

The Program Module for degree programs included closed-ended questions focusing on the following topics:

- Goals of the early childhood degree program related to training students for specific job roles and early childhood settings;
- Format in which the degree was offered (e.g., online/distance learning; traditional/on-campus program);
- Program content and age-group focus, including:
  - Course content related to early childhood administration and leadership (asked if offered, not required);
  - Course content to prepare students for a variety of professional development service roles (for example, as mentors, coaches, quality improvement staff, or trainers); and
  - Course content related to self-reflection and awareness of culture, bias, and discriminatory practices;
- Structure of instruction on early childhood topics (e.g., whether content areas are taught as a separate course and/or as part of a broader course covering multiple topics);
- Coursework alignment with state and national ECE standards, and degree program articulation;
- Strategies to assess student competencies;
- Clinical experiences for students, i.e., student teaching and/or practicum experiences;
- Student population, including:
  - Target: Pre-service teachers and/or experienced teachers; and
  - Number of students enrolled and number attaining degrees;
- Available student services;
- Number of faculty members teaching in the degree program; and
- Challenges facing the degree program.

Data Analysis

Using Stata/SE 14.2 data analysis and statistical software, we computed frequencies for all questions, by program degree level (associate and upper level). Data are reported by program level or type.

Faculty Module

Using an online survey tool completed by all faculty members teaching in a given degree program, the Faculty Module collects information on faculty employment status, teaching experience and expertise, professional development experiences and needs, and past experience within the early childhood field.

Sample Development

We attempted to survey all faculty members employed at each college or university identified as offering an early childhood degree program. For each of the institutions, our telephone conversation with the program lead included a request for a list of names and email addresses for all full- and part-time/adjunct faculty members teaching in the early care and education degree program. Sixteen of the 18 institutions of higher education participating in the *Inventory* sent CSCCE a faculty list, and these names served as the sample universe for the Faculty Module. If the program lead also taught in the early childhood program, they were included in the Faculty Module sample.

A total of 51 surveys were emailed to individual faculty members, resulting in an eligible sample of 29 community college and 22 university faculty members. The final sample consisted of 25 faculty members. Of the faculty members who completed a survey, 17 teach in associate degree programs, and eight teach in bachelor's degree programs. The response rate for community college faculty was 52 percent and for university faculty, 59 percent (see **Table A-5**).[14] While we cannot assume that findings from this module are representative of all early childhood teacher educators in the state, as documented in the body of this report, findings from the Faculty Module concerning course content topics covered and age-group focus were consistent with those from the Program Module.

Data Collection

Each faculty member received a letter from CSCCE describing the *Inventory* and encouraging participation. The Faculty Module was emailed to all faculty members identified for the sample using Qualtrics. The Faculty Module was open for respondents for approximately 40 days during the spring 2017 semester.

Faculty Module Content: All Degree Types

The Faculty Module included closed-ended questions focusing on the following topics:

- Demographics;
- Educational background and experience in the early childhood field;
- Current employment;
- Faculty members' opinions on the importance of topic areas included in higher education teacher preparation;
- Faculty members' capacity to teach different domains;
- Current teaching experience;
- Professional development participation and interest; and
- Resources that would be helpful to the degree program.

[14] Two early childhood master's degree faculty members completed the *Inventory*. However, their responses are not included in this report. Additionally, two faculty members reported working in both a bachelor's degree and master's degree program. They were included in the bachelor's degree faculty in this report.

Response Rate

Table A-5: Response Rate for the Faculty Module of the Arkansas Early Childhood Higher Education Inventory

Faculty Type	Number of Faculty Modules Administered*	Number of Faculty Member Responses	Faculty Module Response Rate
Community College	29	15	52%
University	22	10	45%
TOTAL	51	25	49%

*This number is adjusted for email bounces and reflects the eligible sample from the faculty list supplied by program leads.

Data Analysis

Using Stata/SE 14.2 data analysis and statistical software, we computed frequencies for all questions, for faculty members teaching at each degree level (associate, bachelor's, and graduate).

Appendix B:
Early Childhood Degree Programs

What we asked about program goals, number of faculty teaching, the student population, and student services:

The *Inventory* asked program leads to select the primary goal of their degree programs. The options included:

- To prepare students for teaching and/or administrative roles *only* in early childhood education settings, such as preschools, child care centers, and family child care homes, for children birth to five;
- To prepare students for teaching and/or administrative roles in early childhood *and* elementary education settings;
- To prepare students for the roles of early interventionist or early childhood special educator;
- To prepare students for multiple roles involving young children, working in many types of settings; and
- To prepare students for careers as researchers or college-level faculty members.

The *Inventory* asked program leads the number of full-time and part-time/adjunct faculty members teaching in the degree program during the spring 2017 term.

The *Inventory* asked program leads a series of questions about the students in their programs. Program leads were first asked to indicate their target student population. The options included:

- Adults already working in early childhood settings;
- Pre-service students; and
- A mix of both groups.

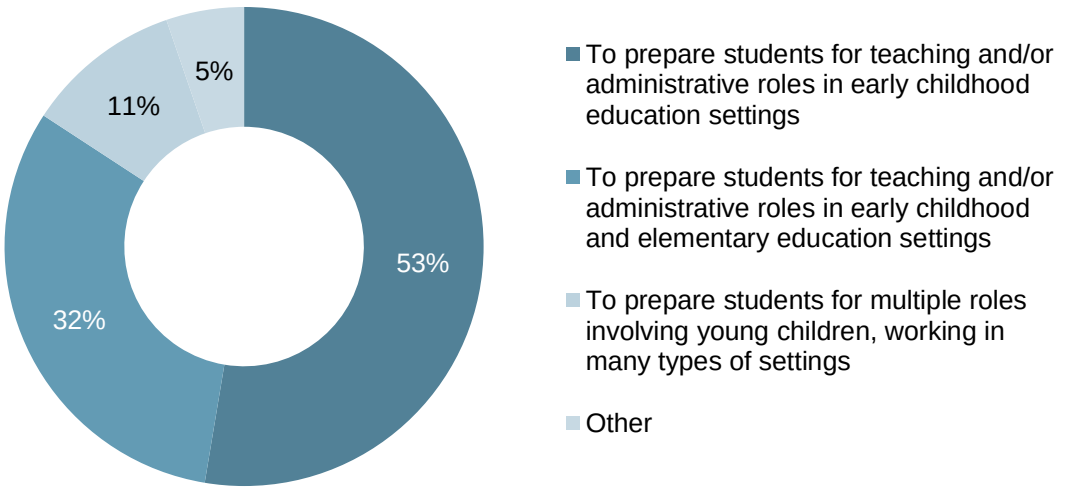
They were then asked to estimate the number of students registered in the degree program and the number of degrees conferred during the 2015-2016 academic year.

Finally, they were asked to indicate which services, if any, were offered to students in the degree program. These included three general categories of student services:

- Skills support, such as academic tutoring and assistance with technology;
- Counseling support, such as academic and financial aid counseling; and
- Access support, such as classes in convenient locations and at convenient times (e.g., evenings, weekends).

Primary Goals of Arkansas Early Childhood Degree Programs

Figure B-1: Primary Goal of Arkansas Early Childhood Degree Programs (N=19)



Number of Faculty Members Teaching in Arkansas Early Childhood Degree Programs

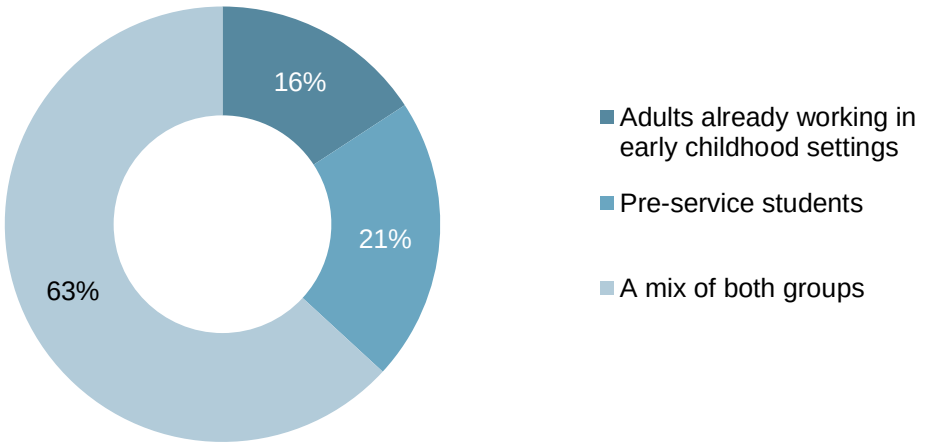
Table B-1: Number of Faculty Members Teaching in Degree Programs During Spring 2017

Number of Faculty	All Degree Levels
Full-Time Faculty	
Mean	2.5
Range	0–10
	N=15
Part-Time/Adjunct Faculty	
Mean	1.5
Range	0–5
	N=17

Students Served in Arkansas Early Childhood Degree Programs

Target Student Population

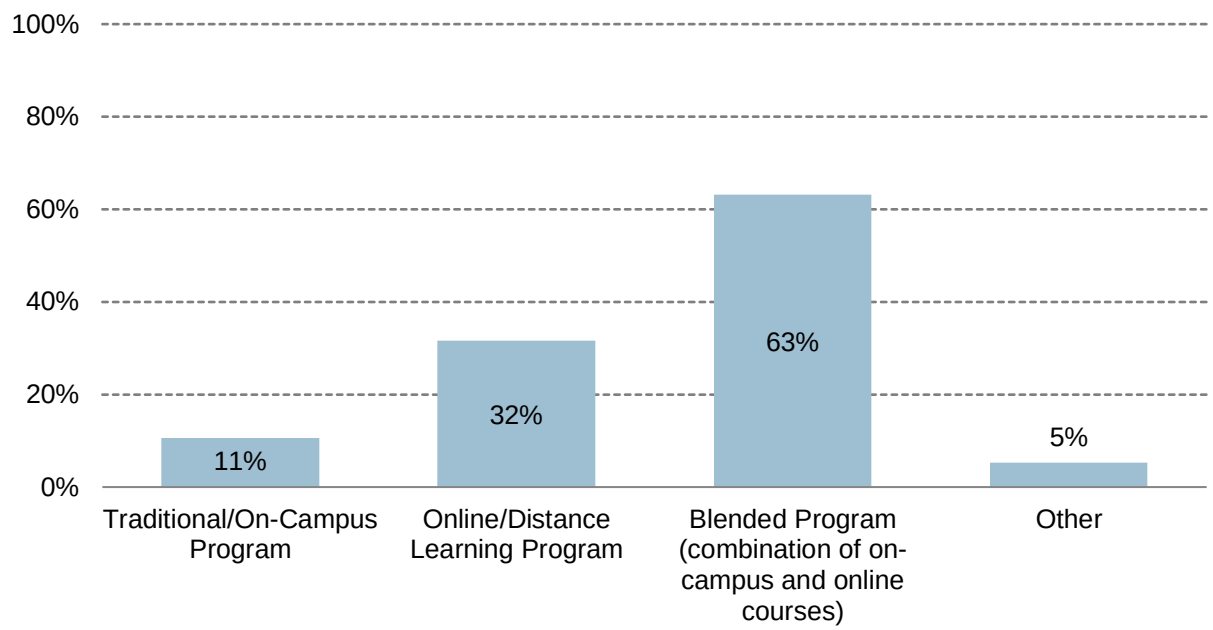
Figure B-2: Target Student Population of Arkansas Early Childhood Degree Programs (N=19)



Format of Degree Program

Program leads were asked about the formats in which students are able to take courses to complete their degrees.

Figure B-3: Format of Arkansas Early Childhood Degree Programs
(N=19)



Student Services

Degree programs reported that students were offered a variety of services to help them access their education and succeed in their educational careers. These services spanned three general categories: counseling support, such as academic and financial aid counseling; access support, such as classes in convenient locations and at convenient times (e.g., evenings, weekends); and skill support, such as academic tutoring and assistance with technology.

Figure B-4: Student Services Offered in Arkansas Early Childhood Degree Programs: Counseling Support (N=19)

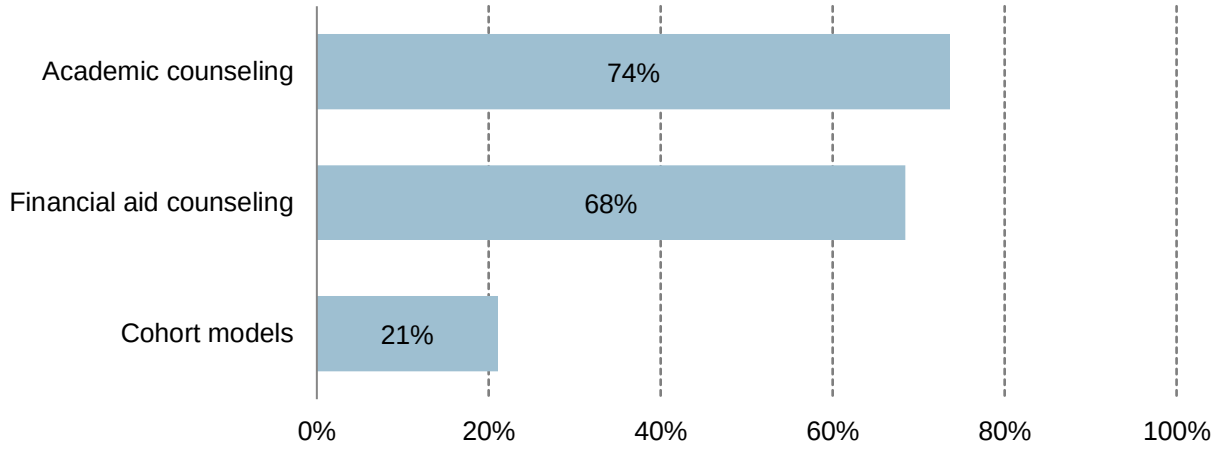


Figure B-5: Student Services Offered in Arkansas Early Childhood Degree Programs: Access Support (N=19)

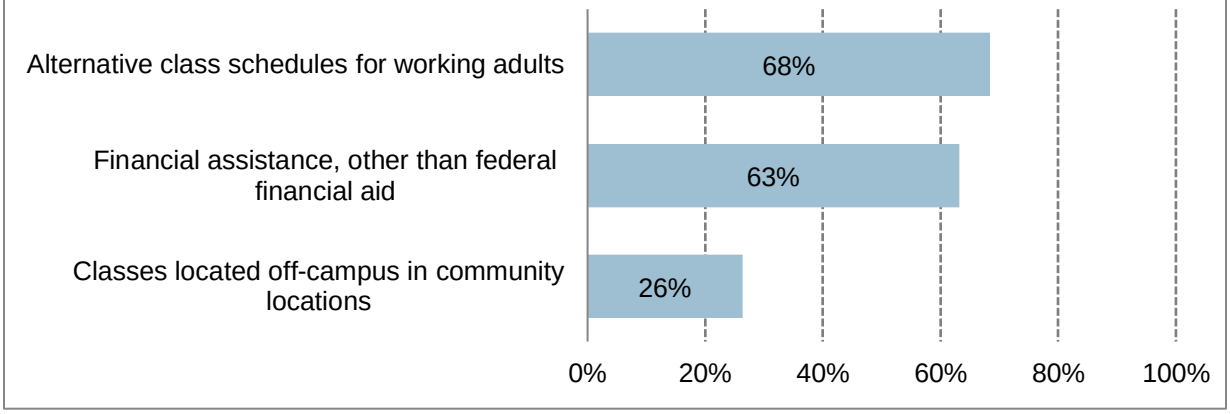
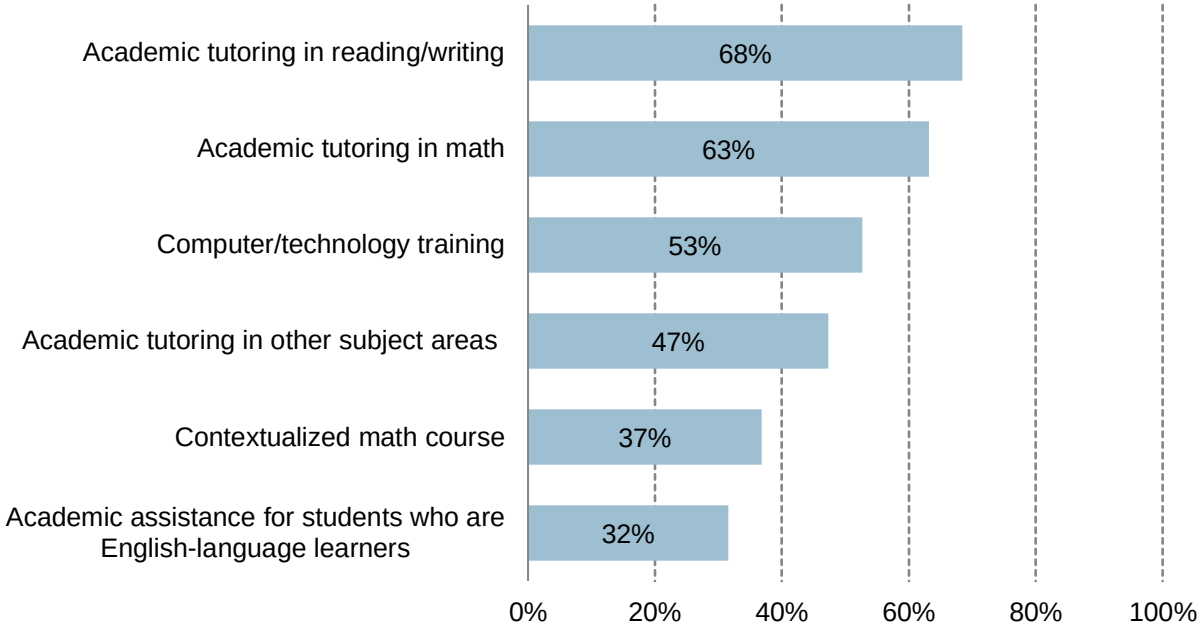


Figure B-6: Student Services Offered in Arkansas Early Childhood Degree Programs: Skill Support (N=19)



Content and Age-Group Focus of Arkansas Early Childhood Degree Programs

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

The *Inventory* asked program leads to identify the topics required for the degree. Topics were categorized into broad areas:

- Child development and learning;
- Teaching diverse child populations;
- Teaching and curriculum;
- Teaching skills in early childhood settings;
- Early childhood administration and leadership (offered, not required);
- Family engagement;
- Early mathematics;
  - Development of young children's mathematical understanding; and
  - Teaching young children math skills; and
- Teaching dual language learners.

Respondents were then asked to specify the age-group focus of the required topics. The three age groups were:

- Infants and toddlers (birth to age two);
- Preschool (age three and/or four); and
- Kindergarten through third grade or higher.

Program leads were asked if the degree program required coursework related to self-reflection and issues of culture and bias and whether programs offered coursework to prepare students to provide professional development services (e.g., mentoring, coaching, training).

Finally, program leads were asked about course structure and required student assessments.

Child Development and Learning

Figure B-7: Required Coursework Related to Child Development and Learning (N=19)

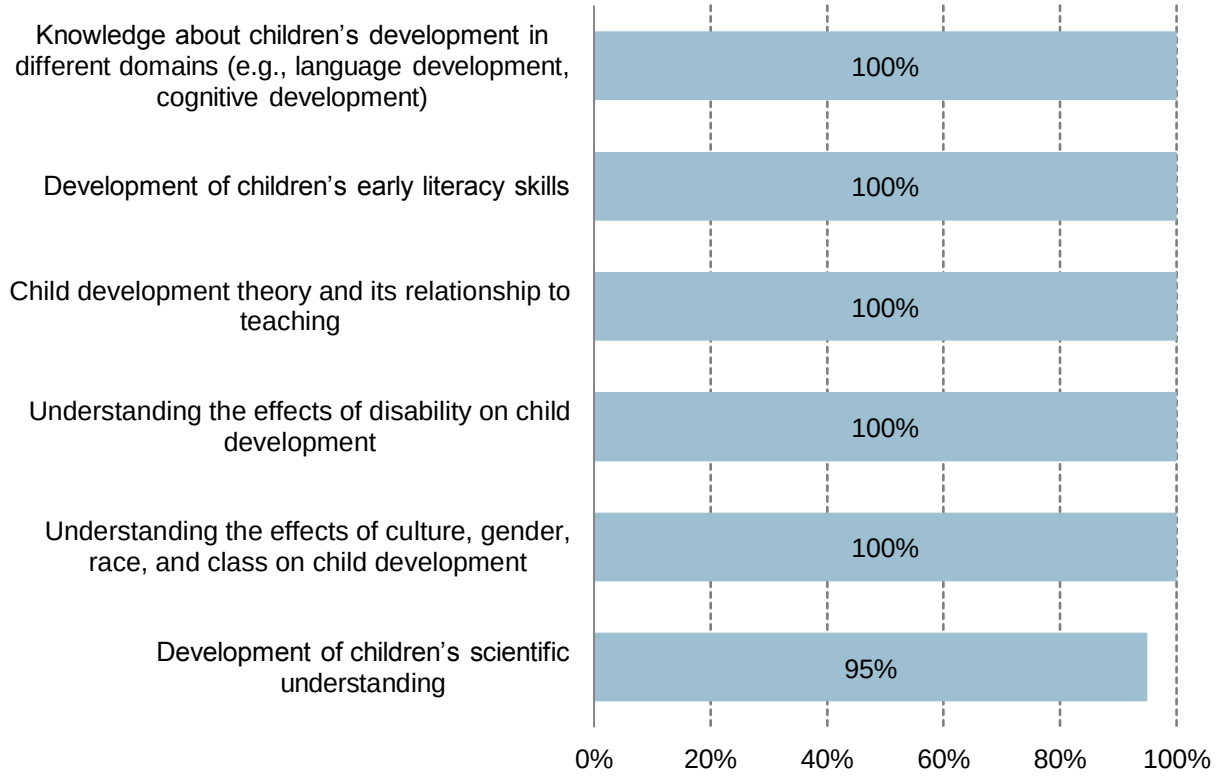


Table B-2: Coursework Related to Child Development and Learning: Required Age-Group Focus

Required age-group focus of topic and percentage of programs not requiring this content

Age-Group Focus	All Degree Programs
Knowledge about children's development in different domains (e.g., language development, cognitive development)	
Birth to 2 years	79%
3 and/or 4 years (pre-K)	89%
K-grade 3 or higher	63%
Required, but no age-group focus	5%
Content area not required	0%
	N=19
Development of children's early literacy skills	
Birth to 2 years	74%
3 and/or 4 years (pre-K)	89%
K-grade 3 or higher	58%
Required, but no age-group focus	5%
Content area not required	0%
	N=19
Child development theory and its relationship to teaching	
Birth to 2 years	84%
3 and/or 4 years (pre-K)	89%
K-grade 3 or higher	63%
Required, but no age-group focus	5%
Content area not required	0%
	N=19
Understanding the effects of disability on child development	
Birth to 2 years	79%
3 and/or 4 years (pre-K)	84%
K-grade 3 or higher	53%
Required, but no age-group focus	11%
Content area not required	0%
	N=19
Understanding the effects of culture, gender, race, and class on child development	
Birth to 2 years	79%
3 and/or 4 years (pre-K)	89%
K-grade 3 or higher	63%
Required, but no age-group focus	5%
Content area not required	0%
	N=19
Development of children's scientific understanding	
Birth to 2 years	68%
3 and/or 4 years (pre-K)	74%
K-grade 3 or higher	53%
Required, but no age-group focus	5%
Content area not required	5%
	N=19

Teaching Diverse Child Populations

Figure B-8: Required Coursework Related to Teaching Diverse Child Populations (N=19)

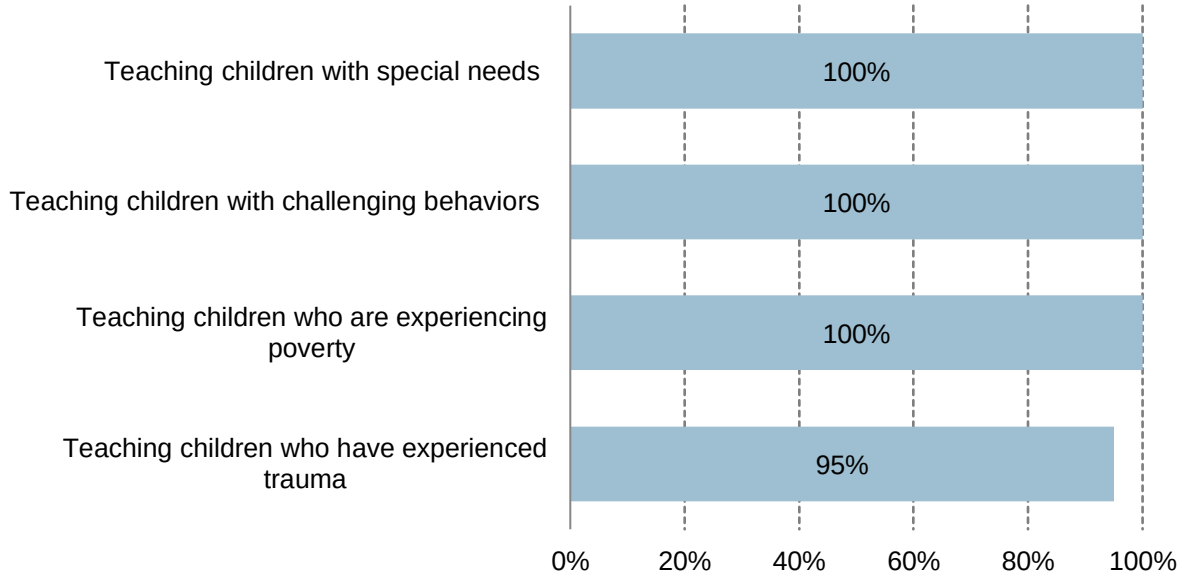


Table B-3: Coursework Related to Teaching Diverse Child Populations: Required Age-Group Focus

Required age-group focus of topic and percentage of programs not requiring this content

Age-Group Focus	All Degree Programs
Teaching children with special needs	
Birth to 2 years	74%
3 and/or 4 years (pre-K)	84%
K-grade 3 or higher	53%
Required, but no age-group focus	11%
Content area not required	0%
	N=19
Teaching children with challenging behaviors	
Birth to 2 years	74%
3 and/or 4 years (pre-K)	84%
K-grade 3 or higher	53%
Required, but no age-group focus	11%
Content area not required	0%
	N=19
Teaching children who are experiencing poverty	
Birth to 2 years	74%
3 and/or 4 years (pre-K)	84%
K-grade 3 or higher	53%
Required, but no age-group focus	11%
Content area not required	0%
	N=19
Teaching children who have experienced trauma	
Birth to 2 years	58%
3 and/or 4 years (pre-K)	74%
K-grade 3 or higher	42%
Required, but no age-group focus	16%
Content area not required	5%
	N=19

Teaching and Curriculum

Figure B-9: Required Coursework Related to Teaching and Curriculum (N=19)

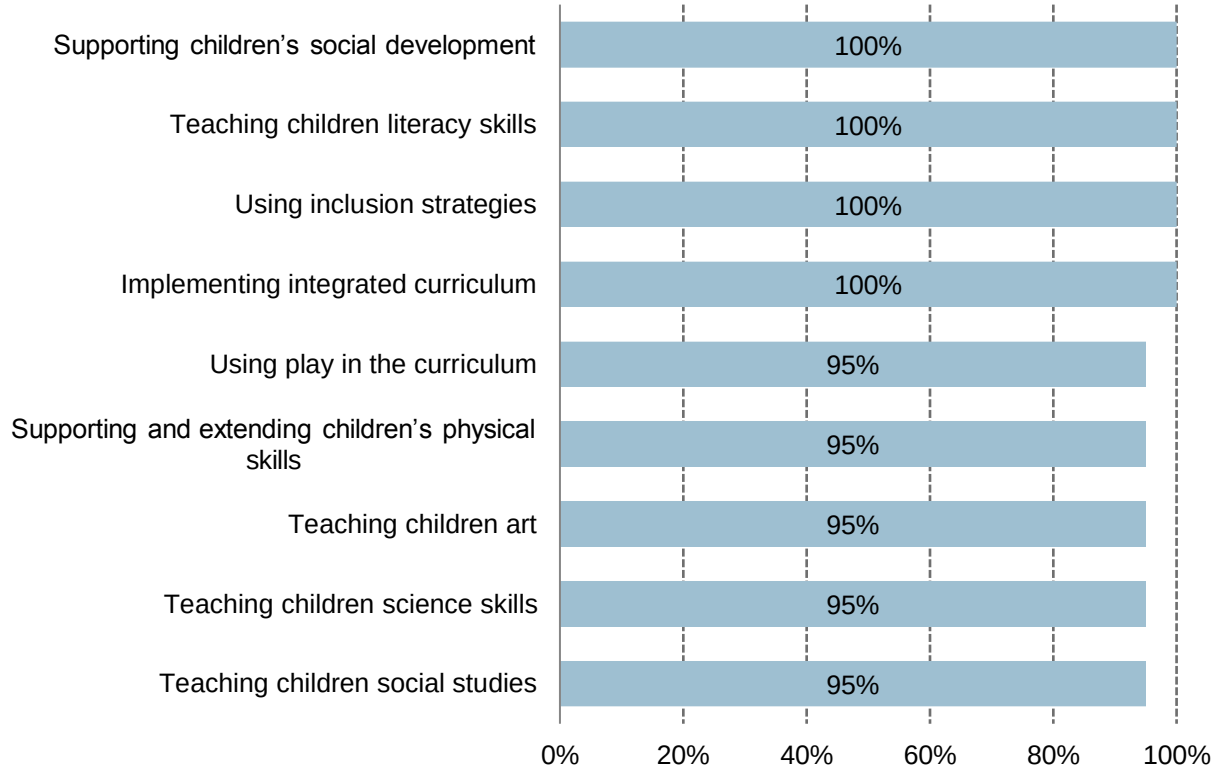


Table B-4: Coursework Related to Teaching and Curriculum: Required Age-Group Focus

Required age-group focus of topic and percentage of programs not requiring this content

Age-Group Focus	All Degree Programs
Supporting children's social development	
Birth to 2 years	68%
3 and/or 4 years (pre-K)	84%
K-grade 3 or higher	58%
Required, but no age-group focus	11%
Content area not required	0%
	N=19
Teaching children literacy skills	
Birth to 2 years	68%
3 and/or 4 years (pre-K)	84%
K-grade 3 or higher	58%
Required, but no age-group focus	11%
Content area not required	0%
	N=19
Implementing inclusion strategies for children of all abilities	
Birth to 2 years	58%
3 and/or 4 years (pre-K)	68%
K-grade 3 or higher	53%
Required, but no age-group focus	21%
Content area not required	0%
	N=19
Implementing integrated curriculum	
Birth to 2 years	63%
3 and/or 4 years (pre-K)	79%
K-grade 3 or higher	58%
Required, but no age-group focus	11%
Content area not required	0%
	N=19
Using play in the curriculum	
Birth to 2 years	68%
3 and/or 4 years (pre-K)	84%
K-grade 3 or higher	47%
Required, but no age-group focus	11%
Content area not required	5%
	N=19

Table B-4: Coursework Related to Teaching and Curriculum: Required Age-Group Focus (Continued)

Age-Group Focus	All Degree Programs
Supporting and extending children's physical skills	
Birth to 2 years	68%
3 and/or 4 years (pre-K)	84%
K-grade 3 or higher	47%
Required, but no age-group focus	11%
Content area not required	5%
	N=19
Teaching children art	
Birth to 2 years	53%
3 and/or 4 years (pre-K)	74%
K-grade 3 or higher	47%
Required, but no age-group focus	16%
Content area not required	5%
	N=19
Teaching children science skills	
Birth to 2 years	58%
3 and/or 4 years (pre-K)	74%
K-grade 3 or higher	53%
Required, but no age-group focus	11%
Content area not required	5%
	N=19
Teaching children social studies	
Birth to 2 years	53%
3 and/or 4 years (pre-K)	68%
K-grade 3 or higher	53%
Required, but no age-group focus	16%
Content area not required	5%
	N=19

Teaching Skills in Early Childhood Settings

Figure B-10: Required Coursework Related to Teaching Skills in Early Childhood Settings (N=19)

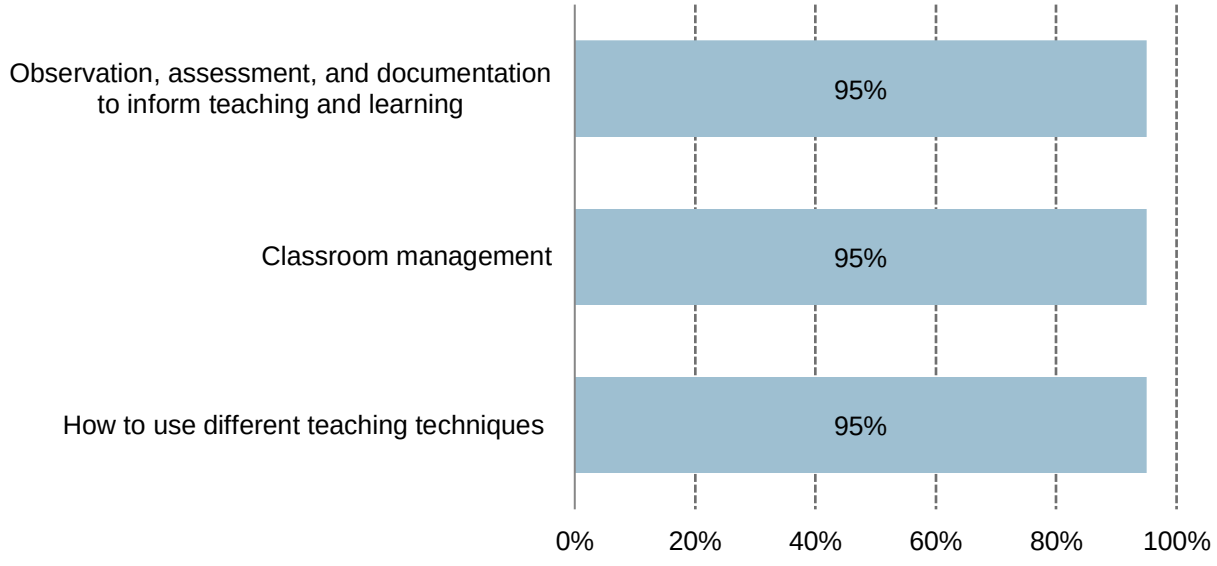


Table B-5: Coursework Related to Teaching Skills in Early Childhood Settings: Required Age-Group Focus

Required age-group focus of topic and percentage of programs not requiring this content

Age-Group Focus	All Degree Programs
Observation, assessment, and documentation to inform teaching and learning	
Birth to 2 years	68%
3 and/or 4 years (pre-K)	84%
K-grade 3 or higher	53%
Required, but no age-group focus	11%
Content area not required	5%
	N=19
Classroom management	
Birth to 2 years	68%
3 and/or 4 years (pre-K)	84%
K-grade 3 or higher	53%
Required, but no age-group focus	11%
Content area not required	5%
	N=19
How to use different teaching strategies (e.g., planning, instructing, facilitating)	
Birth to 2 years	63%
3 and/or 4 years (pre-K)	84%
K-grade 3 or higher	58%
Required, but no age-group focus	11%
Content area not required	5%
	N=19

Administration and Leadership

Figure B-11: Coursework Offered Related to Administration and Leadership: Supervision and Operations Topics (N=18)

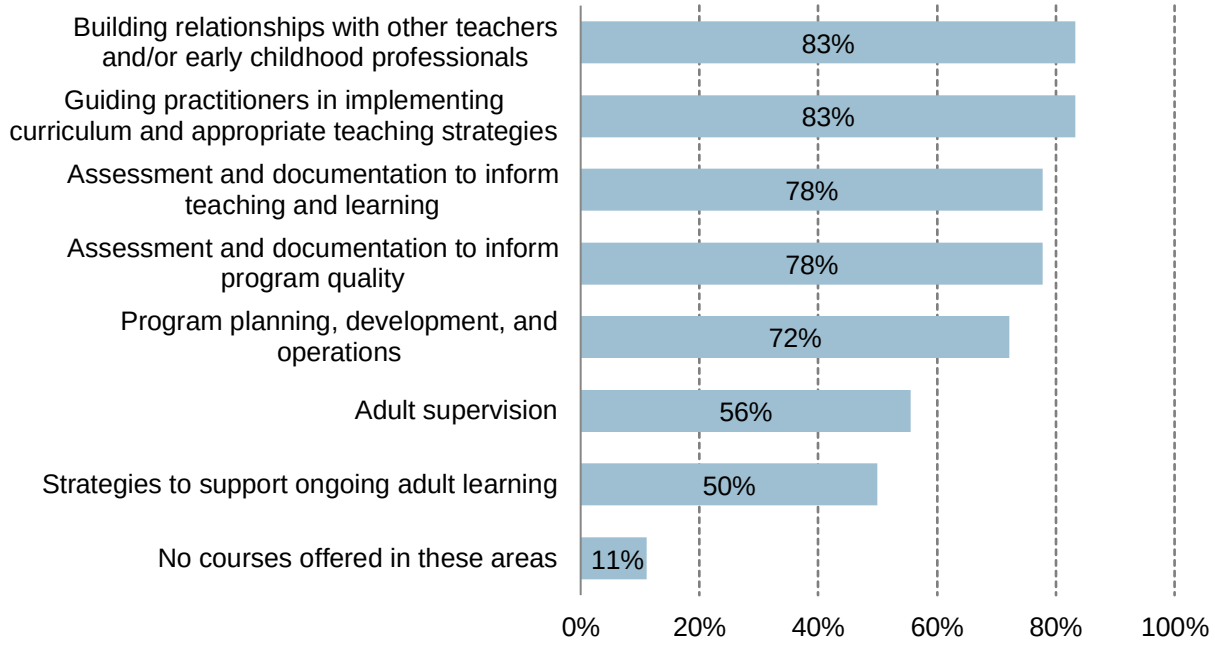
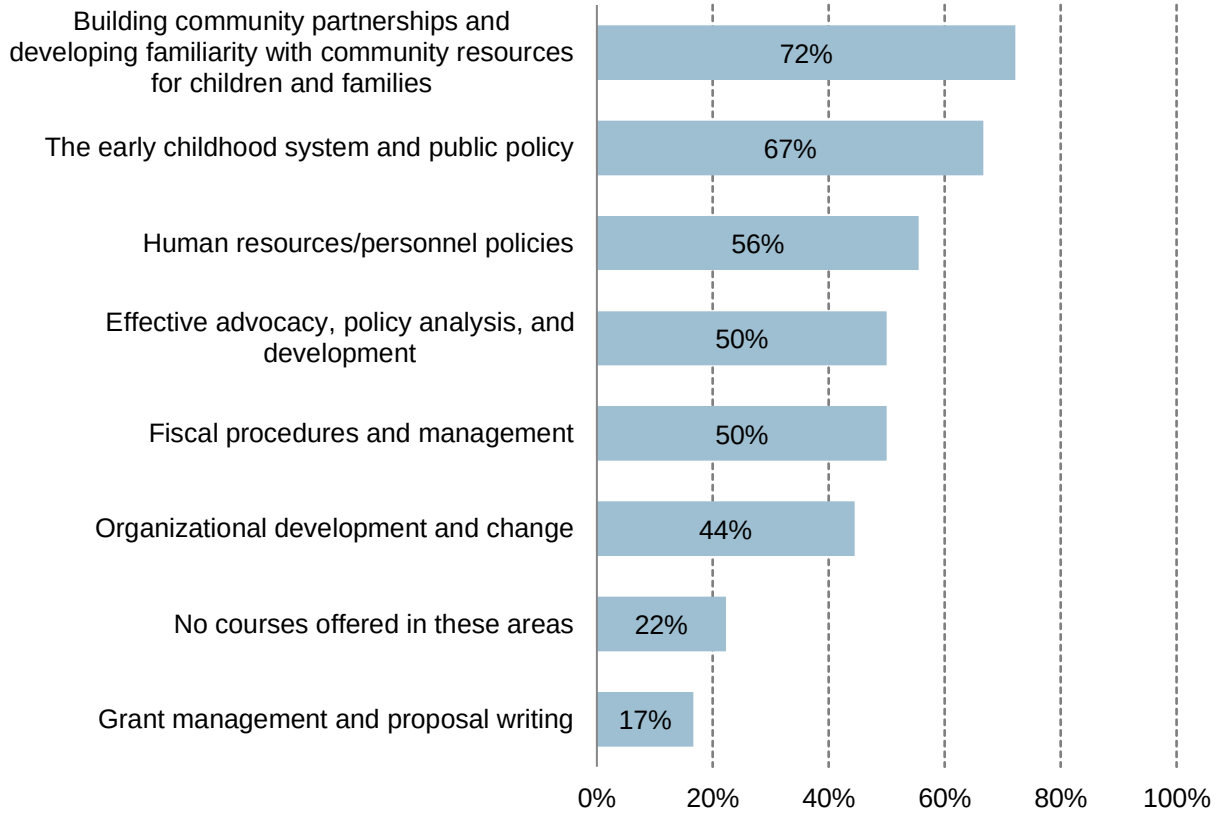


Figure B-12: Coursework Offered Related to Administration and Leadership: Organization and Systems Topics (N=18)



Family Engagement

Figure B-13: Required Coursework Related to Family Engagement (N=14-19)

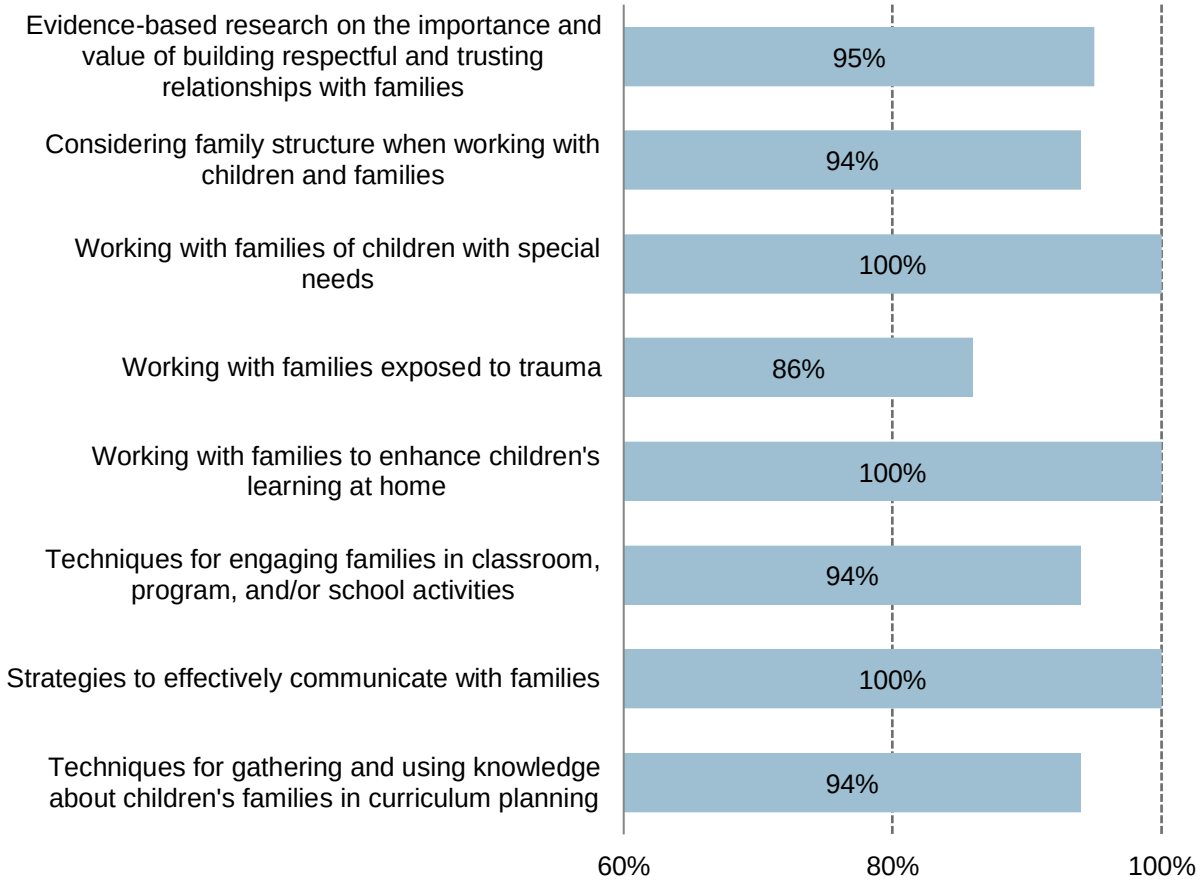


Table B-6: Coursework Related to Family Engagement: Required Age-Group Focus

Required age-group focus of topic and percentage of programs not requiring this content

Age-Group Focus	All Degree Programs
Evidence-based research on the importance and value of building respectful and trusting relationships with families	
Birth to 2 years	58%
3 and/or 4 years (pre-K)	74%
K-grade 3 or higher	47%
Required, but no age-group focus	16%
Content area not required	5%
	N=19
Considering family structures when working with children and families (e.g., single-parent and divorced families, LGBT families, multi-generational families) and having strategies to partner effectively with a variety of family types	
Birth to 2 years	44%
3 and/or 4 years (pre-K)	61%
K-grade 3 or higher	33%
Required, but no age-group focus	28%
Content area not required	6%
	N=18
Working with families of children with special needs	
Birth to 2 years	53%
3 and/or 4 years (pre-K)	71%
K-grade 3 or higher	47%
Required, but no age-group focus	18%
Content area not required	0%
	N=17
Working with families exposed to trauma	
Birth to 2 years	43%
3 and/or 4 years (pre-K)	50%
K-grade 3 or higher	21%
Required, but no age-group focus	29%
Content area not required	14%
	N=14

Table B-6: Coursework Related to Family Engagement: Required Age-Group Focus (Continued)

Age-Group Focus	All Degree Programs
Working with families to help them enhance their children's learning at home	
Birth to 2 years	58%
3 and/or 4 years (pre-K)	74%
K-grade 3 or higher	53%
Required, but no age-group focus	16%
Content area not required	0%
	N=19
Techniques for engaging families in classroom, program, and/or school activities	
Birth to 2 years	56%
3 and/or 4 years (pre-K)	72%
K-grade 3 or higher	44%
Required, but no age-group focus	17%
Content area not required	6%
	N=18
Strategies to effectively communicate with families, including communicating in their home language, making home visits, using technology (email, text message), and providing families opportunities for communication	
Birth to 2 years	58%
3 and/or 4 years (pre-K)	74%
K-grade 3 or higher	53%
Required, but no age-group focus	16%
Content area not required	0%
	N=19
Techniques for gathering and using knowledge about children's families in curriculum planning	
Birth to 2 years	56%
3 and/or 4 years (pre-K)	78%
K-grade 3 or higher	44%
Required, but no age-group focus	11%
Content area not required	6%
	N=18

Early Mathematics

Figure B-14: Required Coursework Related to Development of Children's Mathematical Understanding (N=17)

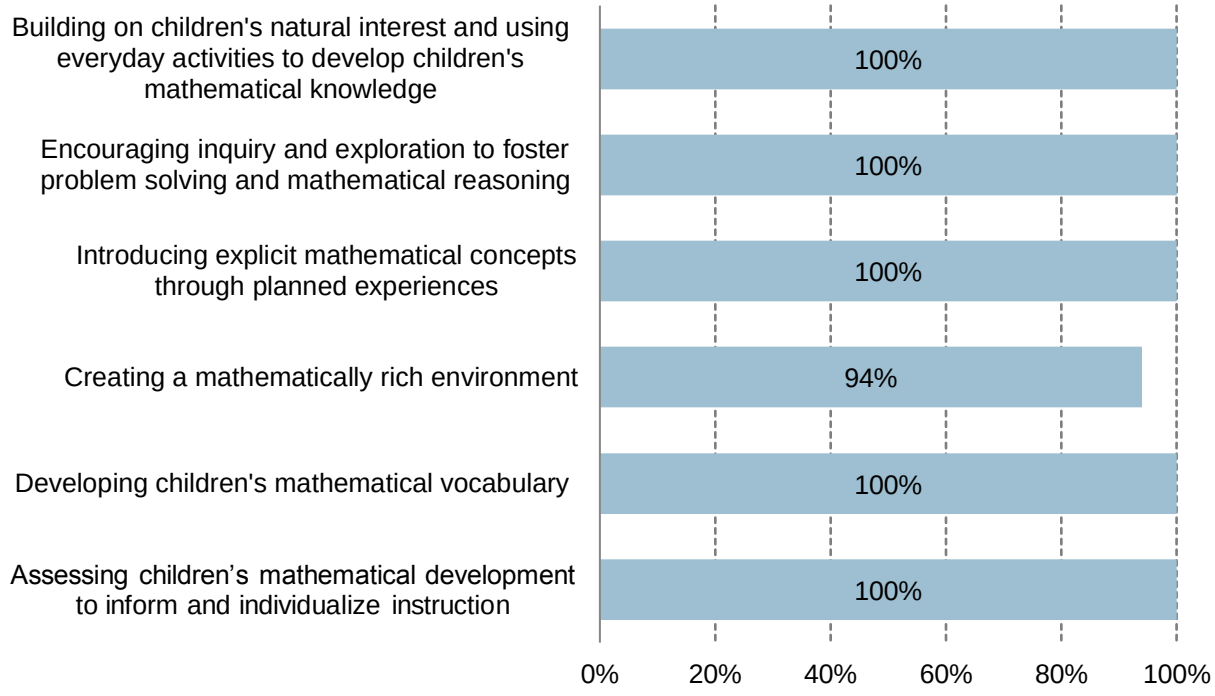


Table B-7: Coursework Related to Development of Children's Mathematical Understanding: Required Age-Group Focus

Required age group focus of topic and percentage of programs not requiring content

Age-Group Focus	All Degree Programs
Building on children's natural interest in mathematics and using everyday activities as natural vehicles for developing children's mathematical knowledge	
Birth to 2 years	71%
3 and/or 4 years (pre-K)	71%
K-grade 3 or higher	53%
Required, but no age-group focus	12%
Content area not required	0%
	N=17
Encouraging children's inquiry and exploration to foster problem solving and mathematical reasoning	
Birth to 2 years	71%
3 and/or 4 years (pre-K)	76%
K-grade 3 or higher	53%
Required, but no age-group focus	12%
Content area not required	0%
	N=17
Introducing explicit mathematical concepts through planned experiences	
Birth to 2 years	65%
3 and/or 4 years (pre-K)	76%
K-grade 3 or higher	47%
Required, but no age-group focus	12%
Content area not required	0%
	N=17
Creating a mathematically rich environment	
Birth to 2 years	71%
3 and/or 4 years (pre-K)	76%
K-grade 3 or higher	41%
Required, but no age-group focus	12%
Content area not required	6%
	N=17
Developing children's mathematical vocabulary	
Birth to 2 years	71%
3 and/or 4 years (pre-K)	76%
K-grade 3 or higher	47%
Required, but no age-group focus	12%
Content area not required	0%
	N=17
Assessing children's mathematical development to inform and individualize instruction	
Birth to 2 years	59%
3 and/or 4 years (pre-K)	76%
K-grade 3 or higher	47%
Required, but no age-group focus	12%
Content area not required	0%
	N=17

Figure B-15: Required Coursework Related to Teaching Children Specific Math Skills (N=17)

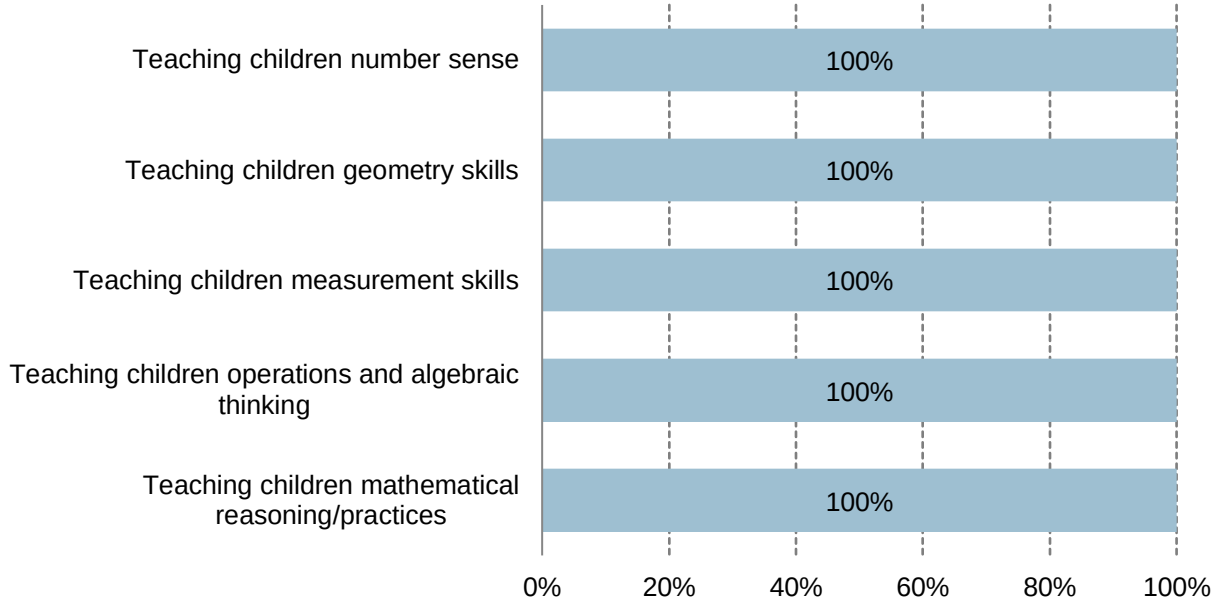


Table B-8: Coursework Related to Teaching Children Specific Math Skills: Required Age-Group Focus

Required age group focus of topic and percentage of programs not requiring content

Age-Group Focus	All Degree Levels
Teaching children number sense (counting and cardinality)	
Birth to 2 years	65%
3 and/or 4 years (pre-K)	82%
K-grade 3 or higher	47%
Required, but no age-group focus	12%
Content area not required	0%
	N=17
Teaching children geometry skills	
Birth to 2 years	53%
3 and/or 4 years (pre-K)	82%
K-grade 3 or higher	47%
Required, but no age-group focus	12%
Content area not required	0%
	N=17
Teaching children measurement skills	
Birth to 2 years	47%
3 and/or 4 years (pre-K)	82%
K-grade 3 or higher	47%
Required, but no age-group focus	12%
Content area not required	0%
	N=17
Teaching children operations and algebraic thinking	
Birth to 2 years	53%
3 and/or 4 years (pre-K)	82%
K-grade 3 or higher	47%
Required, but no age-group focus	12%
Content area not required	0%
	N=17
Teaching children mathematical reasoning/practices	
Birth to 2 years	41%
3 and/or 4 years (pre-K)	82%
K-grade 3 or higher	47%
Required, but no age-group focus	12%
Content area not required	0%
	N=17

Dual Language Learners

Figure B-16: Required Coursework Related to Dual Language Learners (DLLs) (N=16-17)

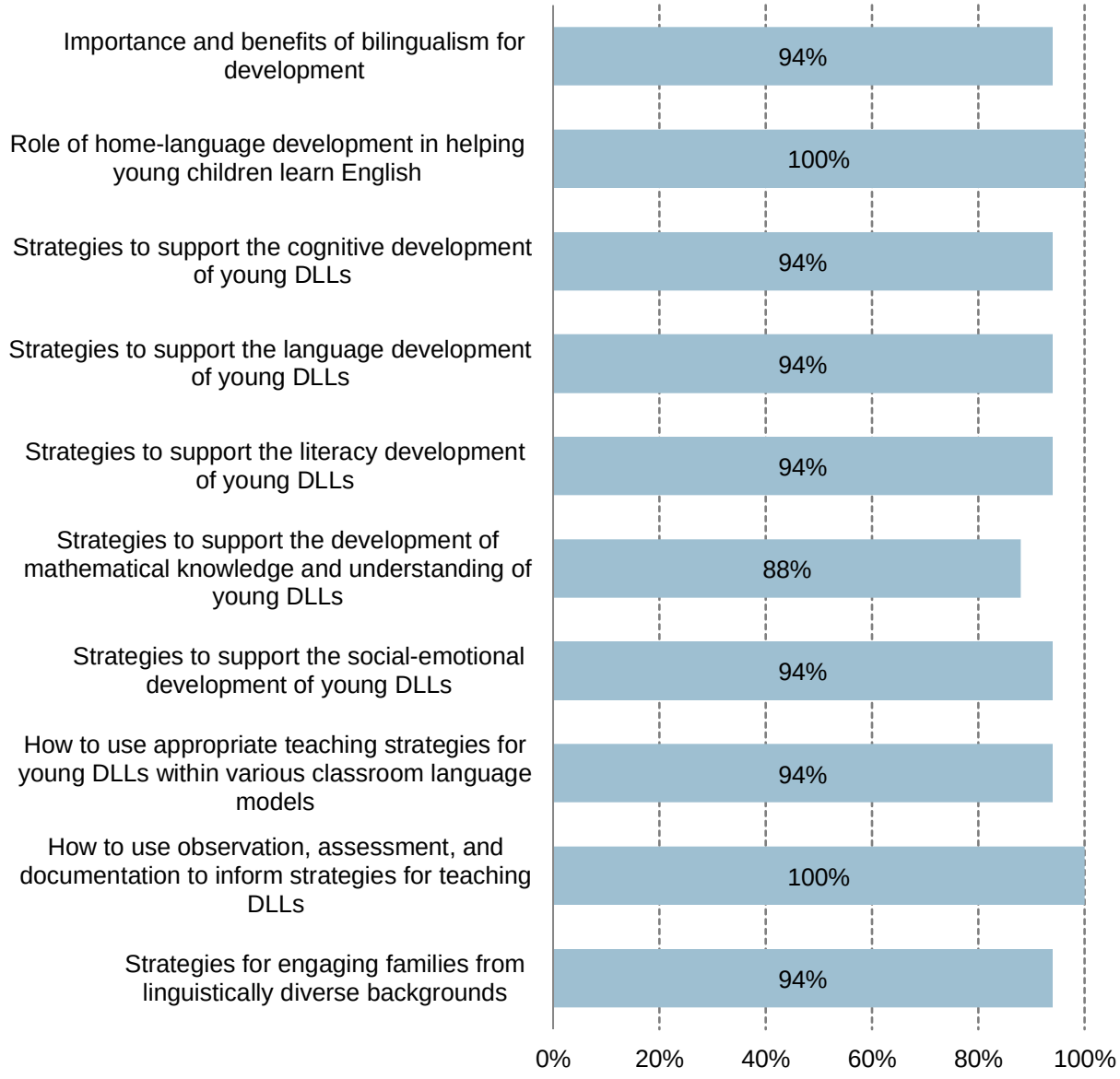


Table B-9: Coursework Related to Dual Language Learners (DLLs): Required Age-Group Focus

Required age group focus of topic and percentage of programs not requiring content

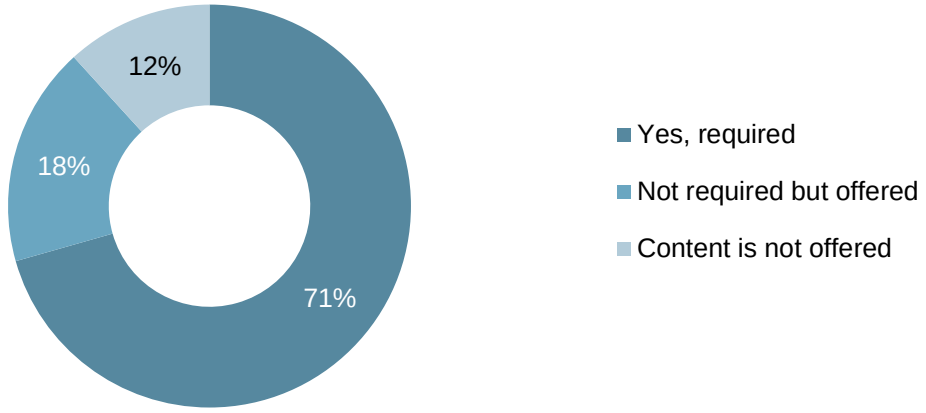
Age-Group Focus	All Degree Programs
Importance and benefits of bilingualism for young children's development	
Birth to 2 years	59%
3 and/or 4 years (pre-K)	71%
K-grade 3 or higher	47%
Required, but no age-group focus	18%
Content area not required	6%
	N=17
Role of home-language development in helping young children learn English	
Birth to 2 years	59%
3 and/or 4 years (pre-K)	71%
K-grade 3 or higher	47%
Required, but no age-group focus	24%
Content area not required	0%
	N=17
Strategies to support the cognitive development of young DLLs	
Birth to 2 years	47%
3 and/or 4 years (pre-K)	59%
K-grade 3 or higher	35%
Required, but no age-group focus	29%
Content area not required	6%
	N=17
Strategies to support the language development of young DLLs	
Birth to 2 years	53%
3 and/or 4 years (pre-K)	65%
K-grade 3 or higher	41%
Required, but no age-group focus	24%
Content area not required	6%
	N=17
Strategies to support the literacy development of young DLLs	
Birth to 2 years	53%
3 and/or 4 years (pre-K)	65%
K-grade 3 or higher	41%
Required, but no age-group focus	24%
Content area not required	6%
	N=17
Strategies to support the development of mathematical knowledge and understanding of young DLLs	
Birth to 2 years	41%
3 and/or 4 years (pre-K)	53%
K-grade 3 or higher	29%
Required, but no age-group focus	29%
Content area not required	12%
	N=17

Table B-9: Coursework Related to Dual Language Learners (DLLs): Required Age-Group Focus (Continued)

Age-Group Focus	All Degree Programs
Strategies to support the socioemotional development of young DLLs	
Birth to 2 years	41%
3 and/or 4 years (pre-K)	53%
K-grade 3 or higher	29%
Required, but no age-group focus	35%
Content area not required	6%
	N=17
How to use appropriate teaching strategies for young DLLs within various classroom language models (e.g., English only, dual language, English with home-language support)	
Birth to 2 years	31%
3 and/or 4 years (pre-K)	56%
K-grade 3 or higher	31%
Required, but no age-group focus	31%
Content area not required	6%
	N=16
How to use observation, assessment, and documentation to inform strategies for teaching young DLLs	
Birth to 2 years	41%
3 and/or 4 years (pre-K)	59%
K-grade 3 or higher	35%
Required, but no age-group focus	35%
Content area not required	0%
	N=17
Strategies for engaging families from linguistically diverse backgrounds	
Birth to 2 years	56%
3 and/or 4 years (pre-K)	69%
K-grade 3 or higher	50%
Required, but no age-group focus	19%
Content area not required	6%
	N=16

Self-Reflection and Awareness of Culture and Bias

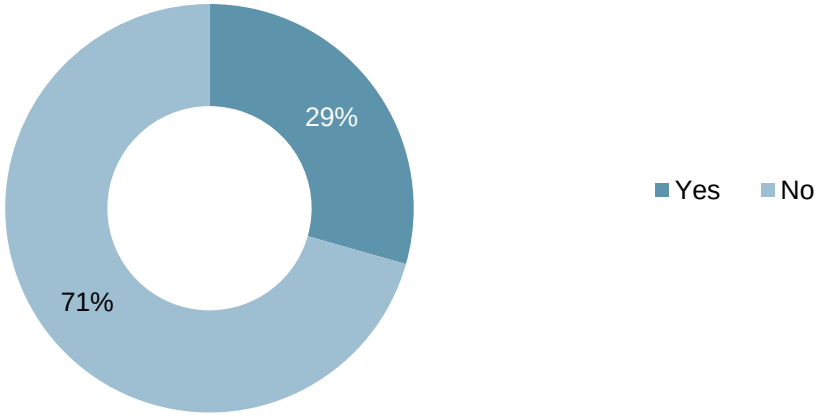
Figure B-17: Required Coursework Related to Self-Reflection and Awareness of Issues Related to Culture and Bias (N=17)



Providing Professional Development Services

Program leads were asked if the degree program offered coursework to prepare students to provide professional development services (e.g., mentoring, coaching, training).

Figure B-18: Coursework Offered to Prepare Students to Provide Professional Development Services (N=17)



Structure of Course Content

Table B-10: Structure of Course Content Instruction in Arkansas Early Childhood Degree Programs

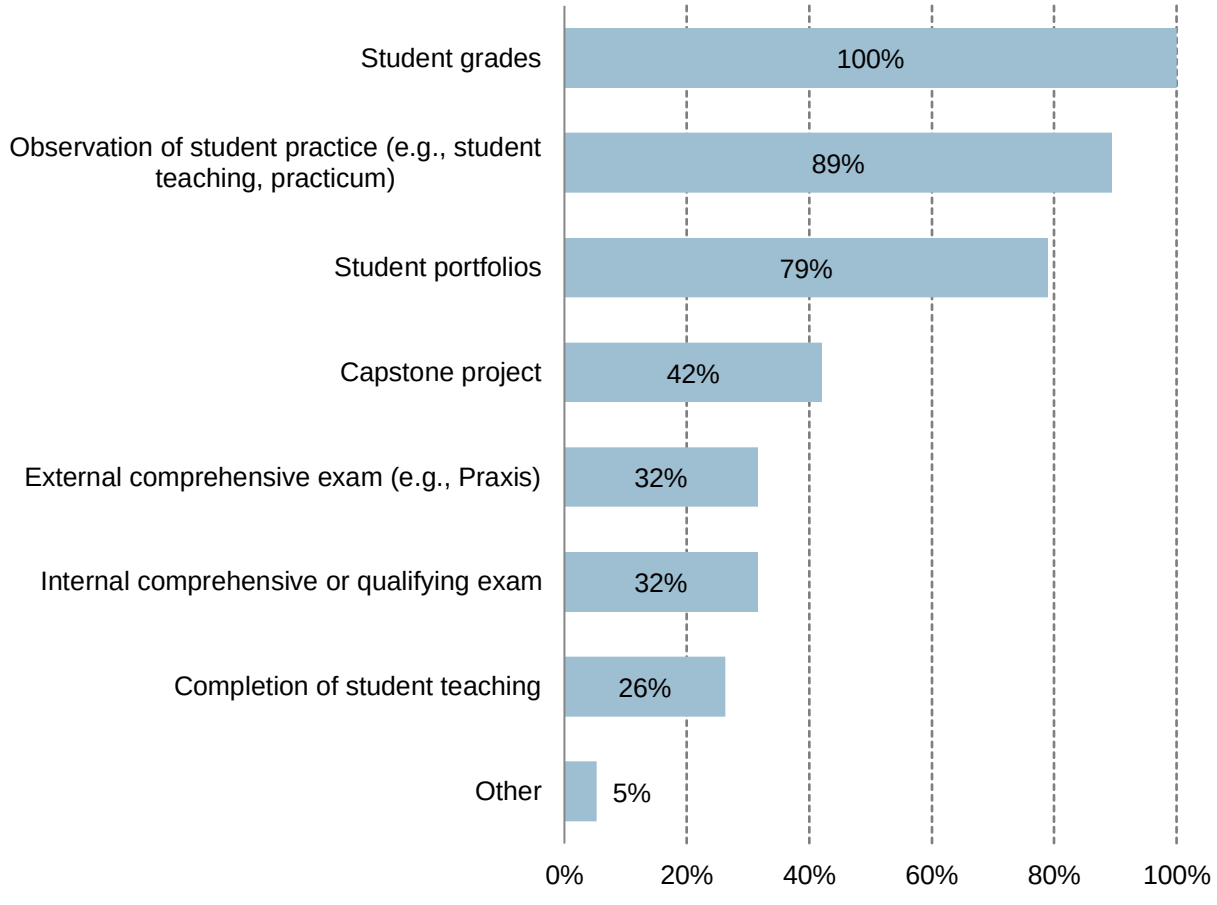
Course Content Structure	All Degree Programs
Literacy development in young children and how to promote their skills related to oral and written language	
Taught as a separate course	37%
Taught within a broader course	32%
Taught both as a separate course and embedded within a broader course	32%
Not taught	0%
	N=19
Socioemotional development, its relationship to learning, and how to support children's socioemotional skills	
Taught as a separate course	26%
Taught within a broader course	47%
Taught both as a separate course and embedded within a broader course	26%
Not taught	0%
	N=19
Normal and atypical motor development in young children, the relationship of motor development to learning, and how to facilitate children's motor skills	
Taught as a separate course	21%
Taught within a broader course	58%
Taught both as a separate course and embedded within a broader course	16%
Not taught	5%
	N=19
Implementing assessments effectively to inform and individualize instruction with children	
Taught as a separate course	17%
Taught within a broader course	44%
Taught both as a separate course and embedded within a broader course	39%
Not taught	0%
	N=18

Table B-10: Structure of Course Content Instruction in Arkansas Early Childhood Degree Programs (Continued)

Course Content Structure	Associate Degree
Domains and sequence of mathematical knowledge in young children and how to promote their mathematical understanding and ability to solve problems	
Taught as a separate course	37%
Taught within a broader course	37%
Taught both as a separate course and embedded within a broader course	21%
Not taught	5%
	N=19
Strategies for working with children who are dual language learners	
Taught as a separate course	11%
Taught within a broader course	63%
Taught both as a separate course and embedded within a broader course	21%
Not taught	5%
	N=19
Strategies to engage families in ongoing and reciprocal partnerships and the relationship between family-school engagement and outcomes for children	
Taught as a separate course	11%
Taught within a broader course	53%
Taught both as a separate course and embedded within a broader course	37%
Not taught	0%
	N=19

Student Assessments

Figure B-19: Student Assessments Required to Earn Degree
(N=19)



Field-Based Learning Experiences

What we asked about field-based experiences:

The *Inventory* asked respondents about two types of field experiences offered to the students:

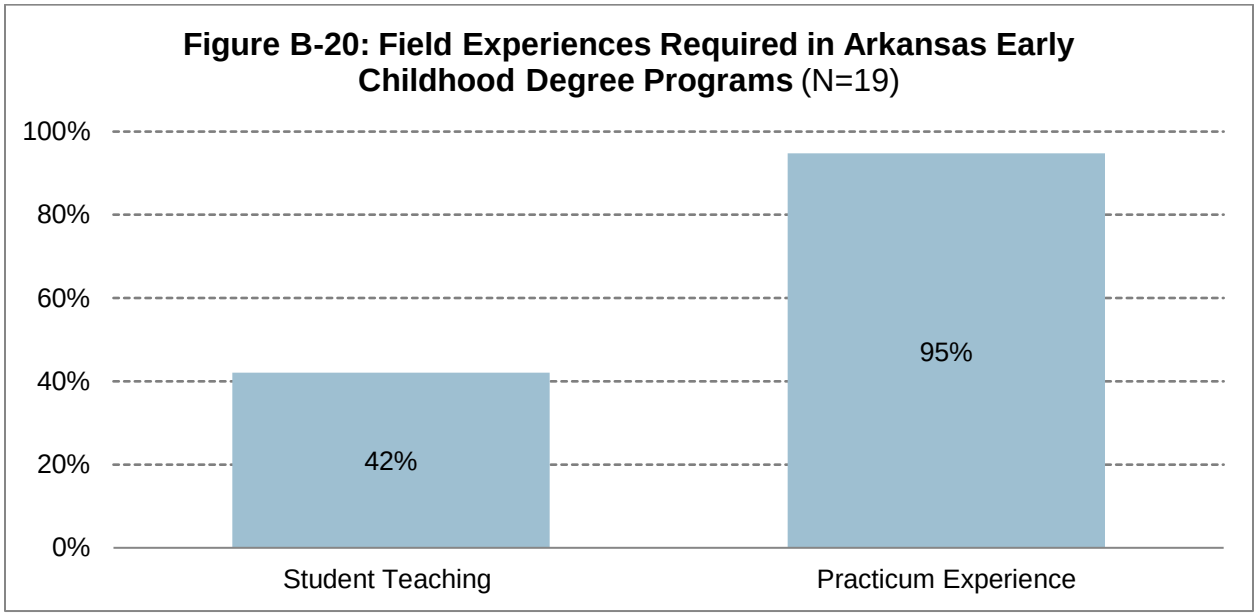
1. Student teaching: Defined as full-time immersion in a classroom, with increasing responsibility for curriculum planning and teaching, as well as supervision by a faculty member, cooperating teacher, and/or mentor.
2. Practicum: Defined as an experience that is short in duration, associated with a course, often focused on a particular skill or population of children, and supervised by a faculty member, cooperating teacher, and/or mentor.

If field experience was required for attaining the degree,[15] the *Inventory* asked about:

- Timing and duration of the field experience;
- Requirements of the field experience;
  - Populations of students or families;
  - Teaching practices required of students;
- Criteria for selecting field sites;
- Supervision of the field experience; and
- Differences in field experience structures for pre-service and experienced teachers.

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

Required Field Experiences



Timing and Duration of Field Experiences

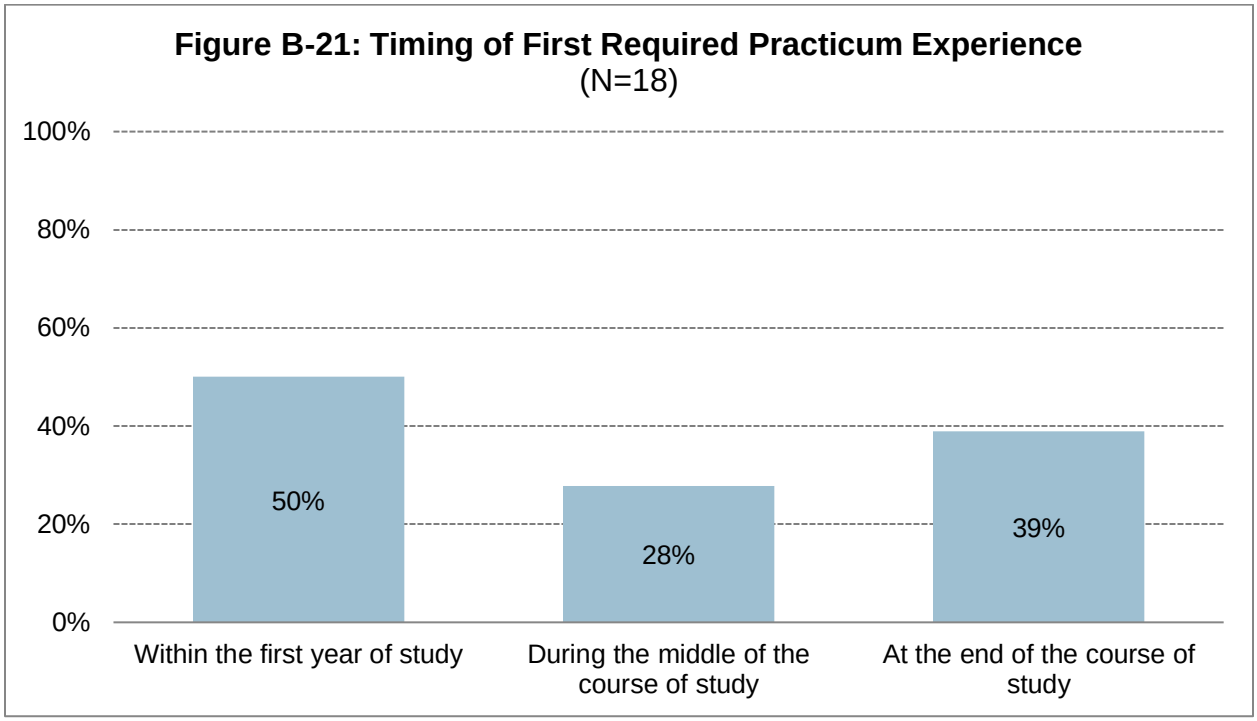


Table B-11: Duration and Course Requirements of Required Practicum Experiences

Required Duration	All Degree Levels
Practicum	
Average (hours)	156
Range (hours)	20-640
	N=17
Average number of courses required	2
Range	1-7
	N=18

Requirements of Field Experiences

Table B-12: Required Age-Group Focus and Elements of Practicum Experiences in Arkansas Early Childhood Degree Programs

Age-Group Focus or Element	Required	Optional	Not Offered
All Degree Programs (N=17-18)			
Working with children birth to 2 years	39%	44%	17%
Working with children 3 or 4 years (pre-K)	67%	33%	0%
Working with children kindergarten to grade 3 or higher	33%	28%	39%
Working with children who are DLLs	22%	61%	17%
Working with children with disabilities	28%	56%	17%
Working with families	47%	29%	24%
All Degree Programs (N=17-18)			
Scaffolding math development and understanding	78%	22%	0%
Scaffolding literacy development	83%	17%	0%
Supporting socioemotional development	83%	17%	0%
Facilitating motor development	83%	17%	0%
Developing partnerships with families	47%	41%	12%
Using assessment to inform instruction	94%	6%	0%
Collaborating with community organizations	39%	44%	17%

Criteria for Selecting Field Experience Sites

Table B-13: Criteria Used to Select Practicum Sites

Criteria	All Degree Programs
Practicum	
Site is at a college laboratory school	33%
Site is a public school	53%
Observed quality rating of the site	47%
Site is a nationally accredited early childhood program	33%
Degree program/college has a partnership with a school district	40%
Location of site	53%
Student currently works at the site	40%
Children with disabilities served at the site	47%
Age of children served at the site	60%
Demographic background of children served at the site	27%
Teacher qualifications	13%
Other	20%
	N= 15*

* Excludes three degree programs that require one or more practicum courses but do not use criteria to select site.

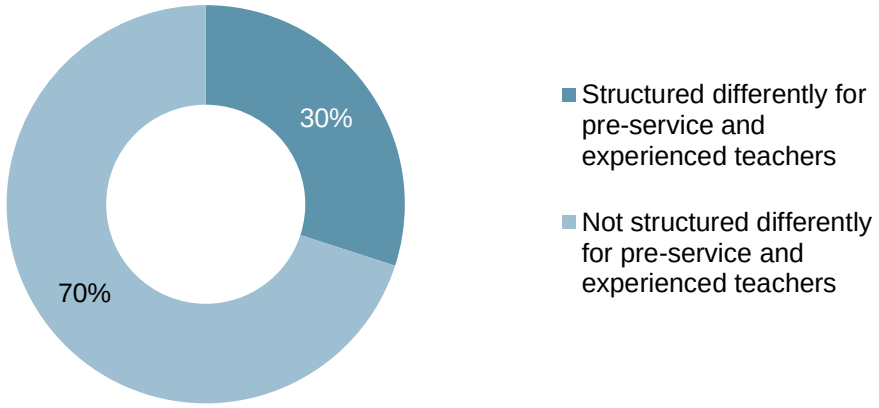
Supervision of Field Experiences

Table B-14: Typical Supervisors of Practicum Experiences

Supervisors	All Degree Levels
Cooperating teacher	78%
Field supervisor	11%
Field mentor	11%
Faculty	94%
Tenure track/tenured	53%
Non-tenured	71%
Clinical faculty	12%
Adjunct/part-time	24%
	N=18

Field Experience Structure for Pre-Service and Experienced Teachers

Figure B-22: Structure of Field Experiences (N=20)



Articulation and Alignment With the Arkansas Professional Development System

What we asked about articulation and alignment:

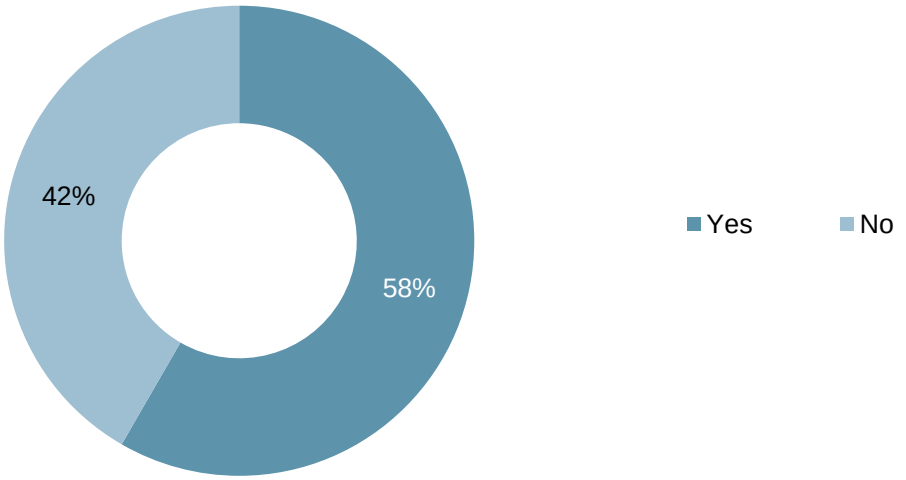
The *Inventory* asked program leads whether their degree programs had formal articulation agreements with other degree programs. Respondents were also asked the status of students entering the program (so we could understand how many students are transferring versus starting as first-year students) and what challenges students face in transferring.

Respondents were then asked a series of questions about the alignment of coursework with the state's professional development system:

- Whether the degree program offers coursework aligned with state and national standards;
- Whether the degree program offers coursework that can be applied to the national Child Development Associate (CDA) credential;
- Whether the program offers credentials aligned with state credentials; and
- Whether the degree program offers portable and/or stackable certificates or credentials.

Articulation

Figure B-23: Percentage of Degree Programs With Articulation Agreements in Place With Specific Institutions or Programs
(N=12)



Alignment With State and National Standards

Integration of Standards and Competencies

Table B-15: Integration of Standards and Competencies Into Coursework

Standards	All Degree Levels (N=18)
Arkansas Child Development and Early Learning Standards: Birth Through 60 months	61%
Arkansas Better Beginnings (QRIS)	78%
Arkansas Education Competencies for Early Childhood Teachers, Birth-K	33%
Arkansas Educator Competencies for Ages 3-4 Endorsement	44%
CDA Competencies	39%
Teacher Excellence and Support System (TESS)	44%
NAEYC Teacher Standards	89%
Council for Education Preparation Standards	11%

Figure B-24: State or National Family Engagement Standards Incorporated Into Family Engagement Course Content of Arkansas Early Childhood Degree Programs (N=19)

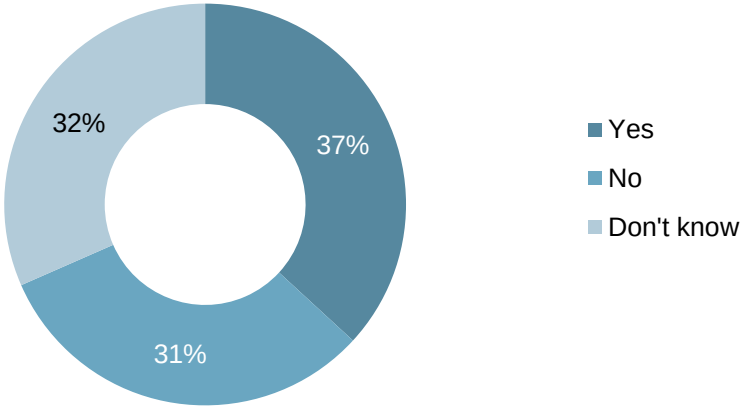
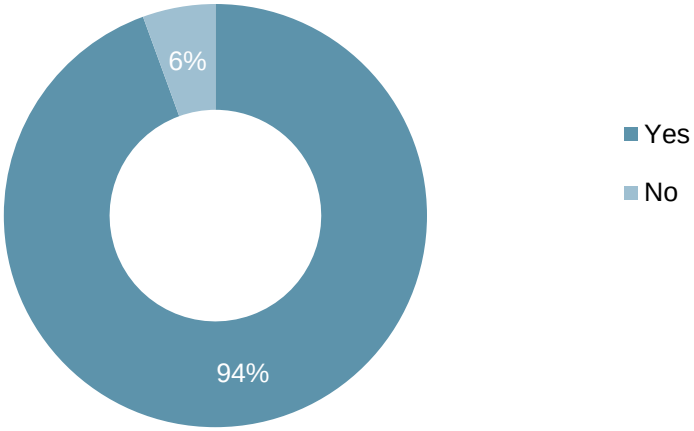
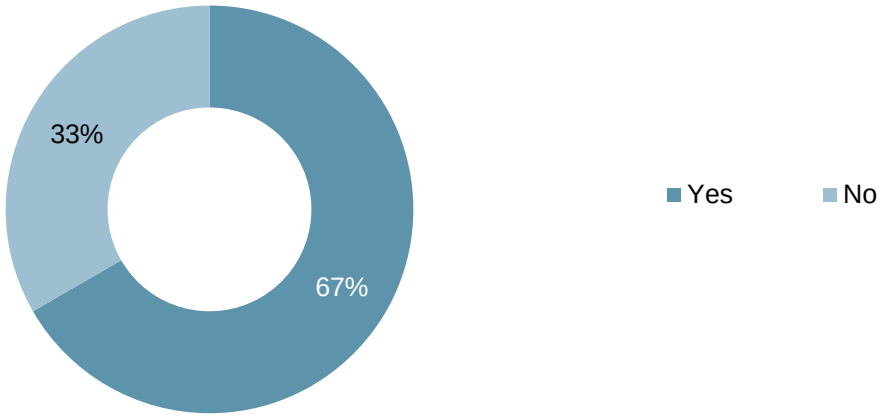


Figure B-25: State or National Math Standards Incorporated Into Early Math Course Content of Arkansas Early Childhood Degree Programs (N=18)



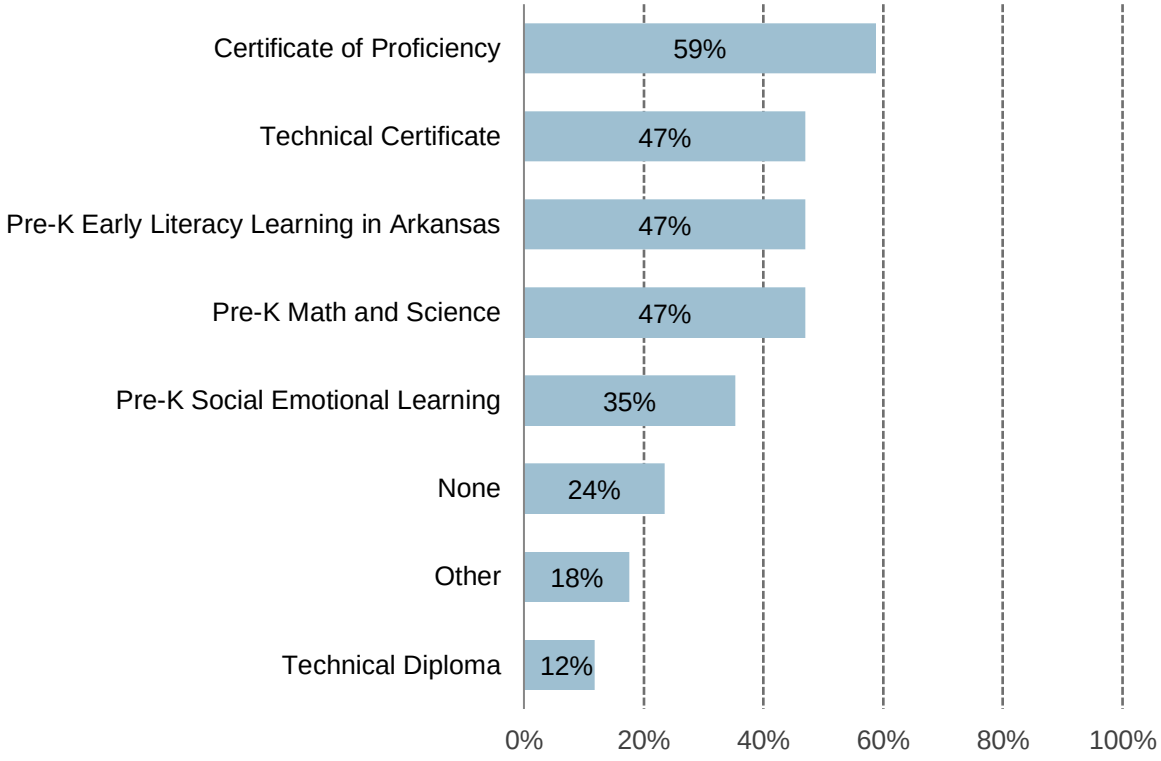
Alignment With Child Development Associate (CDA) Credential

Figure B-26: Percentage of Programs Offering Coursework Applicable to National CDA Credential (N=15)



Alignment With State Credentials

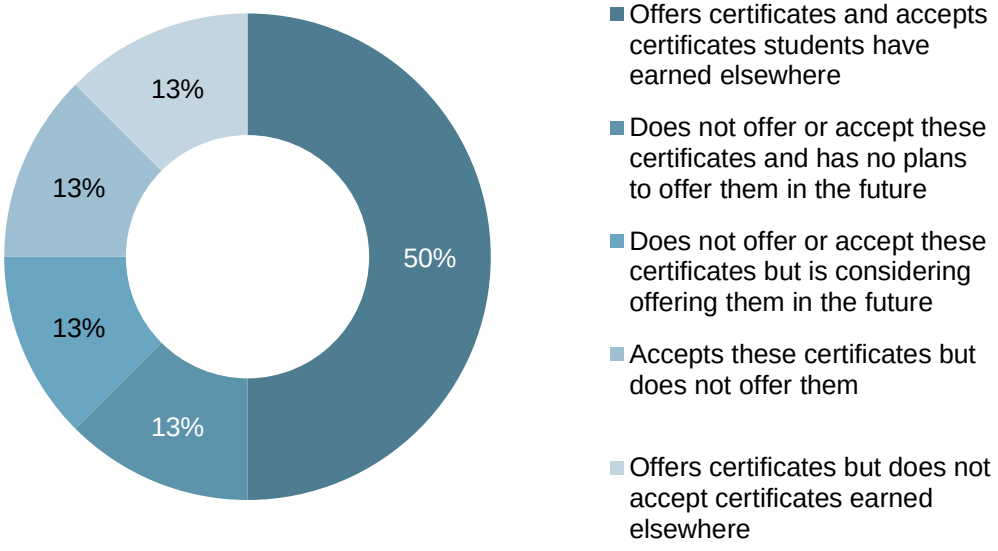
Figure B-27: Percentage of Programs Offering Coursework Applicable to State Certificates or Credentials (N=17)



None of the surveyed programs offered the following credentials: Arkansas Children's Program Administrator Certificate; Early Care and Education Specialist Certificate; Caregiver Certificate; Arkansas Child Care Apprenticeship Certificate; Arkansas Children's Program Administrator Credential; Early Care and Education Curriculum Endorsement; or Mentor Endorsement.

Stackable and Portable Certificates

Figure B-28: Availability and Acceptance of Stackable or Portable Certificates (N=16)



Appendix C:
Early Childhood Degree Program Faculty Members

Demographics of Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory

What we asked faculty members:

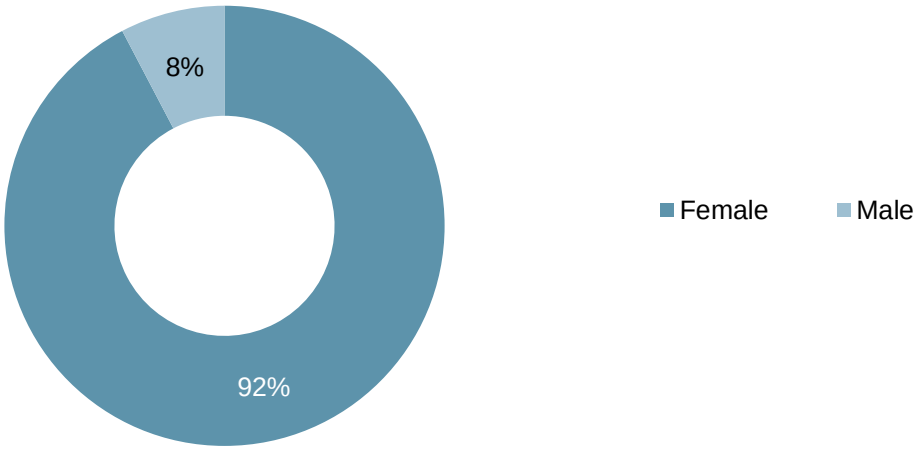
The *Inventory* asked faculty members about their demographic identification and language status, their educational and professional backgrounds, and their current employment status.

The *Inventory* also asked faculty members to indicate their primary teaching focus and their expertise related to various age groups of children.

Faculty members were asked their opinions on the importance of including certain topics in the degree program curriculum and also their capacity to teach certain topics. Finally, faculty members were asked about their recent experience teaching course content and their participation and interest in professional development on a variety of topics.

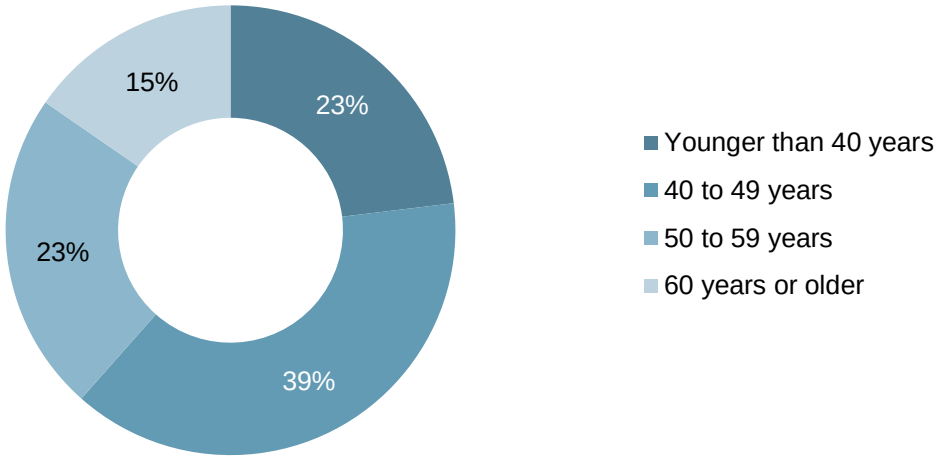
Gender

Figure C-1: Gender of Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory (N=26)



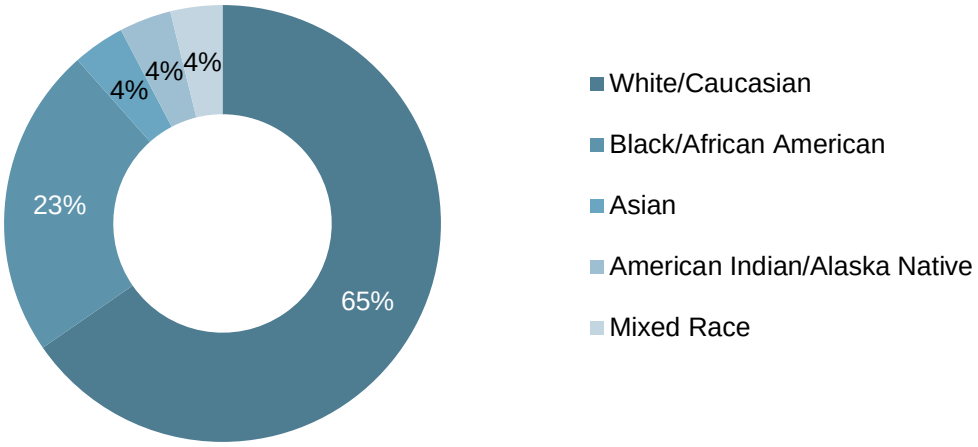
Age

Figure C-2: Age of Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory (N=26)



Race/Ethnicity

Figure C-3: Race/Ethnicity of Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory
(N=26)



Languages

Figure C-4: Languages Spoken Fluently by Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory (N=26)

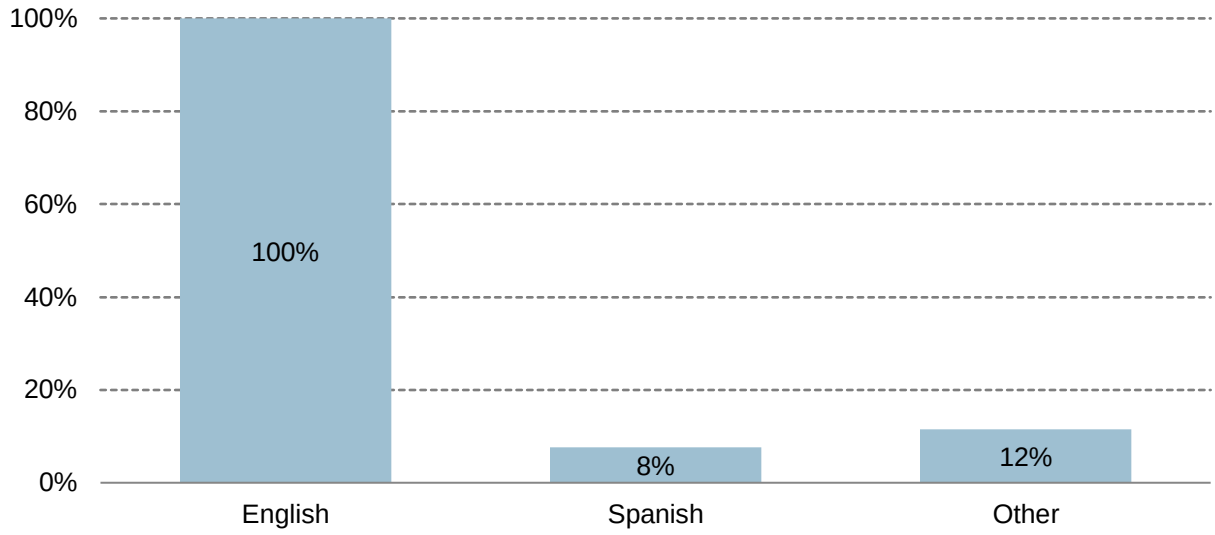


Figure C-5: Languages Used to Communicate With Students by Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory (N=26)

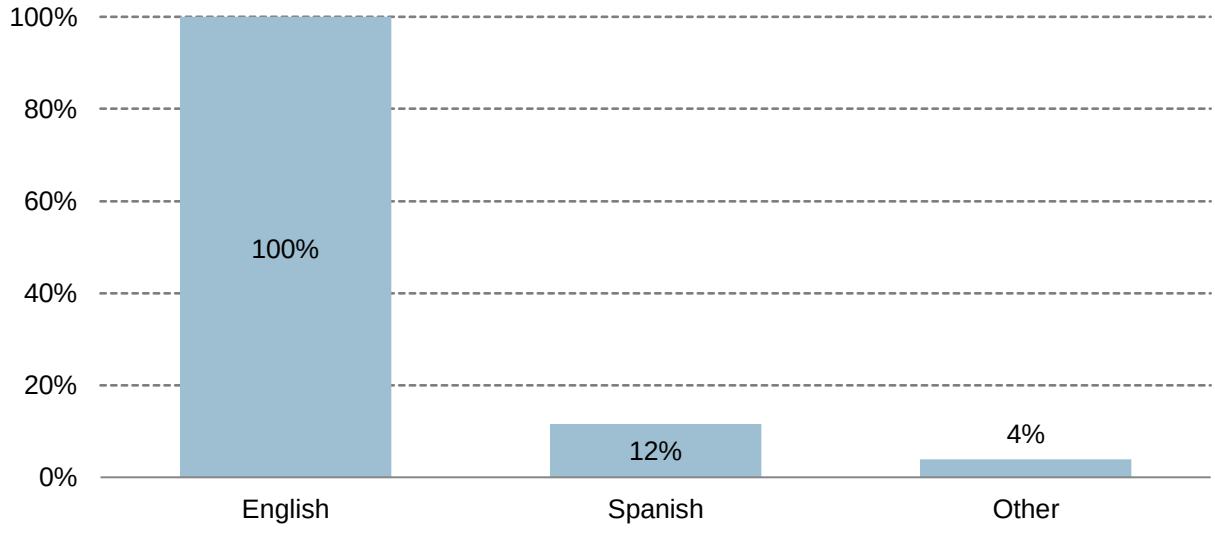
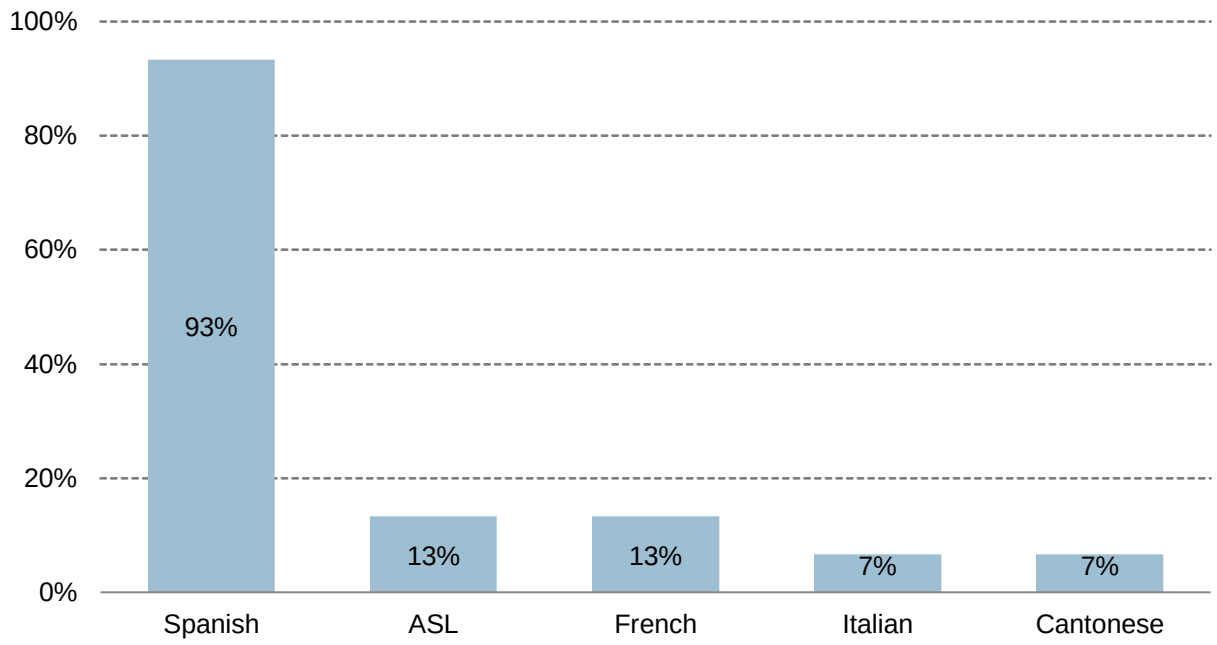


Figure C-6: Languages That Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory Would Like to Know to Better Communicate With Students
(N=15)



Education Levels of Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory

Figure C-7: Highest Level of Education Attained by Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory (N=26)

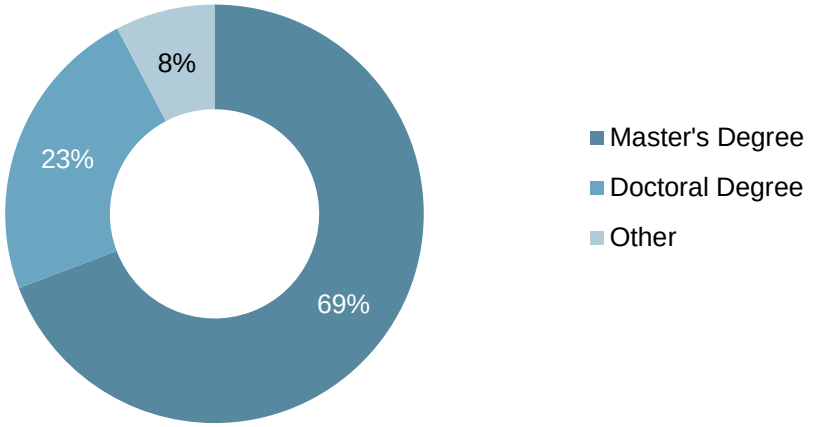
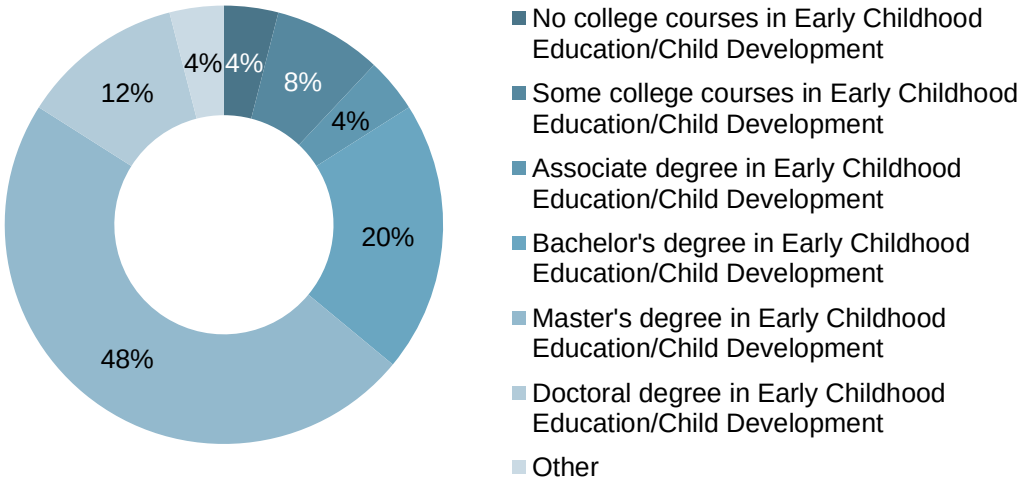


Figure C-8: Early Childhood Education or Child Development Degree Attainment by Faculty Participating in the Arkansas Early Childhood Higher Education Inventory (N=25)



Professional Experiences and Current Employment Status of Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory

Teaching Experience

Figure C-9: Number of Years Teaching at the College or University Level for Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory (N=26)

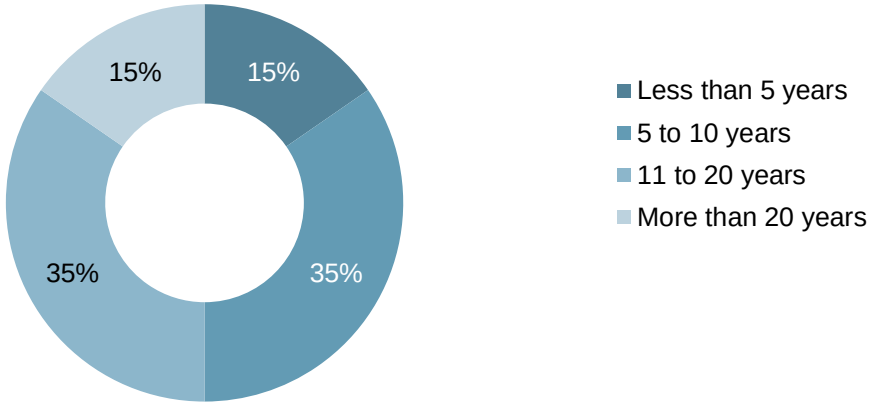
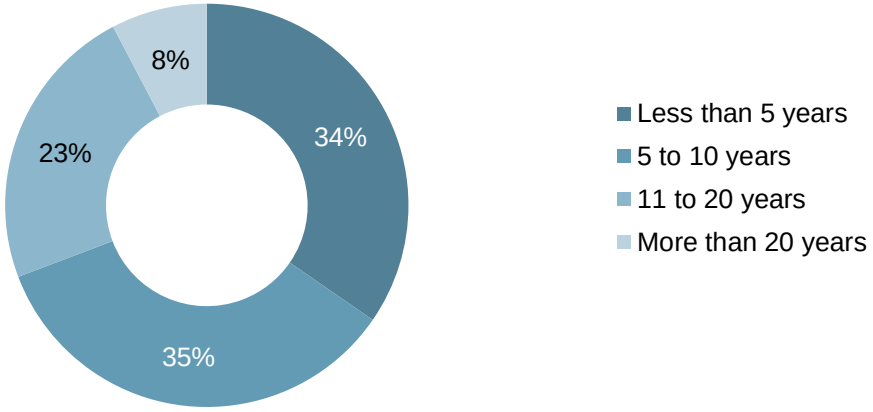


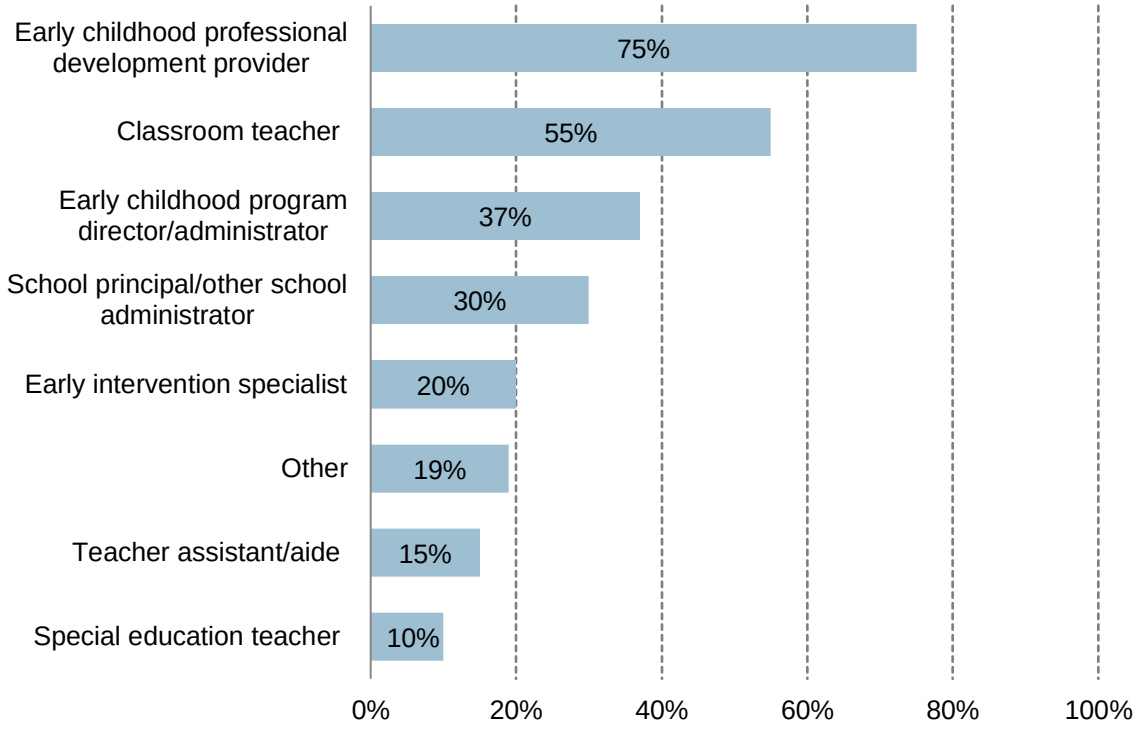
Figure C-10: Number of Years Teaching at Current College or University for Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory (N=26)



Other Employment

Eighty-eight percent of faculty members teaching in associate degree programs and 80 percent of faculty members teaching in bachelor's and graduate degree programs reported that they had worked in roles other than college-level teaching or administration in the past 10 years.

Figure C-11: Job Roles Other Than College-Level Teaching in the Past 10 Years as Reported by Faculty Members (N=20)



Current Employment

Figure C-12: Employment Status of Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory (N=26)

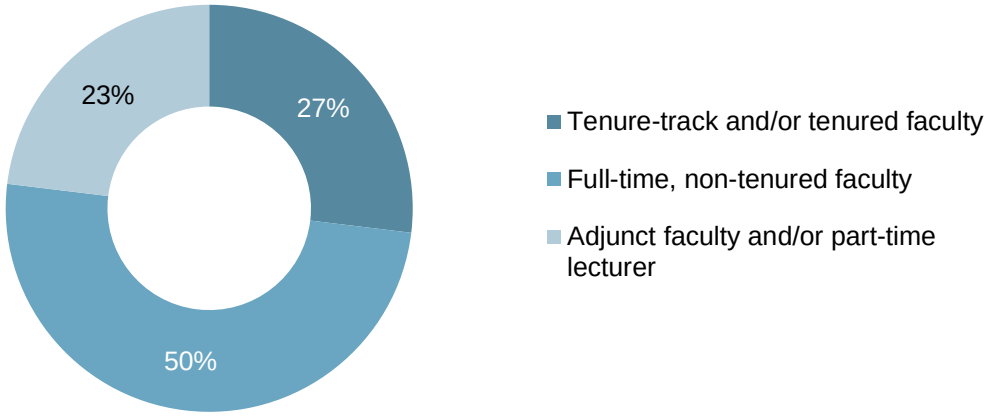


Figure C-13: Primary Responsibility of Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory (N=27)

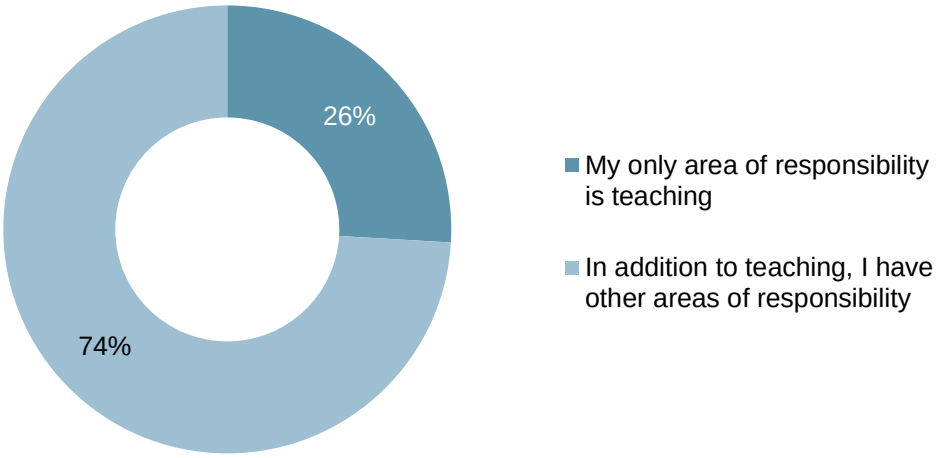


Figure C-14: Additional Responsibilities of Teaching Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory (N=20)

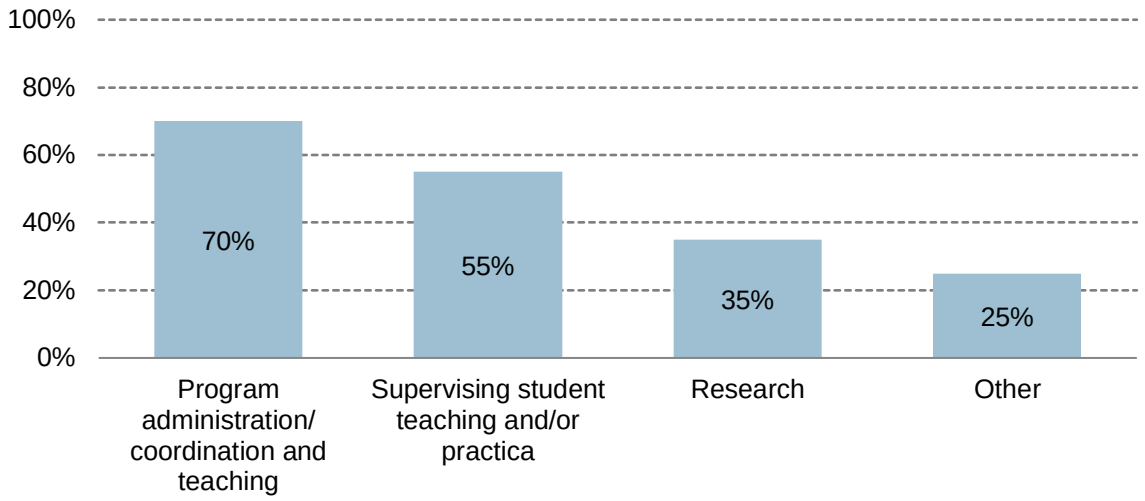


Figure C-15: Number of Courses Taught in a Typical Academic Year by Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory (N=27)

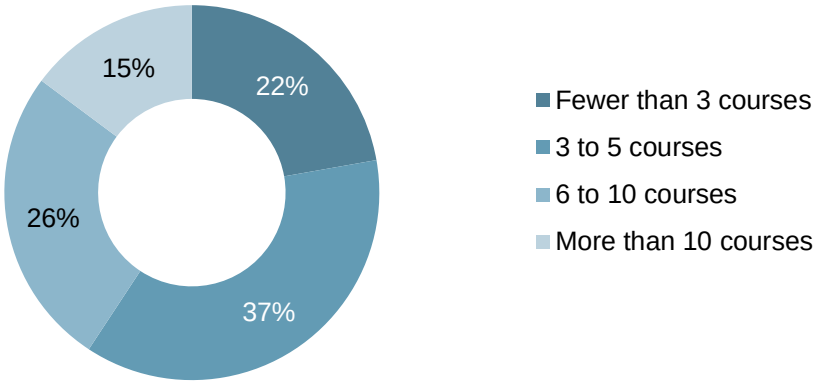


Table C-1: Number of Students Advised in a Typical Academic Year by Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory

Student Advising Load	All Degree Levels (N=27)
Mean	22.3
Median	12
Range	0–100

Teaching Focus and Age-Group Expertise of Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory

Figure C-16: Primary Teaching Focus of Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory (N=27)

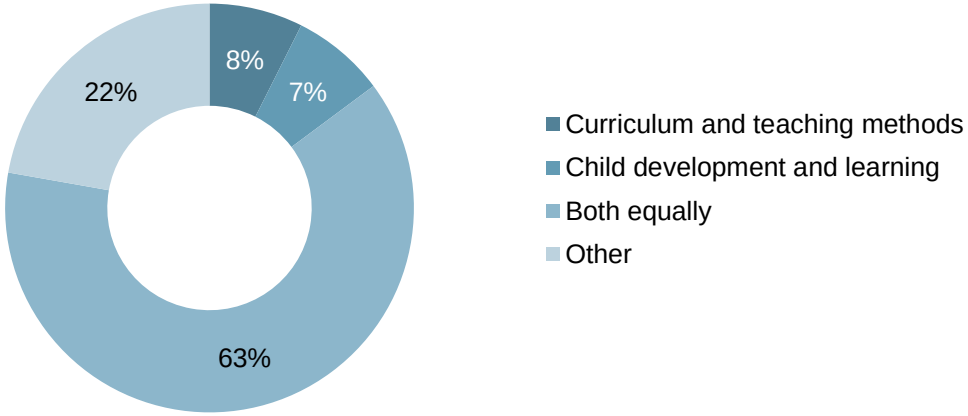
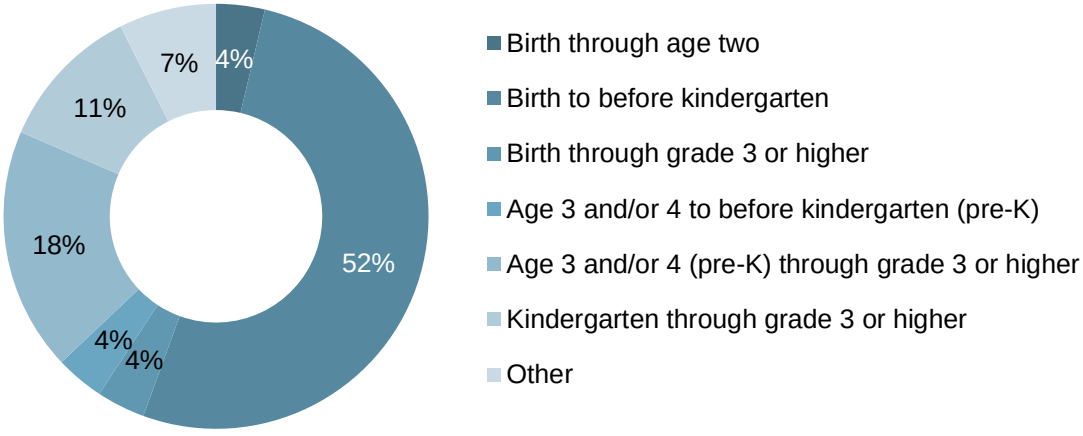


Figure C-17: Primary Age-Group Expertise of Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory (N=27)



Faculty Perspectives on the Importance of Learning Domains

What we asked about the importance of learning domains:

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 the importance of including the following domains in early childhood degree programs:

- **Literacy**: Understanding the components and sequence of literacy development in young children and how to promote their skills related to oral and written language;
- **Socioemotional Development**: Understanding socioemotional development, its relationship to learning, and how to support children's socioemotional skills;
- **Motor Development**: Understanding normal and atypical motor development in young children, its relationship to learning, and how to support the development of children's motor skills;
- **Assessment**: Utilizing assessment effectively to inform and individualize instruction;
- **Collaboration**: Collaborating with community organizations to support children and families;
- **Diverse Families**: Working with families of various ethnic, racial, and cultural backgrounds;
- **Family Engagement**: Understanding and implementing an integrated strategy to engage families in ongoing and reciprocal partnerships and the relationship of such partnerships to outcomes for children;
- **Early Mathematics**: Understanding the domains and sequence of mathematical knowledge in young children and how to promote their mathematical understanding and ability to solve problems; and
- **Dual Language Learners**: Supporting the cognitive and social development of young dual language learners.

Table C-2: Importance of Including Select Topics in Early Childhood Degree Programs, as Reported by Faculty Members by Age Group

Topic and Age-Group Focus	1- Not Important	2	3	4 - Very Important
Total Faculty (N=26-27)				
Understanding the domains and sequence of mathematical knowledge in young children and how to promote mathematical understanding and ability to solve problems				
Birth to 2 years	4%	22%	30%	44%
3 and/or 4 years (pre-K)	0%	0%	19%	81%
K-grade 3 or higher	0%	4%	11%	85%
Understanding the components and sequence of literacy development in young children and how to promote their skills related to oral and written language				
Birth to 2 years	0%	7%	30%	63%
3 and/or 4 years (pre-K)	0%	0%	4%	96%
K-grade 3 or higher	0%	4%	4%	93%
Understanding socioemotional development, its relationship to learning, and how to support children's socioemotional skills				
Birth to 2 years	0%	4%	15%	81%
3 and/or 4 years (pre-K)	0%	0%	11%	89%
K-grade 3 or higher	0%	4%	15%	81%
Understanding typical and atypical motor development in young children, its relationship to learning, and how to support the development of motor skills				
Birth to 2 years	0%	0%	22%	78%
3 and/or 4 years (pre-K)	0%	0%	11%	89%
K-grade 3 or higher	0%	7%	26%	67%
Understanding and implementing an integrated strategy to engage families in ongoing and reciprocal partnerships and its relationship to outcomes for children				
Birth to 2 years	0%	8%	12%	81%
3 and/or 4 years (pre-K)	0%	4%	12%	85%
K-grade 3 or higher	0%	4%	27%	69%

Table C-2: Importance of Including Select Topics in Early Childhood Degree Programs, as Reported by Faculty Members, by Age Group (Continued)

Topic and Age-Group Focus	1- Not Important	2	3	4 - Very Important
Total Faculty (Continued) (N=26-27)				
Utilizing assessment effectively to inform and individualize instruction				
Birth to 2 years	0%	4%	41%	56%
3 and/or 4 years (pre-K)	0%	0%	22%	78%
K-grade 3 or higher	0%	4%	19%	78%
Collaborating with community organizations to support children and families				
Birth to 2 years	0%	7%	30%	63%
3 and/or 4 years (pre-K)	0%	7%	26%	67%
K-grade 3 or higher	0%	11%	30%	59%
Supporting the cognitive and social development of young dual language learners				
Birth to 2 years	0%	4%	26%	70%
3 and/or 4 years (pre-K)	0%	4%	15%	81%
K-grade 3 or higher	0%	7%	19%	74%
Working with families of various ethnic, racial, and cultural backgrounds				
Birth to 2 years	0%	0%	11%	89%
3 and/or 4 years (pre-K)	0%	0%	11%	89%
K-grade 3 or higher	0%	4%	11%	85%

Teaching Capacity of Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory

What we asked about teaching capacity of faculty members:

The *Inventory* asked faculty members to describe their own knowledge and skill related to preparing teachers to promote young children's development. For each topic below, respondents were also asked to indicate whether they had limited familiarity, whether they were knowledgeable but not prepared to teach, or whether they were capable of preparing teachers working with children birth through age two, children age three and/or four (pre-K), and/or children in kindergarten through third grade or higher:

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

Table C-3: Capacity to Prepare Teachers, as Reported by Faculty Members, by Age Group

Age-Group Focus	All Degree Faculty (N=25-27)
Scaffolding children's mathematical development and promoting their ability to solve problems	
Birth to 2 years	73%
3 and/or 4 years (pre-K)	77%
K-grade 3 or higher	65%
Scaffolding children's literacy development and promoting their oral and written skills	
Birth to 2 years	70%
3 and/or 4 years (pre-K)	74%
K-grade 3 or higher	70%
Supporting children's socioemotional development and skills	
Birth to 2 years	74%
3 and/or 4 years (pre-K)	78%
K-grade 3 or higher	74%
Facilitating the developmental course of motor development in young children	
Birth to 2 years	74%
3 and/or 4 years (pre-K)	81%
K-grade 3 or higher	67%
Integrating families in partnerships to support children's learning	
Birth to 2 years	74%
3 and/or 4 years (pre-K)	81%
K-grade 3 or higher	70%
Utilizing assessment effectively to inform and individualize instruction	
Birth to 2 years	73%
3 and/or 4 years (pre-K)	77%
K-grade 3 or higher	65%
Collaborating with community organizations to support children and families	
Birth to 2 years	67%
3 and/or 4 years (pre-K)	74%
K-grade 3 or higher	74%
Supporting the cognitive and social development of young dual language learners	
Birth to 2 years	64%
3 and/or 4 years (pre-K)	72%
K-grade 3 or higher	56%
Working with families of various ethnic, racial, and cultural backgrounds	
Birth to 2 years	74%
3 and/or 4 years (pre-K)	74%
K-grade 3 or higher	74%

Capacity to Prepare Teachers to Teach Early Mathematics

Table C-4: Capacity to Teach Coursework on the Development of Children's Mathematical Understanding, as Reported by Faculty Members, by Age Group

Age-Group Focus	All Degree Faculty (N=26-27)
Building on children's natural interest in mathematics and using everyday activities as natural vehicles for developing children's mathematical knowledge	
Birth to 2 years	70%
3 and/or 4 years (pre-K)	78%
K-grade 3 or higher	70%
Encouraging children's inquiry and exploration to foster problem solving and mathematical reasoning	
Birth to 2 years	70%
3 and/or 4 years (pre-K)	78%
K-grade 3 or higher	70%
Introducing explicit mathematical concepts through planned experiences	
Birth to 2 years	69%
3 and/or 4 years (pre-K)	81%
K-grade 3 or higher	65%
Creating a mathematically rich environment	
Birth to 2 years	73%
3 and/or 4 years (pre-K)	81%
K-grade 3 or higher	69%
Developing children's mathematical vocabulary	
Birth to 2 years	73%
3 and/or 4 years (pre-K)	81%
K-grade 3 or higher	69%
Assessing children's mathematical development to inform and individualize instruction	
Birth to 2 years	73%
3 and/or 4 years (pre-K)	81%
K-grade 3 or higher	58%

Table C-5: Capacity to Teach Coursework on Teaching Children Specific Math Skills, as Reported by Faculty Members, by Age Group

Age-Group Focus	All Degree Faculty (N=26-27)
Teaching children number sense (counting and cardinality)	
Birth to 2 years	70%
3 and/or 4 years (pre-K)	78%
K-grade 3 or higher	63%
Teaching children operations and algebraic thinking	
Birth to 2 years	65%
3 and/or 4 years (pre-K)	77%
K-grade 3 or higher	58%
Teaching children measurement skills	
Birth to 2 years	59%
3 and/or 4 years (pre-K)	78%
K-grade 3 or higher	63%
Teaching children geometry skills	
Birth to 2 years	69%
3 and/or 4 years (pre-K)	81%
K-grade 3 or higher	58%
Teaching children mathematical reasoning/practices	
Birth to 2 years	62%
3 and/or 4 years (pre-K)	81%
K-grade 3 or higher	62%

Recent Teaching Experience of Faculty Members Participating in the Arkansas Early Childhood Higher Education Inventory

What we asked about recent teaching experience of faculty members:

The *Inventory* asked faculty to indicate whether in the past two years, they had taught the following content areas either as a separate course, embedded within a broader course, or both:

- Child development;
- Mathematical understanding;
- Language development;
- Teaching strategies for STEM (science, technology, engineering, mathematics);
- Teaching children with special needs;
- Observation, assessment, and documentation;
- Adult supervision and learning styles;
- Fiscal procedures and program management; and
- Partnering with families to enhance children's learning.

Figure C-18: Recent Teaching Experience: Percentage of Faculty Members Reporting Having Taught Content Area in Past Two Years (N=26-27)

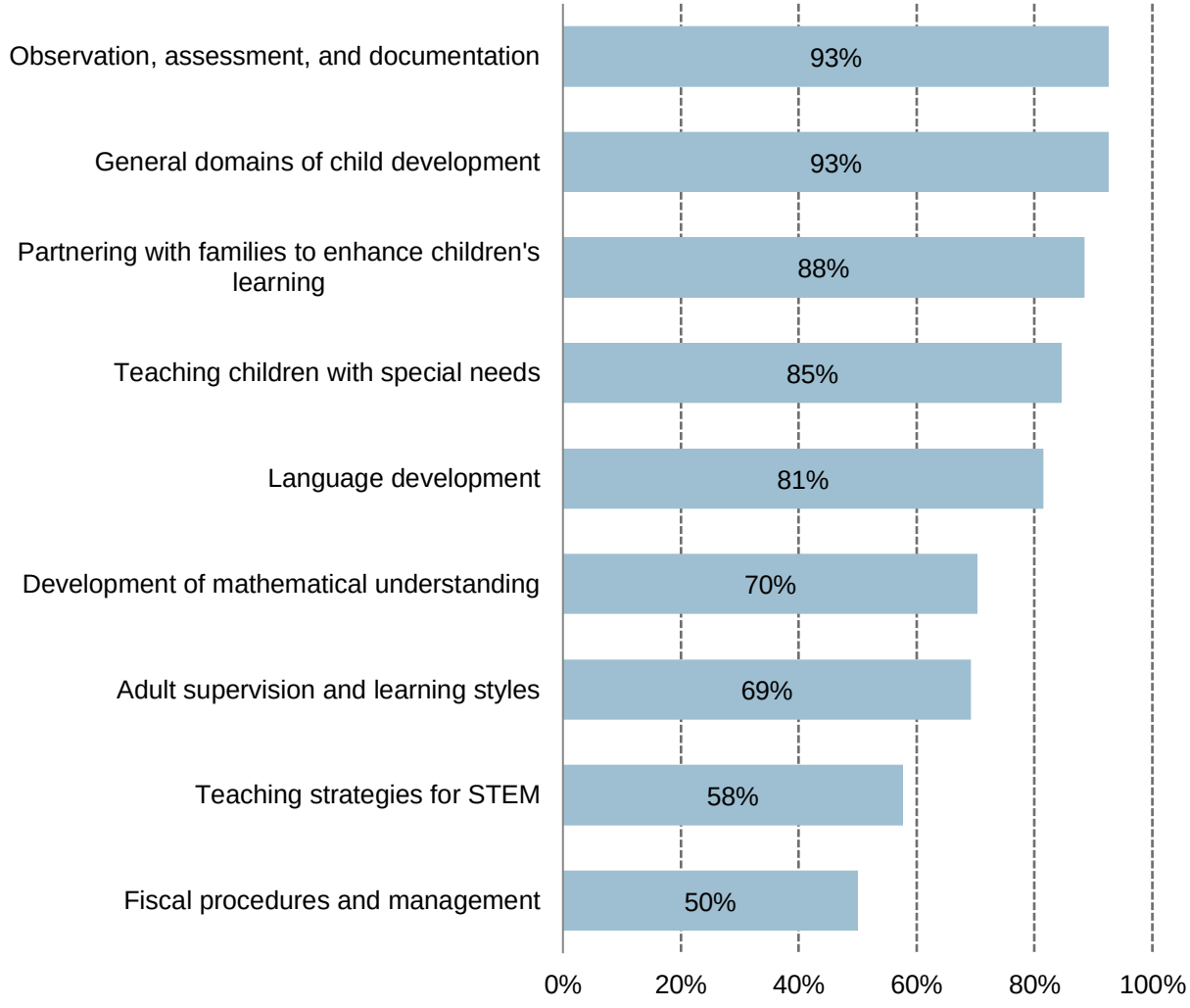


Table C-6: Structure of Recent Teaching Experience, Percentage of Faculty Reporting Having Taught Content Area in the Past Two Years

Course Content Structure	All Degree Faculty
Observation, assessment, and documentation to inform teaching and learning	
Taught as a separate course	15%
Taught within a broader course	33%
Taught both as a separate course and embedded within a broader course	44%
Not taught	7%
	N=27
General domains of child development (e.g., cognitive development, socioemotional development, physical development)	
Taught as a separate course	15%
Taught within a broader course	33%
Taught both as a separate course and embedded within a broader course	44%
Not taught	7%
	N=27
Partnering with families to enhance children's learning in school and at home	
Taught as a separate course	4%
Taught within a broader course	46%
Taught both as a separate course and embedded within a broader course	38%
Not taught	12%
	N=26
Teaching children with special needs	
Taught as a separate course	15%
Taught within a broader course	38%
Taught both as a separate course and embedded within a broader course	31%
Not taught	15%
	N=26
Language development (e.g., first and second language acquisition)	
Taught as a separate course	7%
Taught within a broader course	37%
Taught both as a separate course and embedded within a broader course	37%
Not taught	19%
	N=27

Table C-6: Structure of Recent Teaching Experience, Percentage of Faculty Reporting Having Taught Content Area in Past Two Years (Continued)

Course Content Structure	All Degree Faculty
Development of mathematical understanding	
Taught as a separate course	15%
Taught within a broader course	30%
Taught both as a separate course and embedded within a broader course	26%
Not taught	30%
	N=27
Adult supervision and learning styles	
Taught as a separate course	8%
Taught within a broader course	38%
Taught both as a separate course and embedded within a broader course	23%
Not taught	31%
	N=26
Teaching strategies for STEM (science, technology, engineering, math)	
Taught as a separate course	4%
Taught within a broader course	42%
Taught both as a separate course and embedded within a broader course	12%
Not taught	42%
	N=26
Fiscal procedures and program management	
Taught as a separate course	27%
Taught within a broader course	15%
Taught both as a separate course and embedded within a broader course	8%
Not taught	50%
	N=26

Professional Development Participation and Interest

What we asked about professional development:

The *Inventory* asked faculty members if they had participated in professional development opportunities over the past three years. The *Inventory* then listed 36 topics and asked faculty members to indicate the opportunities in which they had participated. The list included multiple topics related to:

- Diverse child populations;
- Adult learners;
- Teaching skills and assessment;
- Early childhood administration and leadership;
- Family engagement;
- Early mathematical development; and
- Working with dual language learners.

The next series of questions asked faculty members to indicate areas in which they would be interested in gaining additional knowledge or training. Faculty members were provided with a list of 17 topics and asked to rate their interest in obtaining additional knowledge or training on these topics using a scale of 1 to 5, with 1 being "not at all interested" and 5 being "very interested." The list included multiple topics related to the areas listed above.

Professional Development Participation

Table C-7: Participation in Professional Development Related to Diverse Child Populations in Past Three Years

Professional Development Topic	All Degree Faculty (N=27)
Teaching practitioners to work with children from diverse backgrounds	63%
Teaching practitioners to work with children with special needs	52%
Teaching practitioners to work with children who have experienced trauma	37%
None of the above	30%

Table C-8: Participation in Professional Development Related to Adult Learners in Past Three Years

Professional Development Topic	All Degree Faculty (N=27)
Strategies and techniques for mentoring/coaching of adult students	52%
Strategies to supervise adult students in clinical/field experiences	30%
Strategies to provide quality academic/career advising to adult students	48%
Using technology to promote adult learning	48%
Teaching adult students who are English-language learners	11%
Teaching culturally and ethnically diverse college students	37%
Teaching economically diverse college students	37%
None of the above	19%

Table C-9: Participation in Professional Development Related to Teaching Skills and Assessment in Past Three Years

Professional Development Topic	All Degree Faculty (N=27)
Teaching practitioners to use technology with children	33%
Child assessment (e.g., portfolios, using particular assessment tools)	37%
Early childhood program assessment (e.g., Environment Rating Scale)	44%
Early childhood teacher assessment (e.g., CLASS)	26%
Teaching practitioners developmentally appropriate practice in infant and toddler settings	52%
None of the above	26%

Table C-10: Participation in Professional Development Related to Administration and Leadership in Past Three Years

Professional Development Topic	All Degree Faculty (N=26)
Early childhood systems and policy	38%
Organizational development	31%
Theories of leadership	31%
None of the above	27%

Table C-11: Participation in Professional Development Related to Family Engagement in Past Three Years

Professional Development Topic	All Degree Faculty (N=27)
Evidence-based research on the importance and value of building respectful and trusting relationships with families	63%
Considering family structure when engaging with children and families	41%
Working with families of children with special needs	48%
Working with families to help them enhance their children's learning at home	44%
Working with families exposed to trauma	33%
Techniques for engaging families in classroom, program, and/or school activities	56%
Strategies to effectively communicate with families	56%
Techniques for gathering and using knowledge about children's families in curriculum planning	33%
None of the above	22%

Table C-12: Participation in Professional Development Related to Early Mathematical Development in Past Three Years

Professional Development Topic	All Degree Faculty (N=26)
Teaching practitioners to implement instructional strategies that support mathematical understanding in children from birth through age 2	38%
Teaching practitioners to implement instructional strategies that support mathematical understanding in children ages 3 and 4 (pre-K)	46%
Teaching practitioners to implement instructional strategies that support mathematical understanding in children in kindergarten through grade 3 or higher	27%
Teaching practitioners how to effectively use assessment to inform and individualize their mathematical instruction	31%
Strategies to help practitioners who struggle with mathematics build confidence in their ability to facilitate children's mathematical understanding and skill	35%
None of the above	50%

Table C-13: Participation in Professional Development Related to Dual Language Learners (DLLs) in Past Three Years

Professional Development Topic	All Degree Faculty (N=27)
Importance and benefits of bilingualism for young children's development	26%
Role of home-language development in helping young children learn English	33%
Strategies to support the cognitive development of young DLLs	22%
Strategies to support the language development of young DLLs	26%
Strategies to support the literacy development of young DLLs	22%
Strategies to support the development of mathematical knowledge and understanding of young DLLs	4%
Strategies to support the socioemotional development of young DLLs	22%
How to use appropriate teaching strategies for young DLLs within various classroom language models	15%
How to use observation, assessment, and documentation to inform strategies for teaching DLLs	11%
Strategies for engaging families from linguistically diverse backgrounds	33%
None of the above	41%

Professional Development Interest

Table C-14: Interest in Professional Development Topics Related to Diverse Child Populations

Professional Development Topic	1- Not interested	2	3	4	5- Very Interested
All Degree Level Faculty (N=26)					
Teaching practitioners to work with children from diverse backgrounds	0%	0%	27%	15%	58%
Teaching practitioners to work with children with special needs	0%	0%	23%	19%	58%
Teaching practitioners to work with children who have experienced trauma	0%	0%	31%	23%	46%

Table C-15: Interest in Professional Development Topics Related to Adult Learners

Professional Development Topic	1- Not interested	2	3	4	5- Very Interested
All Degree Faculty (N=26)					
Strategies and techniques for mentoring/coaching adult students	4%	4%	23%	12%	58%
Strategies to supervise adult students in clinical/field experiences	8%	0%	15%	19%	58%
Strategies to provide quality academic/career advising to adult students	8%	4%	19%	12%	58%
Using technology to promote adult learning	4%	8%	19%	19%	50%
Teaching adult students who are English-language learners	0%	4%	35%	23%	38%
Teaching culturally and ethnically diverse college students	0%	4%	31%	12%	54%
Teaching economically diverse college students	4%	0%	31%	8%	58%

Table C-16: Interest in Professional Development Topics Related to Teaching Skills and Assessment

Professional Development Topic	1- Not interested	2	3	4	5- Very Interested
All Degree Faculty (N=26)					
Teaching practitioners to use technology with children	8%	4%	31%	19%	38%
Using child assessment effectively (e.g., portfolios, using particular assessment tools)	0%	4%	19%	31%	46%
Using early childhood program assessment effectively (e.g., Environment Rating Scale)	0%	4%	27%	19%	50%
Using early childhood teacher assessment effectively (e.g., CLASS)	0%	4%	27%	19%	50%
Teaching practitioners developmentally appropriate practice in infant and toddler settings	0%	4%	15%	23%	58%

Table C-17: Interest in Professional Development Topics Related to Administration and Leadership

Professional Development Topic	1- Not interested	2	3	4	5- Very Interested
All Degree Faculty (N=26)					
Early childhood systems and policy	0%	4%	15%	27%	54%
Organizational development	4%	4%	27%	15%	50%
Theories of leadership	4%	0%	23%	19%	54%

Table C-18: Interest in Professional Development Topics Related to Family Engagement

Professional Development Topic	1- Not interested	2	3	4	5- Very Interested
All Degree Faculty (N=27)					
Evidence-based research on the importance and value of building respectful and trusting relationships with families	0%	4%	30%	26%	41%
Considering family structures when working with children and families and having strategies to partner effectively with a variety of family types	4%	0%	41%	22%	33%
Working with families of children with special needs	4%	0%	26%	19%	52%
Working with families exposed to trauma	0%	0%	41%	19%	41%
Working with families to help them enhance their children's learning at home	4%	0%	37%	11%	48%
Techniques for engaging families in classroom, program, and/or school activities	4%	4%	33%	22%	37%
Strategies to effectively communicate with families	4%	0%	37%	15%	44%
Techniques for gathering and using knowledge about children's families in curriculum planning	7%	0%	26%	41%	26%

Table C-19: Interest in Professional Development Topics Related to Early Mathematical Development

Professional Development Topic	1- Not interested	2	3	4	5- Very Interested
All Degree Faculty (N=26)					
Teaching practitioners to implement strategies that support mathematical understanding in children birth to age 2	0%	8%	35%	27%	31%
Teaching practitioners to implement strategies that support mathematical understanding in children ages 3 and 4 (pre-K)	0%	8%	19%	31%	42%
Teaching practitioners to implement strategies that support mathematical understanding in children in grades K-3 or higher	4%	8%	38%	23%	27%
Teaching practitioners how to effectively use assessment to inform and individualize instruction	0%	0%	35%	19%	46%
Strategies to help practitioners who struggle with math build confidence in their ability to facilitate children's mathematical understanding and skill	0%	12%	19%	15%	54%

Table C-20: Interest in Professional Development Topics Related to Dual Language Learners (DLLs)

Professional Development Topic	1- Not interested	2	3	4	5- Very Interested
All Degree Faculty (N=26)					
Importance and benefits of bilingualism for young children's development	4%	0%	50%	8%	38%
Role of home-language development in helping young children learn English	0%	4%	42%	12%	42%
Strategies to support the cognitive development of young DLLs	0%	0%	38%	15%	46%
Strategies to support the language development of young DLLs	0%	0%	38%	15%	46%
Strategies to support the literacy development of young DLLs	0%	0%	38%	15%	46%
Strategies to support the development of mathematical knowledge and understanding of young DLLs	0%	4%	38%	12%	46%
Strategies to support the socioemotional development of young DLLs	0%	0%	38%	15%	46%
How to use appropriate teaching strategies for young DLLs within various classroom language models	0%	4%	42%	12%	42%
How to use observation, assessment, and documentation to inform strategies for teaching DLLs	0%	0%	46%	12%	42%
Strategies for engaging families from linguistically diverse backgrounds	0%	0%	46%	12%	42%

Appendix D: Challenges Facing Early Childhood Degree Programs and Additional Resources Needed

What we asked about program challenges and resources needed for program improvement:

The *Inventory* asked program leads whether their degree programs were facing any challenges. Program leads who responded "yes" were then asked to identify the challenges from two broad lists: 1) challenges related to a lack of resources and/or support; and 2) challenges related to a need for additional faculty expertise.

(See **Figure D-1** and **Figure D-2** for the lists of challenges, pages 151 and 152.)

The *Inventory* asked faculty members whether resources were needed to improve the early childhood degree program(s) at their college or university. Faculty members were asked to identify needed resources from two lists: 1) program-related resources; and 2) faculty-related resources.

(See **Figure D-3** and **Figure D-4** for the lists of resources, pages 153 and 154.)

Challenges Facing Early Childhood Degree Programs

Figure D-1: Challenges Facing Arkansas Early Childhood Degree Programs Related to Lack of Resources and/or Support
(N=19)

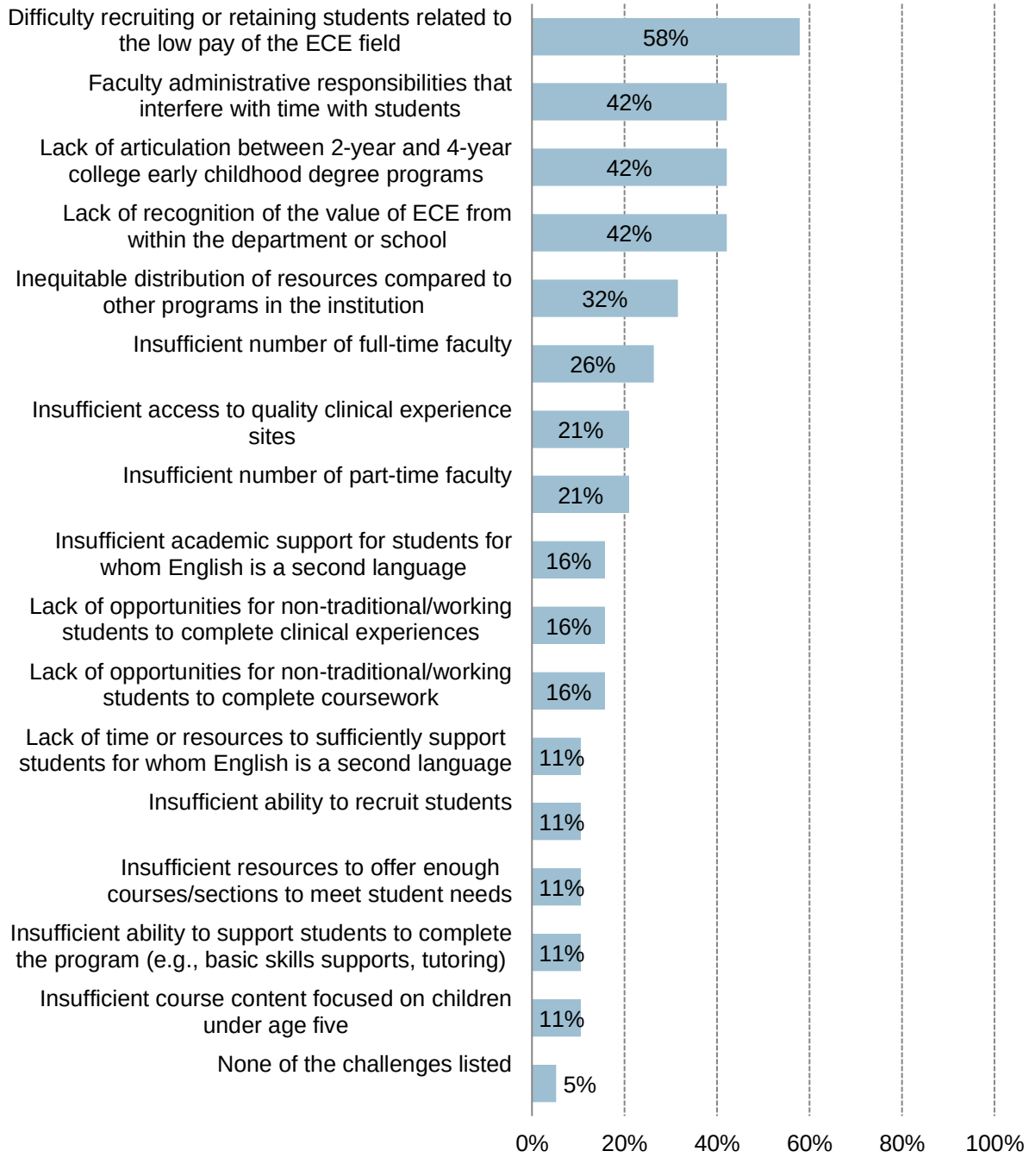
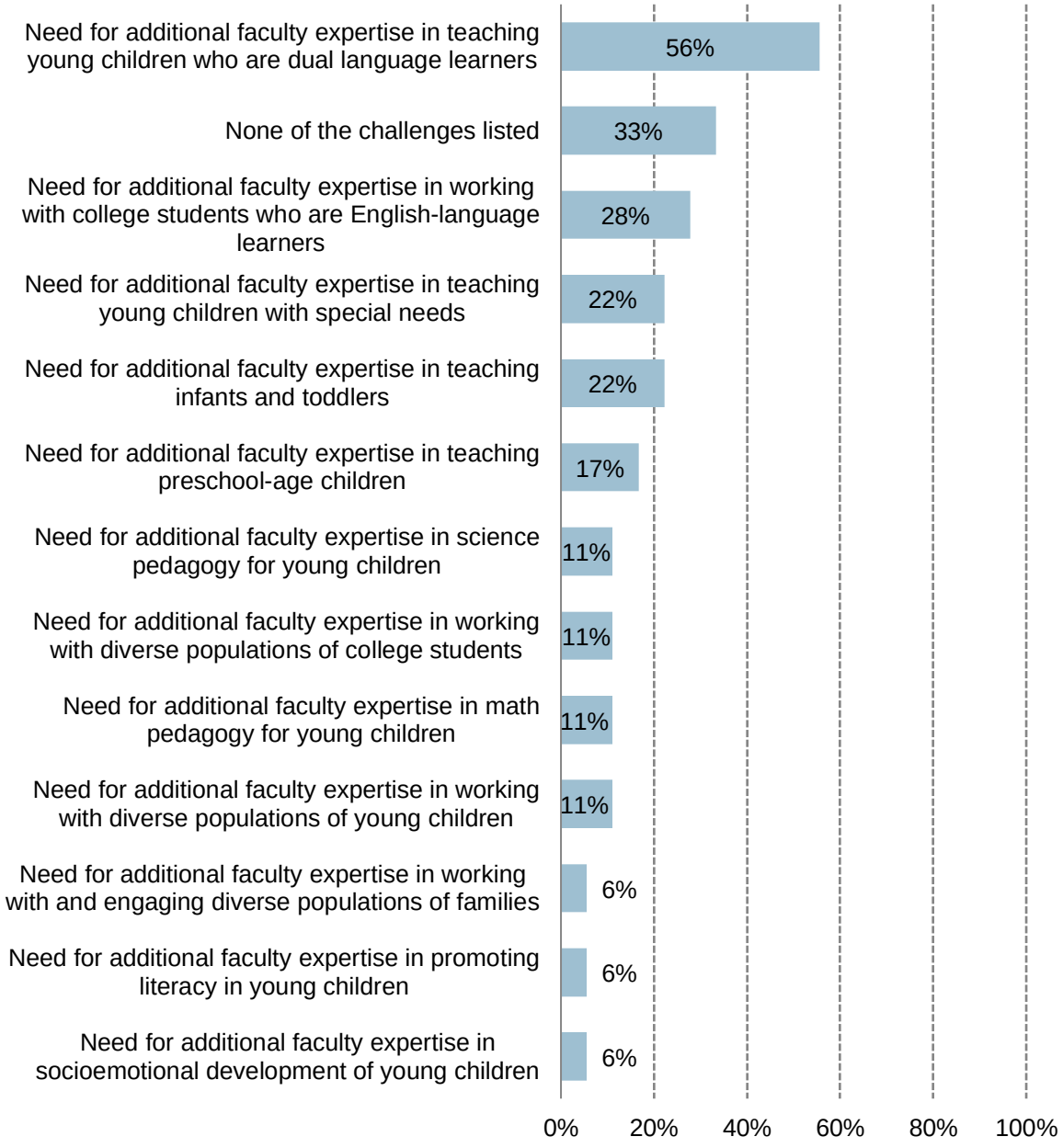


Figure D-2: Challenges Facing Arkansas Early Childhood Degree Programs Related to Need for Additional Faculty Expertise (N=18)



Additional Resources Needed to Improve Early Childhood Degree Programs

Figure D-3: Program-Related Resources Needed to Improve Early Childhood Degree Programs, as Reported by Faculty Members (N=25)

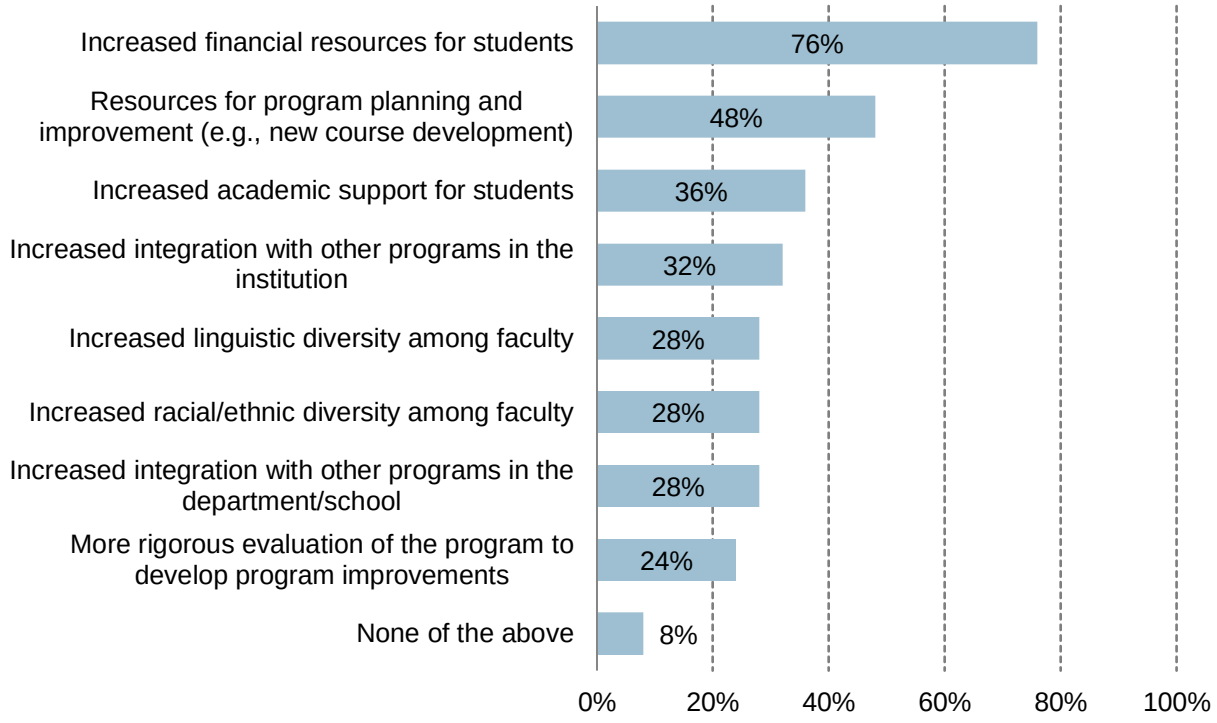


Figure D-4: Faculty-Related Resources Needed to Improve Early Childhood Degree Programs, as Reported by Faculty Members
(N=23)