

Teaching the Teachers of Our Youngest Children

The State of Early Childhood Higher
Education in Mississippi

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

2018

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



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

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

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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 the simultaneous advancement of preparation, workplace supports, and compensation of the ECE workforce. 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.

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. Among the recommendations for improving the preparation of the ECE workforce, *Transforming the Workforce for Children Birth Through Age 8: A Unifying Foundation* (Institute of Medicine [IOM] & National Research Council [NRC], 2015) emphasized how critical it is that all ECE teachers, regardless of role, possess foundational knowledge of child development and developmentally appropriate teaching practices. Furthermore, the report detailed the training and qualifications necessary for all lead teachers working with children from birth to age eight, which include a minimum of a bachelor’s degree in early childhood education or a related field, as well as specialized knowledge and competencies (IOM & NRC, 2015).

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

Likewise, recent changes in state licensure for teachers have caused early childhood advocates to express concern. Mississippi is home to more than 235,000 children under the age of six (U.S. Census Bureau, 2017), and more than 154,000 of these young children have all available parents in the workforce (Child Care Aware of America, 2017). In response to this need for high-quality early care and education in Mississippi and the recommendations in the IOM/NRC report, the state introduced a pre-K licensure endorsement option for teachers in 2016.

Stakeholders and advocates in Mississippi remain committed to advancing strategies that improve ECE services, including workforce preparation and development in order to ensure that early educators have what they require 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 ECE workforce. Institutions of higher education are critical 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 Mississippi, the great variability in early childhood degree programs across the country, and the evolving expectations for effective teacher preparation recommended by the IOM/NRC, it seemed the appropriate time to examine the status of early childhood higher education offerings in Mississippi 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 *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).

The IOM/NRC report also 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 et al., 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 early childhood degree 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

¹ Mississippi is one of 13 states (along with Arkansas, California, Florida, Indiana, Nebraska, New Hampshire, New Jersey, New York, Oregon, Rhode Island, Tennessee, and Washington) in which the *Inventory* has been completed at the time of publication of this report.

(Capps, Fix, Ost, Reardon-Anderson, & Passel, 2004). In light of this reality, the *Inventory* examines the capacity of early childhood degree programs to prepare their students to teach dual language learners.

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

The *Inventory* was implemented in Mississippi during the 2017-2018 academic year. This report summarizes major findings collected by implementing the *Inventory's* program and faculty modules (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 Mississippi

A network of 12 community colleges and nine public and private universities offers an array of early childhood degree programs. The 12 community colleges offer 12 associate degree programs, while the seven public and two private universities offer a total of two associate degree programs, 14 bachelor's degree programs, nine master's degree programs, and two doctoral degree programs.² In the current study, all associate degree programs and two-thirds of upper-level degree programs reported serving a mix of those already working in the early childhood field as well as more traditional pre-service students.

The *Inventory* findings are presented in two sections. The first section, "Early Childhood Higher Education, Mapping the Scene," examines the extent to which Mississippi early childhood degree 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 Mississippi early childhood degree programs have incorporated recent findings related to the importance of:

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

² A complete list of programs and institutions is available in Appendix A.

Box 1. Study Design

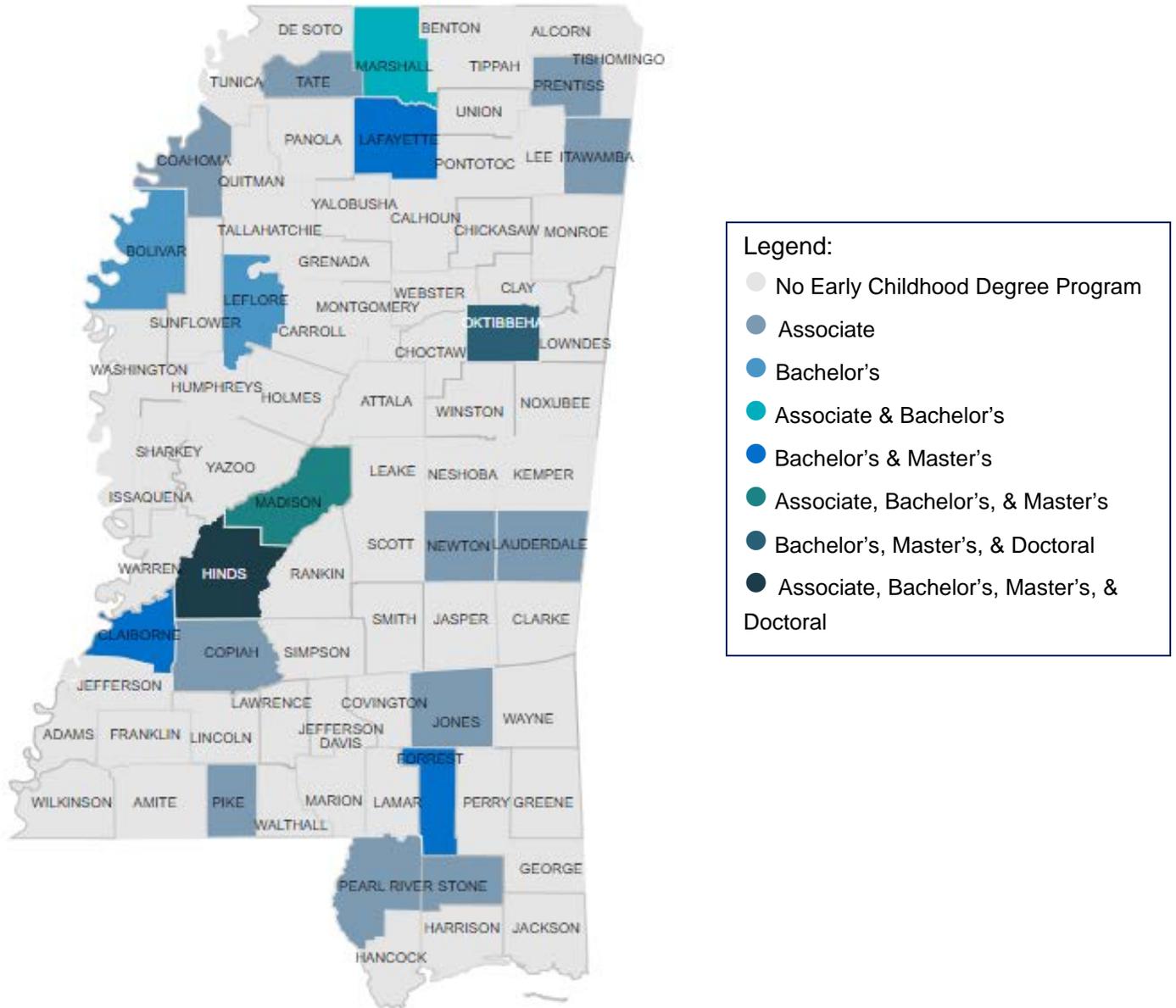
During the 2017-2018 academic year, researchers from CSCCE implemented the *Early Childhood Higher Education Inventory II*, which consists of three modules: a mapping of the population of higher education programs within a state; an online program survey completed by the degree program lead (e.g., dean, chair, or coordinator); and an online faculty survey completed by individual faculty members. The program findings reported here are drawn from a final sample of eight associate and 13 upper-level degree programs.³

The faculty findings are drawn from a final sample of 25 faculty members. Thirteen of these faculty members teach in associate degree programs, and 12 teach in upper-level degree programs.

See the Appendices 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, seven master's degree programs, and one doctoral program. Due to the small sample size and in order to protect the identity of these institutions, all analyses of upper-level degree programs are reported out of the total of all 13 programs.

Distribution of Mississippi Early Childhood Degree Programs



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 intervention provider 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:

- Child development and learning;
- Teaching, with three primary categories:
 - Teaching diverse child populations;
 - Teaching and curriculum; and
 - Teaching skills in early childhood settings; and
- 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

Nearly one-half of Mississippi early childhood degree programs identify their primary goal as teacher preparation, while most remaining programs aim to prepare students for multiple roles in many types of settings. While programs

offer a range of topics related to child development and teaching approaches, they tend to require more content focused on preschool-age children than infants and toddlers or school-age children. In general, associate degree programs are more likely than upper-level programs to offer content related to administration and leadership. More than one-half of programs incorporate state or national standards related to early math and/or family engagement into their curricula.

Like most states across the country, education requirements in Mississippi for those administering or teaching in early care and education programs vary and depend more on the program's funding source than children's developmental needs (Whitebook et al., 2016). Requirements vary across settings, with public-school preschool teachers needing a bachelor's degree, but caregivers in center- and home-based private settings needing only a high school diploma or GED (Mississippi Department of Education, 2018; Mississippi State Department of Health, 2017).

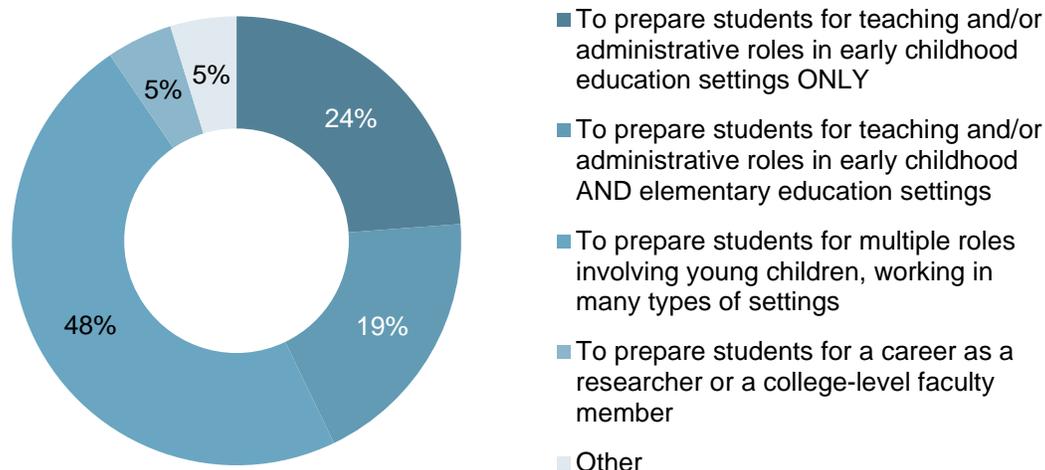
It is likely, however, that many early childhood teaching staff in Mississippi mirror their counterparts nationally and possess higher levels of education and training than are required (Whitebook et al., 2016). Additionally, other initiatives encourage and support many professionals in the ECE workforce to pursue further training/education, including the Early Learning Collaboratives (ELCs) that provide high-quality pre-K experiences to children across the state (Bass & Canter, 2017).

Program Goals

Not all early childhood degree programs are alike, nor should they be. However, it is important to distinguish between programs that have an intent to prepare teachers and administrators and those that 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).

The Mississippi higher education programs that participated in the *Inventory* varied in their goals. Nearly one-half of early childhood degree programs in Mississippi reported a primary focus on teacher preparation, although the child age focus varies depending on the program (see **Figure 1**). Approximately one-quarter (24 percent) of degree programs reported that their primary goal was to prepare students to work as teachers and/or administrators in early childhood education settings *only*, while approximately one-fifth (19 percent) of degree programs reported that their primary goal was to prepare students to work as teachers and/or administrators in both early childhood *and* elementary education settings. In addition, almost one-half (48 percent) of degree programs reported that their primary goal was to prepare students for multiple roles in many types of settings, and this broader goal was more common among upper-level programs than associate degree programs. Slightly fewer upper-level degree program leads (46 percent) noted that the program results in (or could lead to) teacher licensure.

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



Course Content

There is broad consensus that early childhood 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 Mississippi Inventory

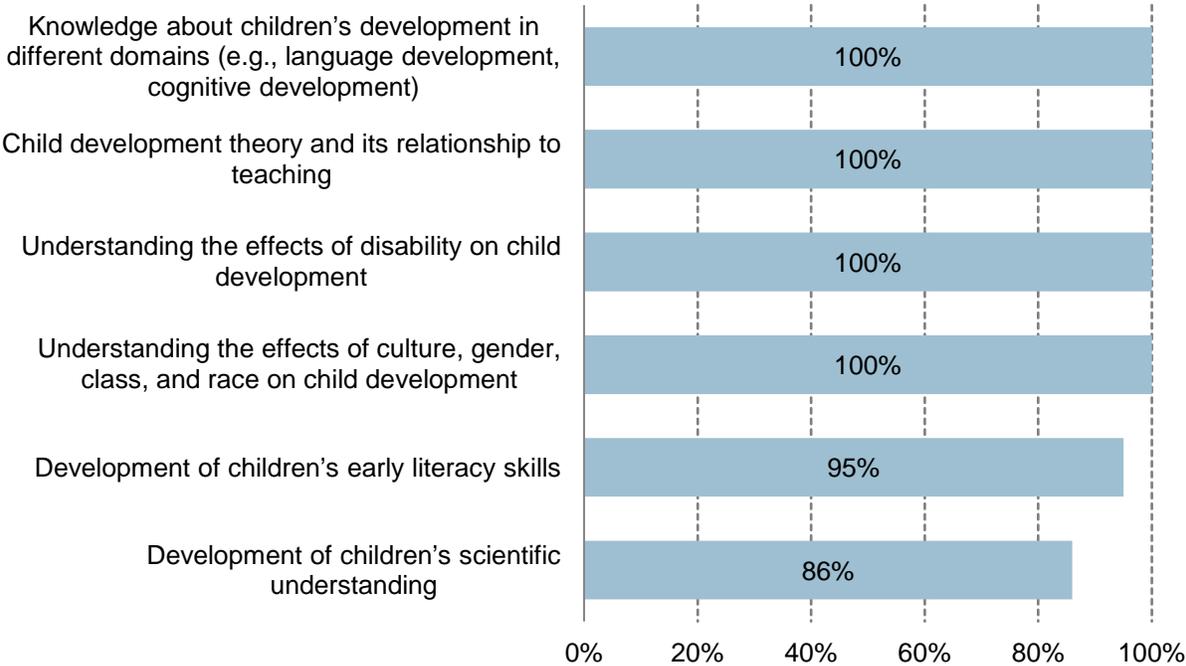
Domains	Topics
Child Development and Learning	Domains of development
	Effects of culture, gender, race, and class on development
	Effects of disability on development
	Development of children’s early literacy skills
	Child development theory and its relationship to teaching
	Development of children’s scientific understanding
Teaching	<i>Teaching Diverse Child Populations:</i> Teaching children who are experiencing poverty, who have special needs, who exhibit challenging behaviors, or who have experienced trauma
	<i>Teaching and Curriculum:</i> Implementing integrated curriculum and using play in teaching; implementing inclusion strategies; supporting social and physical development; and teaching art, literacy, science, and social studies

	<i>Teaching Skills in Early Childhood Settings</i> : Using observation, assessment, and documentation to inform teaching and learning; different teaching strategies; and classroom management
Leadership and Administration	<i>Supervision and Operations</i> : Building relationships with other teachers and/or early childhood professionals; guiding practitioners in implementing curriculum and appropriate teaching strategies; adult supervision; strategies to support adult learning; assessment and documentation to inform teaching; assessment and documentation to inform program quality; program planning, development, and operations; and preparation to provide professional development services
	<i>Organization and Systems</i> : 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

While all associate degree programs participating in the *Inventory* reported requiring all six of the course content topics related to the domain of child development and learning, some upper-level programs did not (see **Figure 2**). Programs were least likely to require “development of children’s scientific understanding,” which was reported as required by 86 percent of all programs and 77 percent of upper-level programs.

Figure 2. Required Coursework Related to Child Development and Learning (N=21)



Administration and Leadership

Associate degree programs were more likely than upper-level programs to offer course content to prepare practitioners for early childhood supervisory, administrative, or other leadership roles. In fact, all associate degree programs offered coursework in “building relationships with other teachers and/or early childhood professionals,” “assessment and documentation to inform teaching and learning,” and “building community partnerships and developing familiarity with community resources for children and families.”

Among upper-level degree programs, the most commonly offered topics were “building community partnerships and developing familiarity with community resources for children and families,” “organizational development and change,” and “the early childhood system and public policy.” These topics were offered by more than one-half (58-67 percent) of upper-level programs. Across degree levels, very few programs offered course content in “grant management and proposal writing.”

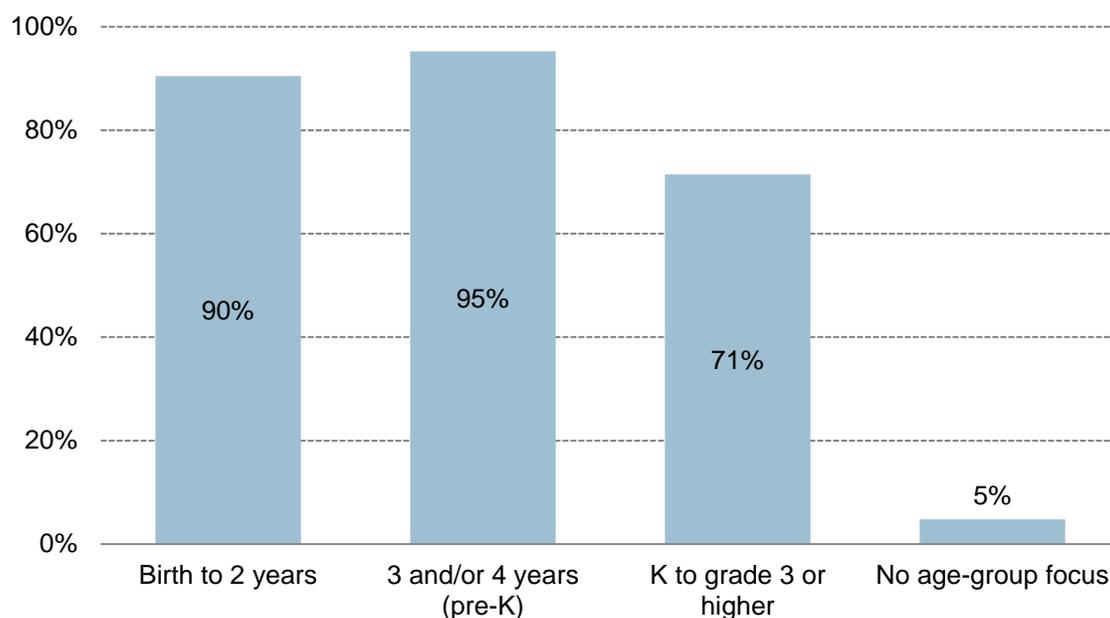
Finally, the *Inventory* also asked if programs offered coursework designed to prepare students to provide professional development services (e.g., mentoring, coaching, or training other ECE professionals): 45 percent of programs reported offering courses related to the provision of professional development services. Upper-level programs were more likely than associate degree programs to offer these courses.

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 degree programs (Whitebook et al., 2012; Whitebook & McLean, 2017). The Institute of Medicine and the National Research Council conclude that educators working with children at any age from birth to eight require equivalent levels of education and training, and this variability in preparation is both inconsistent with the science of early development and learning and unlikely to produce consistently effective preparation of teachers and administrators for early learning programs serving children in this age span (IOM & NRC, 2015).

Creating an integrated birth-to-age-eight early care and education system, inclusive of the institutions preparing the ECE workforce, has thus emerged as a major goal and as a metric by which to measure progress toward it. The *Inventory* intentionally sought to examine differences among programs in preparing students to work with children of different ages. For child development and learning and teaching topics, early childhood degree programs were most likely to require an age-group focus on preschool-age children (see **Figure 3** for an example). In general, both associate degree programs and upper-level degree programs were more likely to require a focus on infants and toddlers than school-age children. However, upper-level degree programs were more likely to require a focus on school-age children than infants and toddlers for certain teaching and curriculum topics, including teaching children science, art, and social studies.

Figure 3. Knowledge About Children's Development in Different Domains: Age-Group Focus of Programs Participating in the Mississippi Inventory (N=19)

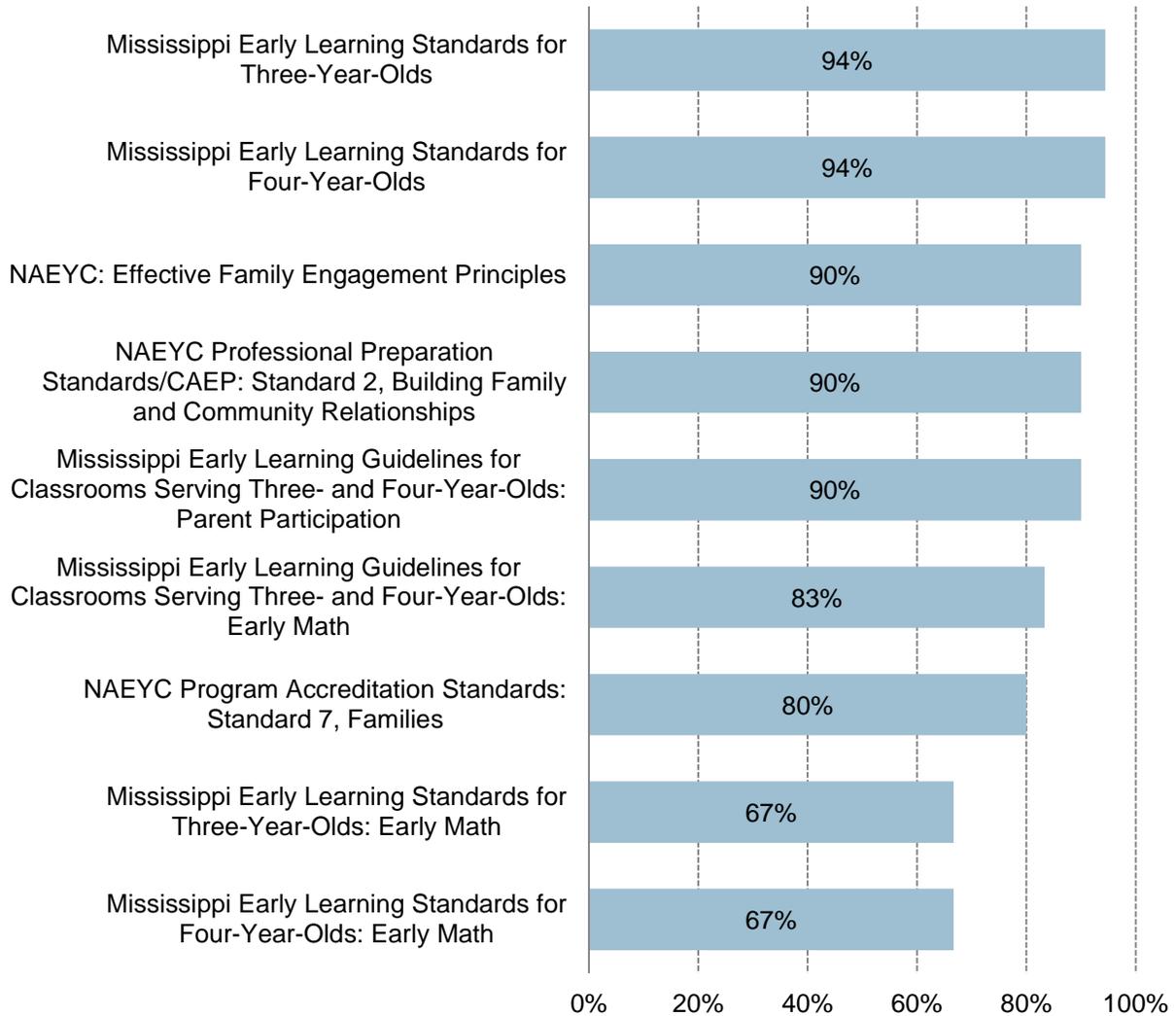


Integration of Standards and Competencies Into Coursework

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 et al., 2016). However, despite increasing agreement on the value of these standards and competencies for ensuring professionalism of the ECE workforce, in Mississippi some early childhood degree programs do not consistently require alignment of coursework to these standards.

The majority of programs (57 percent) reported incorporating state or national math standards into their course content related to early childhood mathematics, and an equal proportion of programs (57 percent) reported incorporating state or national family engagement standards. The National Association for the Education of Young Children (NAEYC) standards and the Mississippi Early Learning Guidelines and Standards were the most commonly reported standards that early childhood degree programs integrated into coursework (see [Figure 4](#)).

Figure 4. Standards Integrated by at Least 50 Percent of Programs Participating in the Mississippi Inventory (N=10-18)



FINDING TWO: FIELD-BASED LEARNING EXPERIENCES

Requirements and Age-Group Focus

Most associate and upper-level degree programs in early childhood require students to complete one or more practicum experiences. In addition, most associate degree programs require a student teaching experience. There is

little consistency as to the duration and frequency of either type of field-based learning experience. Programs are more likely to require field experiences to have an age-group focus on preschool-age children than infants and toddlers or school-age children, especially at the associate degree level. While programs typically require field experiences to involve supporting children's math, literacy, and socioemotional development, programs are less likely to require field experiences to involve developing partnerships with families and collaborating with community organizations.

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 faculty member *and/or* cooperating teacher *and/or* mentor. For each, respondents were asked to indicate whether the field experience was required in order to attain the degree, and if so, they were asked a series of questions pertaining to the field experience, including timing, duration, and differences in field experience structures for pre-service and experienced teachers.

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

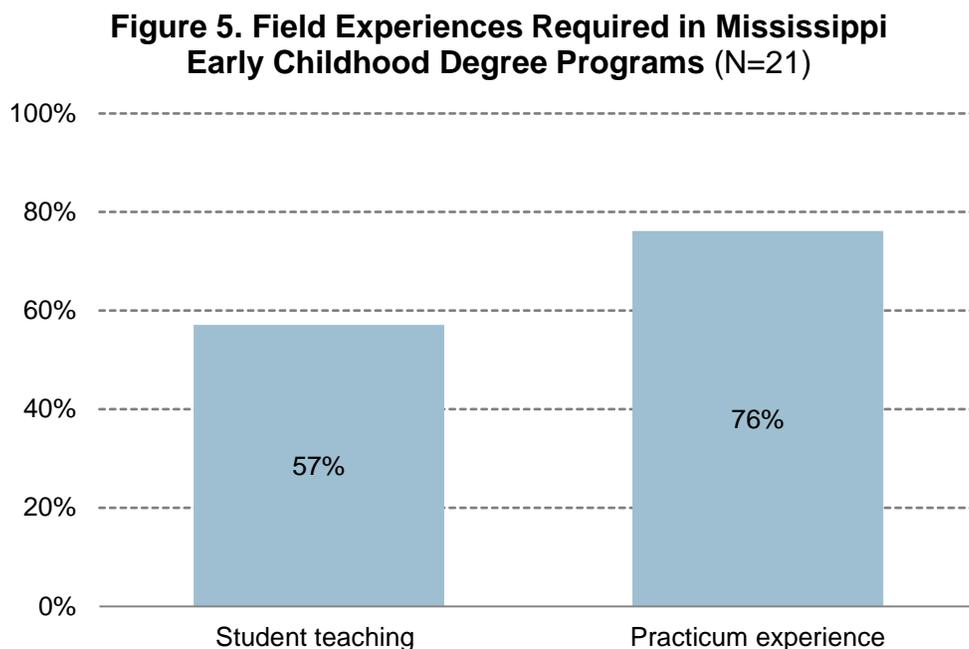
Finally, program leads were asked to identify practices that students were required to incorporate during student teaching and practica, including the following:

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

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

Required Field Experiences

More than one-half (57 percent) of all programs require students to participate in student teaching. In addition, about three-quarters (76 percent) of programs require students to participate in at least one practicum course (see **Figure 5**).



Duration and Timing of Student Teaching

Seven associate degree programs and five upper-level degree programs required a student teaching experience. The required duration of student teaching varied widely from one week to 32 weeks, with a mean of 15 weeks.

Nearly all programs (92 percent) required the student teaching experience to occur at the end of the student's course of study, rather than at the beginning or middle of the course of study.

Number, Duration, and Timing of Practica

Practica are the most common type of field-based learning experience required across Mississippi early childhood degree programs. Seven associate degree programs and nine upper-level degree programs required one or more practicum courses. 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 Mississippi Inventory

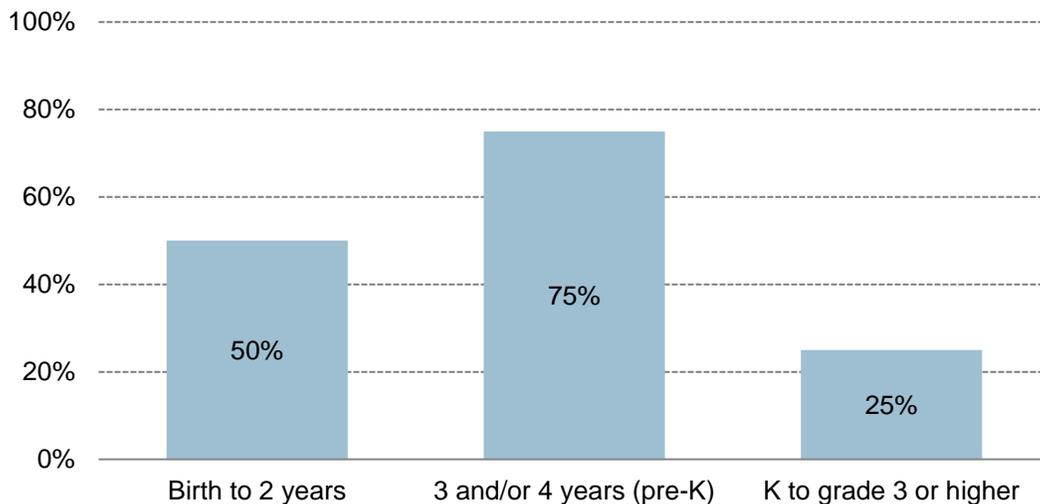
Degree Level	One practicum required	Two practica required	Three practica required	Four or more practica required	Mean number of hours typically required to complete a practicum course
All Degree Programs (N=13)	8%	62%	0%	31%	97

Programs varied in when they required the first practicum experience to occur. In both associate and upper-level degree programs, the first practicum was more likely to occur during the middle or at the end of the course of study, as opposed to within the first year of study. The majority of programs across degree levels do not structure practica differently for pre-service and experienced teachers.

Requirements of Student Teaching Experiences

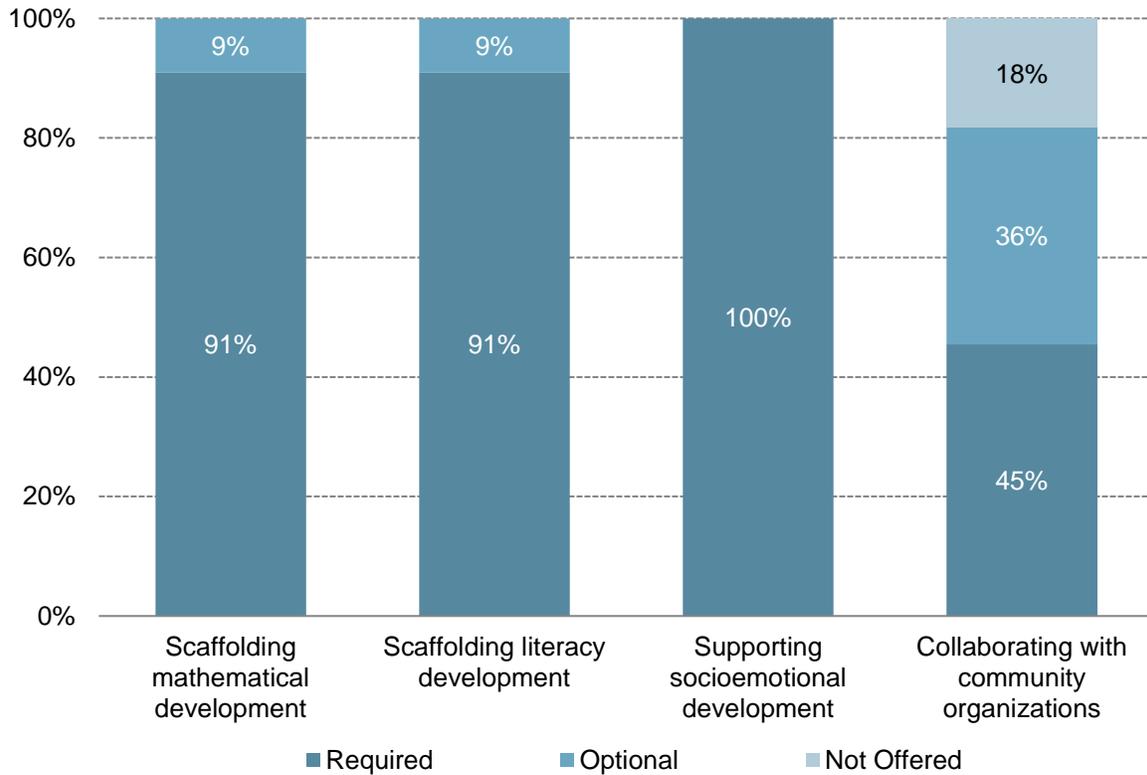
Associate degree programs were more likely to require student teaching experiences to involve working with preschool-age children, as opposed to infants and toddlers or school-age children (see [Figure 6](#)). However, upper-level programs participating in the *Inventory* were equally likely to require student teaching experiences to focus on working with infants and toddlers, preschool-age children, and school-age children.

Figure 6. Required Age-Group Focus in Student Teaching Experiences (N=12)



More than 90 percent of programs requiring student teaching reported that these experiences involved guiding early math and literacy development, supporting children's socioemotional development and skills, and facilitating motor development. However, less than half (45 percent) of these programs reported that student teaching experiences require collaborating with community organizations (see **Figure 7**).

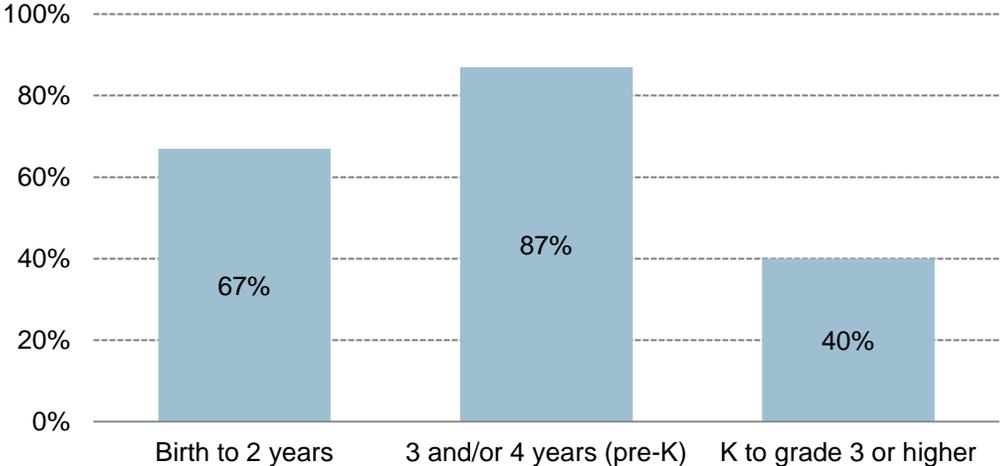
Figure 7. Select Practices Required for Students in Their Student Teaching Experiences (N=11)



Requirements of Practicum Experiences

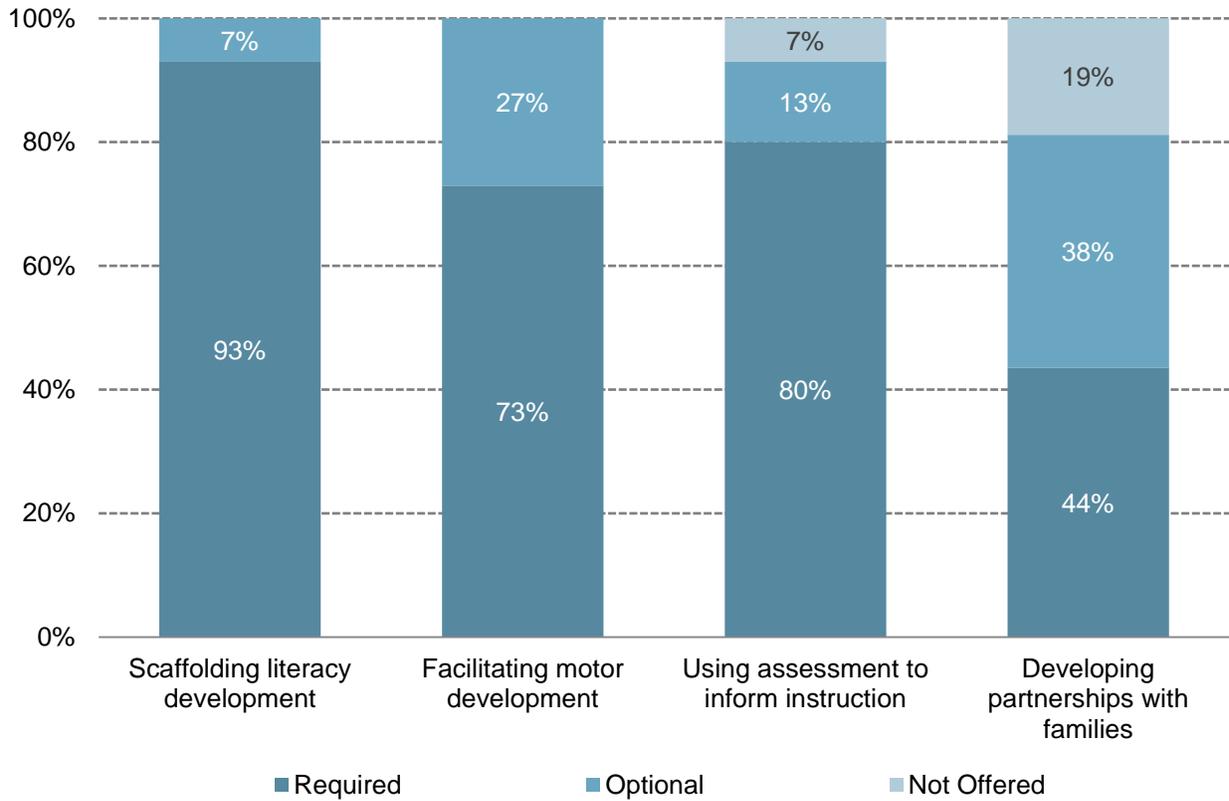
In general, programs were most likely to require an age-group focus on preschool-age children within the practicum experience, rather than infants and toddlers or school-age children (see **Figure 8**). However, upper-level programs were equally likely to require an age-group focus on infants and toddlers in practicum experiences as they were to require a focus on preschool-age children.

Figure 8. Required Age-Group Focus in Practicum Experiences (N=15)



Most programs requiring students to complete practica also require these experiences to involve guiding early math and literacy development, supporting children's socioemotional development and skills, facilitating motor development, and utilizing assessment. However, less than one-half (44 percent) of these programs reported requiring practica to involve developing partnerships with families (see **Figure 9**).

Figure 9. Select Practices Required for Students in Their Practicum Experiences (N=16)



FINDING THREE: PORTRAIT OF FACULTY

Employment Status, Demographics, and Professional Background

Mississippi early childhood degree programs are staffed with a mix of part-time and full-time faculty. Faculty members primarily identified as white/Caucasian, although one-third of faculty members identified as black/African American. Nearly all faculty members identified as female,

and all faculty members reported that they were monolingual, speaking only English. Most faculty members have had graduate education specific to early childhood, and they report 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: age; race/ethnicity; and linguistic capacity;
3. Their academic background;
4. The primary focus of their teaching and expertise related to children across the birth-to-age-eight continuum;
5. Their professional experience, 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 52 faculty who received the *Inventory*.⁴ Thirteen of these faculty members teach in associate degree programs, and 12 teach in upper-level degree programs.⁵

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 et al., 2006; Whitebook, Bellm, Lee, & Sakai, 2005).

⁴The faculty members included in the *Inventory* represent only a portion of faculty members who are currently teaching in early childhood degree programs in Mississippi. Nonetheless, these findings provide insight into the experiences and needs of the wider population of early childhood higher education faculty in the state.

⁵ Upper-level degree program faculty members teach in bachelor's, master's, and/or doctoral programs.

Among those who participated in the *Inventory*, no faculty members in associate degree programs identified themselves as adjunct faculty members or part-time lecturers. However, 42 percent of faculty members in upper-level degree programs identified themselves as adjunct faculty members or part-time lecturers. While this figure for upper-level programs is lower than the national average of 46 percent (U.S. Department of Education, 2017), respondents nonetheless identified some challenges related to staffing, as discussed in more detail in Finding Six.

Demographic Characteristics

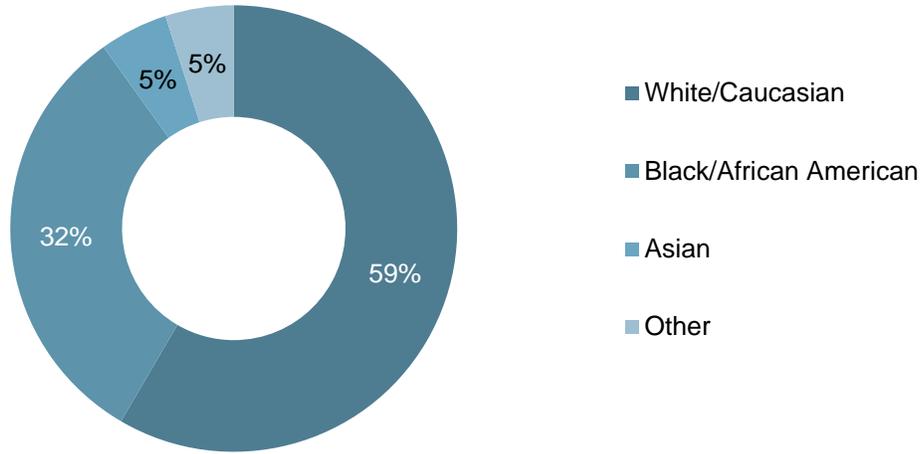
The well-documented absence of racial and ethnic minorities among early childhood higher education faculty — in contrast to their adult students and the child populations that these ECE professionals will serve — has implications for the degree of focus on diversity in coursework and the availability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

Racial, Ethnic, and Linguistic Diversity

Nearly all faculty members participating in the *Inventory* (95 percent) identified as female. A majority of faculty members (59 percent) identified as white/Caucasian, and one-third (32 percent) identified as black/African American (see **Figure 10**). The racial/ethnic makeup of the early childhood higher education faculty members who participated in the *Inventory* is similar to that of the general population of Mississippi, which is 59 percent white/Caucasian and 38 percent black/African American (U.S. Census Bureau, n.d.).

All faculty members across all degree levels reported fluency in English, but none reported fluency in another language. However, 45 percent of faculty members reported that it would be helpful to know another language in order to communicate better with their students. Of these faculty members who would like to know another language, 90 percent wanted to learn Spanish. Additionally, one or more faculty members identified Choctaw, French, and Vietnamese as languages they would like to know.

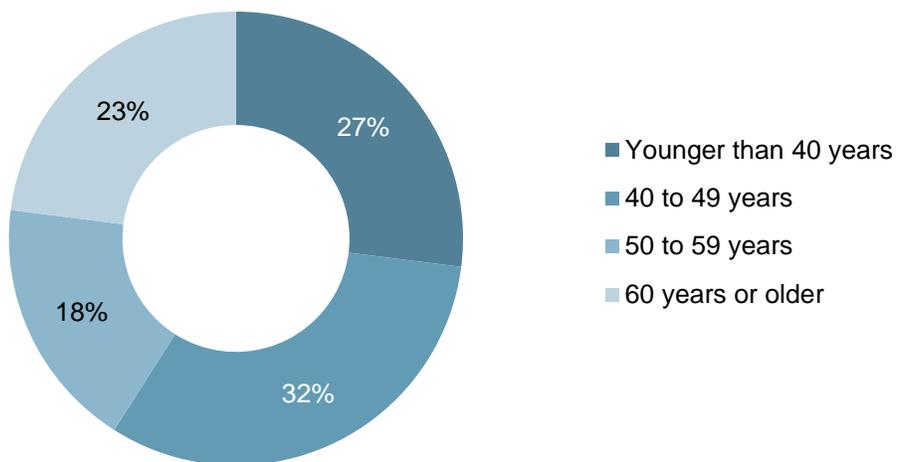
Figure 10. Race/Ethnicity of Faculty Members Participating in the Mississippi Inventory (N=22)



Age

The average age of faculty members was 47 years. More than one-quarter (27 percent) of faculty were younger than 40 years old, while 23 percent of faculty were age 60 or older (see **Figure 11**).

Figure 11. Age of Faculty Members Participating in the Mississippi Inventory (N=22)



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

Nearly all faculty members participating in the *Inventory* had earned at least a bachelor's degree in early childhood education or child development, and more than one-quarter (27 percent) had earned a doctoral degree in one of these disciplines.

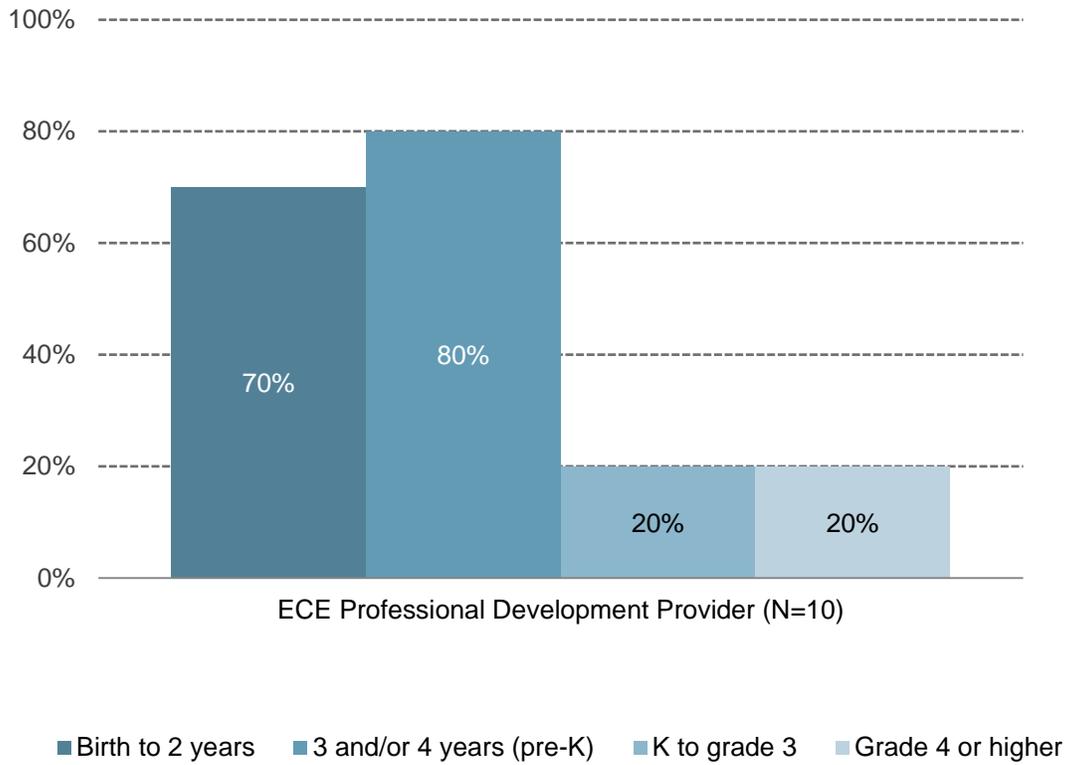
While we did not ask faculty members about the primary focus of their own early childhood degrees, faculty were asked to indicate whether the primary focus of their teaching in the degree program was "child development and learning," "curriculum and teaching methods," or "both equally." Nearly three-quarters of faculty members (71 percent) reported focusing equally on both "curriculum and teaching methods" and "child development and learning."

Faculty were also asked about their expertise related to various age groups of children. Two-thirds (67 percent) of upper-level faculty members reported their primary area of expertise as spanning the full age spectrum from birth through grade 3 or higher. In contrast, only 15 percent of associate degree faculty members reported this broad age spectrum as their primary area of expertise. Instead, nearly one-half (46 percent) of associate degree faculty members reported that their primary area of expertise was in birth through before kindergarten, and an additional 23 percent reported that their primary area of expertise focused specifically on preschool-age children.

Professional Teaching and Administrative Experience

About two-thirds (64 percent) 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, nearly three-fourths (71 percent) had worked as ECE professional development providers (e.g. coach, mentor, trainer, consultant). Nearly two-thirds (64 percent) of faculty members had worked as classroom teachers, and one-half had worked as directors of ECE programs. In addition, experiences as professional development providers most commonly occurred with preschool-age children (see **Figure 12**).

Figure 12. Age-Group Focus of Select Job Roles Held by Faculty Members in the 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

Mississippi early childhood higher education faculty were more likely to consider content related to preparing teachers to work with families of various ethnic, racial, and cultural backgrounds important relative to other course content. In general, faculty members reported feeling most capable of preparing teachers to work with preschool-age children. Mississippi

early childhood higher education faculty are particularly interested in professional development related to helping practitioners who struggle with mathematics, teaching practitioners to use assessment to inform instruction, and teaching practitioners to work with children with special needs.

What we asked faculty members:

Individual faculty members were asked to indicate:

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

Faculty members were also asked about:

- Their capacity to teach certain content;
- Recent teaching experiences; and
- 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

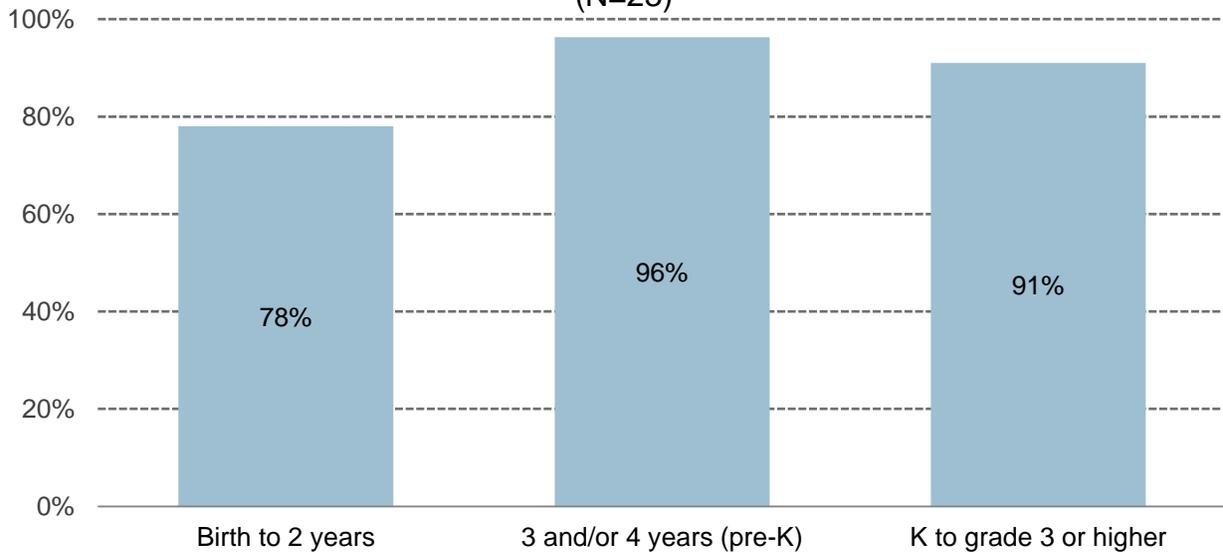
We asked faculty members their opinions about the importance of including particular domains of development and learning in early childhood degree programs focused on infants and toddlers, preschool-age children, and school-age children (see **Box 3** for a description of how we gathered this information). On average, 88 percent of faculty members rated these domains as “very important” for teachers working with preschool-age children and for teachers working with school-age children. For teachers working with infants and toddlers, the percentage of faculty members rating domains as “very important” decreased to an average of 81 percent (see **Figure 13** 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 96 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 members' perspectives on the relative importance of various domains of development and learning in teacher preparation programs. Faculty members were asked to use a Likert scale of 1 to 4, with 1 meaning "not important" and 4 meaning "very important," to indicate their views on including various domains for different age groups of children. The domains were:

Literacy Development	Understanding the components and sequence of literacy development in young children and how to promote children's skills related to oral and written language
Socioemotional Development	Understanding socioemotional development, its relationship to learning, and how to support children's socioemotional skills
Motor Development	Understanding typical 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
Dual Language Learners	Supporting the cognitive and social development of young dual language learners

Figure 13. Importance of Including "Understanding Socioemotional Development" in Teacher Preparation Programs: Percentage of Faculty Members Reporting "Very Important" (N=23)



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 most topics, at least 90 percent of faculty members reported feeling capable of teaching content to students. However, only 70 percent of faculty members reported feeling capable of preparing teachers to support the cognitive and social development of young dual language learners, while 87 percent reported feeling capable of preparing teachers to work with diverse families.⁶

In general, faculty were most likely to report feeling capable of preparing teachers to work with preschool-age children. For example, 87 percent of faculty members reported feeling capable of preparing teachers to scaffold mathematical development and problem solving for preschool-age children. In contrast, only 74 percent of faculty members reported feeling capable of preparing teachers in this domain for infants and toddlers, and only 65 percent reported feeling capable of preparing teachers to scaffold mathematical development and problem solving for school-age children.

Recent Teaching Experience

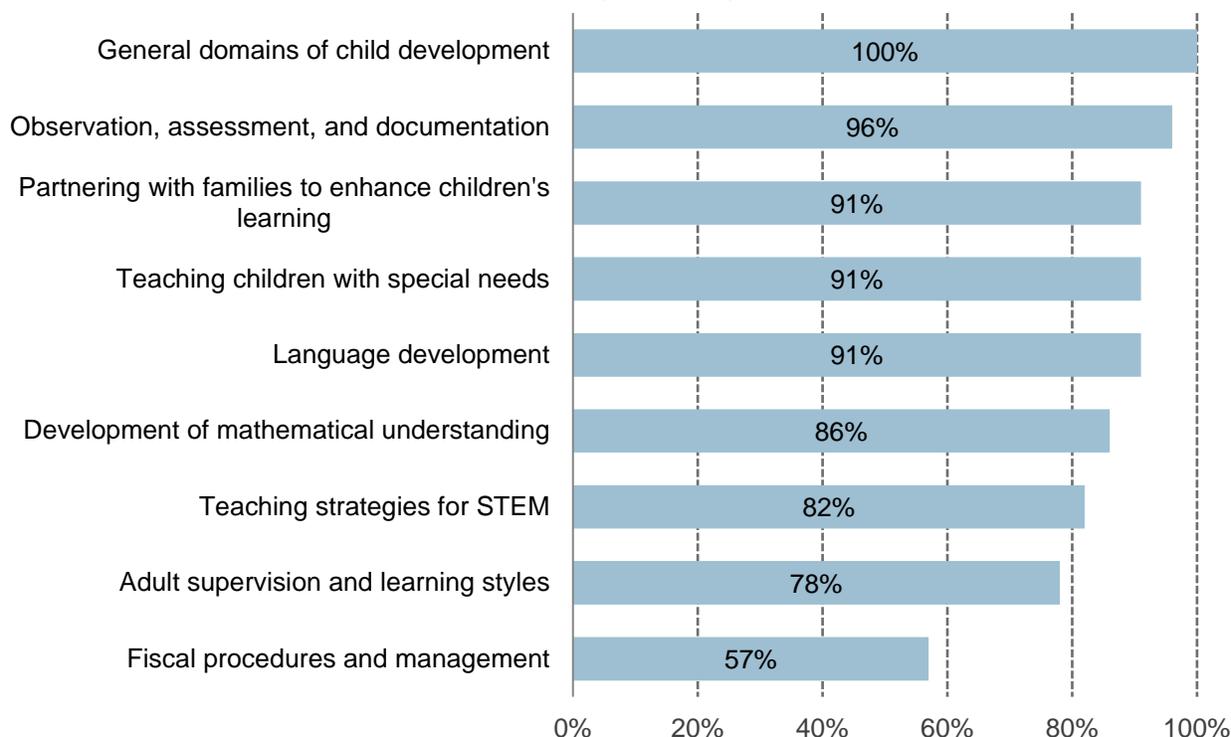
Faculty were asked about their experience teaching a variety of topics during the past two academic years and whether they taught the following content areas either as a separate course, embedded within a broader course, or both. At least 90 percent of faculty members participating in the *Inventory* reported teaching content related to general domains of child development; language development; teaching children with special needs; observation, assessment, and documentation to inform teaching and learning; and partnering with families to enhance children's learning in school and at home (see **Figure 14**). In addition, all associate degree faculty members reported teaching content related to teaching strategies for STEM and the development of mathematical understanding.

Faculty members were least likely to report having taught courses related to fiscal procedures and management (57 percent) and adult supervision and learning styles (78 percent). Associate degree faculty members were much more likely than upper-level faculty members to report that they had taught courses related to adult supervision and learning styles.

Most topics listed in the *Inventory* were more likely to be taught embedded within a broader course than as a separate course. However, language development, teaching children with special needs, and fiscal procedures and program management were more likely to be taught as separate courses.

⁶ Capacity to teach topics related to family engagement, early mathematical development, and working with dual language learners is described in more detail in Part 2 of this report.

Figure 14. Recent Teaching Experience: Percentage of Faculty Members Reporting Having Taught Content Area in Past Two Years (N=22-23)



Professional Development Participation and Interest

All faculty members reported participating in professional development during the past three years.⁷ The most frequently reported professional development experiences, participated in by 50 percent or more of faculty members, included the following topics:

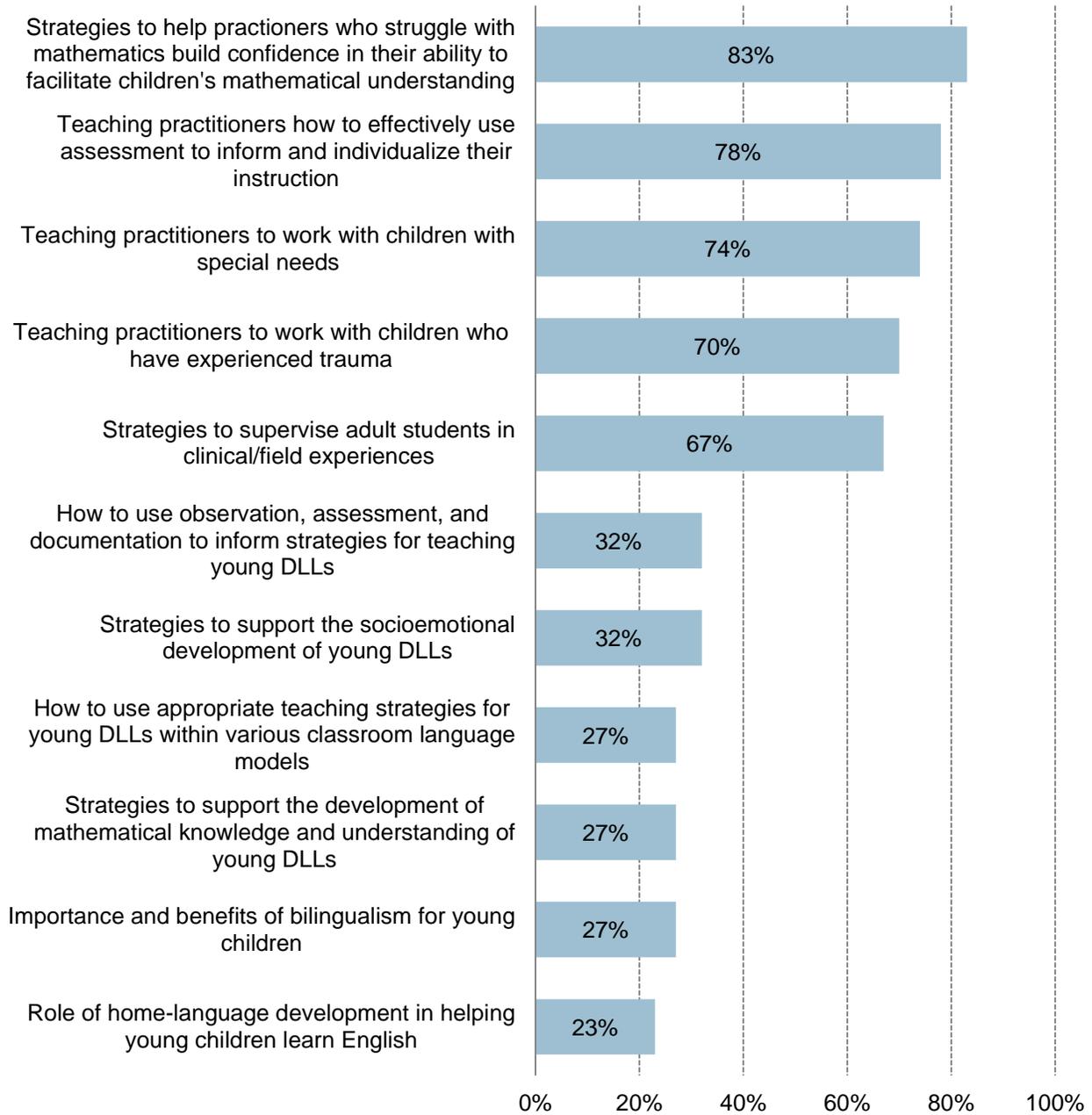
- Using technology to promote adult learning;
- Child assessment (e.g., portfolios, specific assessment tools);
- Early childhood teacher assessment (e.g., CLASS);
- Teaching practitioners to work with children with special needs;
- Evidence-based research on the importance and value of building respectful and trusting relationships with families; and
- Teaching practitioners to implement instructional strategies that support mathematical understanding in children ages three and four.

⁷ 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 were least likely to have participated in professional development related to dual language learners; less than one-half (43 percent) of faculty members had participated in professional development on any of the topics related to dual language learners in the past three years. In addition, only 57 percent of faculty members had participated in professional development on any of the topics related to early math.

Faculty members indicated a number of areas in which they were interested in gaining additional knowledge or training (see **Figure 15**). The most commonly identified topics included “strategies to help practitioners who struggle with mathematics build confidence in their ability to facilitate children’s mathematical understanding and skill,” “teaching practitioners how to effectively use assessment to inform and individualize their instruction,” “teaching practitioners to work with children with special needs,” and “teaching practitioners to work with children who have experienced trauma.”

Figure 15. Professional Development Topics With Highest and Lowest Percentage of Faculty Members Reporting "Very Interested" (N=21-23)



FINDING FIVE: SUPPORTING STUDENTS

Services Offered and Articulation

Mississippi early childhood degree programs offer multiple support services to help students access resources and strengthen their academic skills. More than one-half of all programs offer the following services specifically for early childhood education students: academic

counseling, financial aid counseling, academic tutoring in math, or academic tutoring in reading/writing. These services are more common among associate degree programs than upper-level programs. While most programs across degree levels reported that they had articulation agreements for early childhood education students, associate degree programs were far more likely than upper-level degree programs to report challenges with articulation.

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 education 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 support.

Services Offered

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

Box 4. Support for Student Success: Praxis

A student's ability to become a licensed teacher in Mississippi is contingent upon several factors:

- Completing an approved educator preparation program at an accredited institution of higher education;
- Attaining a minimum ACT score or passing the Praxis CORE;
- Passing the Praxis Subject Assessment; and
- Passing the Praxis: Principles of Learning and Teaching.⁸

If students encounter difficulty attaining the necessary scores on the standardized tests required for licensure (ACT and/or Praxis), these challenges may impede their progress through the degree program and onto their chosen career path. Supports such as those discussed in this section may be offered by programs or institutions in order to address these challenges and assist students in attaining their goals.

Skill Support

Although only 15 percent of programs participating in the *Inventory* offer a contextualized math course,⁹ more than one-half of programs (58 percent) offer tutoring in math tailored to early childhood education students. In addition, 58 percent of programs offer tutoring in reading/writing tailored to early childhood education students (see **Figure 16**). Associate degree programs were more likely than upper-level programs to offer tutoring in these subjects. Upper-level programs also noted offering students the option of retaking prior coursework, working with a tutor, or enrolling in a special course to help prepare for the Praxis (see **Box 4**).

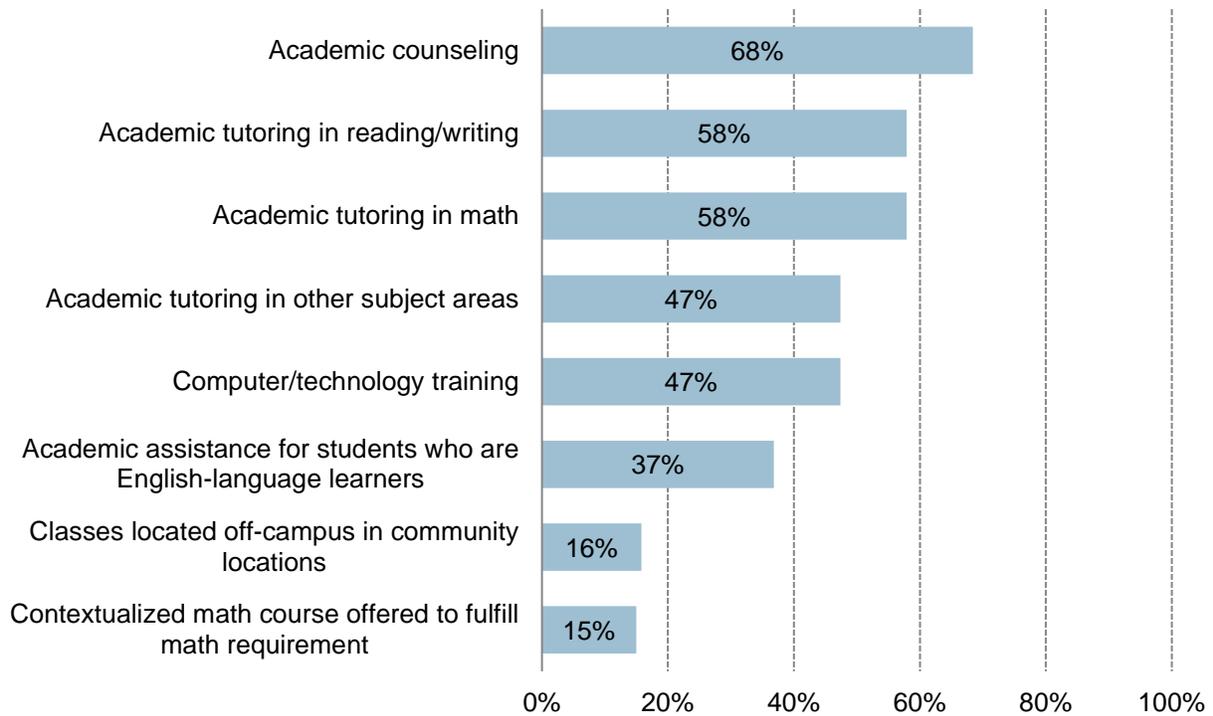
Counseling and Cohort Models

Among all support services offered specifically for early childhood education students, counseling services were the most commonly offered by programs participating in the *Inventory*. More than two-thirds of programs (68 percent) offered academic counseling tailored to early childhood education students. In addition, almost two-thirds of programs (63 percent) offered financial aid counseling specifically for early childhood education students, and 37 percent of programs offered cohort models. Upper-level degree programs were more likely to offer cohort models than associate degree programs. Cohort models, in which small groups of students move through a degree program together, taking the same courses and receiving targeted support services, have been shown to improve graduation rates and other educational outcomes of early childhood education students (Kipnis et al., 2012).

⁸ Licensure requirements were retrieved from the *Guidelines for Mississippi Educator Licensure K-12*, prepared by the Office of Educator Licensure, Mississippi Department of Education in May 2018.

⁹ A contextualized math course is a course that focuses on the mathematics required for early childhood educators or administrators, for example, calculating child enrollment and ratios or developing a classroom budget.

Figure 16. Services Tailored to Students in Programs Participating in the Mississippi Inventory (N=19-20)



Access Support

About one-half (52 percent) of degree programs offered a “blended” program combining online and in-person courses, while 29 percent of programs offered a traditional/on-campus program, and 19 percent of programs offered the degree as an online/distance learning program. A higher percentage of associate degree programs than upper-level degree programs were offered in traditional/on-campus formats.

More than one-half (53 percent) of all programs offered alternative class schedules for working adults. In addition, more than one-third (37 percent) of programs offered financial assistance other than federal financial aid specifically for early childhood education students. Associate degree programs were more likely to offer financial assistance than upper-level programs.

In addition to the access supports included in the program module, it is important to note that the Early Childhood Education Technology Associate of Applied Science (A.A.S.) degree, which is offered at many of the community and technical colleges in Mississippi, incorporates a common curriculum with identical courses across a number of institutions. This common curriculum acts as an access support, allowing for easy transfer across community/technical colleges if a student’s particular situation necessitates a transfer. Common curriculum should also facilitate articulation, as bachelor’s degree-granting institutions should be familiar with the coursework that transfer students bring in, which should streamline the process of approving credits and designing a program of study.

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.

Eighty percent of bachelor's degree programs participating in the *Inventory* reported articulation agreements with early childhood associate degree programs, and 71 percent of associate degree programs reported articulation agreements with bachelor's degree programs. The number of associate degree credits that articulate into the bachelor's degree ranged widely from five to 27.¹⁰

When asked to identify challenges facing their degree program, 71 percent of associate degree program leads indicated that there are articulation issues between two-year and four-year early childhood degree programs. In contrast, only 15 percent of upper-level program leads cited articulation as a challenge.

¹⁰ Courses falling under the "technology" designation within A.A.S. degrees are not included in articulation agreements between associate degree-granting and bachelor's degree-granting institutions, which may account for the wide range of credits that articulate across programs participating in the *Inventory*.

FINDING SIX: PROGRAM CHALLENGES

Faculty and Program Needs

Mississippi early childhood degree programs experience challenges related to faculty resources. More than one-half of upper-level program leads reported a need for additional faculty expertise teaching young children who are dual language learners and working with college students who are

English-language learners. Almost one-half of all program leads, including most program leads at the associate degree level, indicated that the low pay of the ECE field has led to challenges recruiting and retaining students. In addition, most faculty reported a need for additional financial resources for 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

One-half of all program leads reported that the “need for additional faculty expertise in teaching young children who are dual language learners” was an issue their program is facing. Upper-level degree program leads were much more likely to report this need than associate degree program leads (62 percent and 29 percent, respectively). In addition, 54 percent of upper-level degree program leads, but no associate degree program leads, reported a need for additional faculty expertise in working with college students who are English-language learners.

Among faculty members, the most commonly reported needs were “resources for faculty professional development” and “funding for travel,” which were both identified by 43 percent of faculty members participating in the *Inventary*. In addition, 73 percent of upper-level faculty members identified a need for additional full-time faculty within their program. In comparison, no associate degree faculty mentioned the need for additional full-time faculty.

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.”¹¹ Almost one-half (45 percent) of all program leads identified this challenge, and associate degree program leads were more likely to identify this challenge than upper-division program leads.

¹¹ In 2015, the median wage for child care workers in Mississippi was \$8.72, a 4-percent decrease in real wages since 2010 (Mississippi State Profile in Whitebook, McLean, & Austin, 2016).

Thirty-five percent of program leads indicated that “faculty administrative responsibilities that interfere with time with students” present a challenge in their program. In addition, 30 percent of program leads identified challenges related to a lack of opportunities for non-traditional/working students to complete coursework, and the same percentage of program leads identified the lack of opportunities for non-traditional/working students to complete clinical experiences.

Among faculty members, the most commonly identified program-related need was increased financial resources for students, cited by 61 percent of faculty members in all programs. In addition, 43 percent of faculty members reported a need for additional resources for program planning and improvement (such as new course development), with upper-level faculty more likely to report this need than associate degree faculty. Finally, 45 percent of upper-level faculty members reported a need for increased racial/ethnic diversity among faculty, compared to only 8 percent of associate degree faculty members.

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 generally consider the inclusion of family engagement to be very important in the preparation of early childhood teachers. Multiple topics related to family engagement are embedded in degree programs, and programs were most likely to require an age-

group focus on preschool-age children for these topics. Nearly all faculty members reported feeling capable of teaching family engagement content and having recent experience teaching this topic. Faculty members expressed high interest in professional development topics related to working with families exposed to trauma and working with families of children with special needs.

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 list of topics).

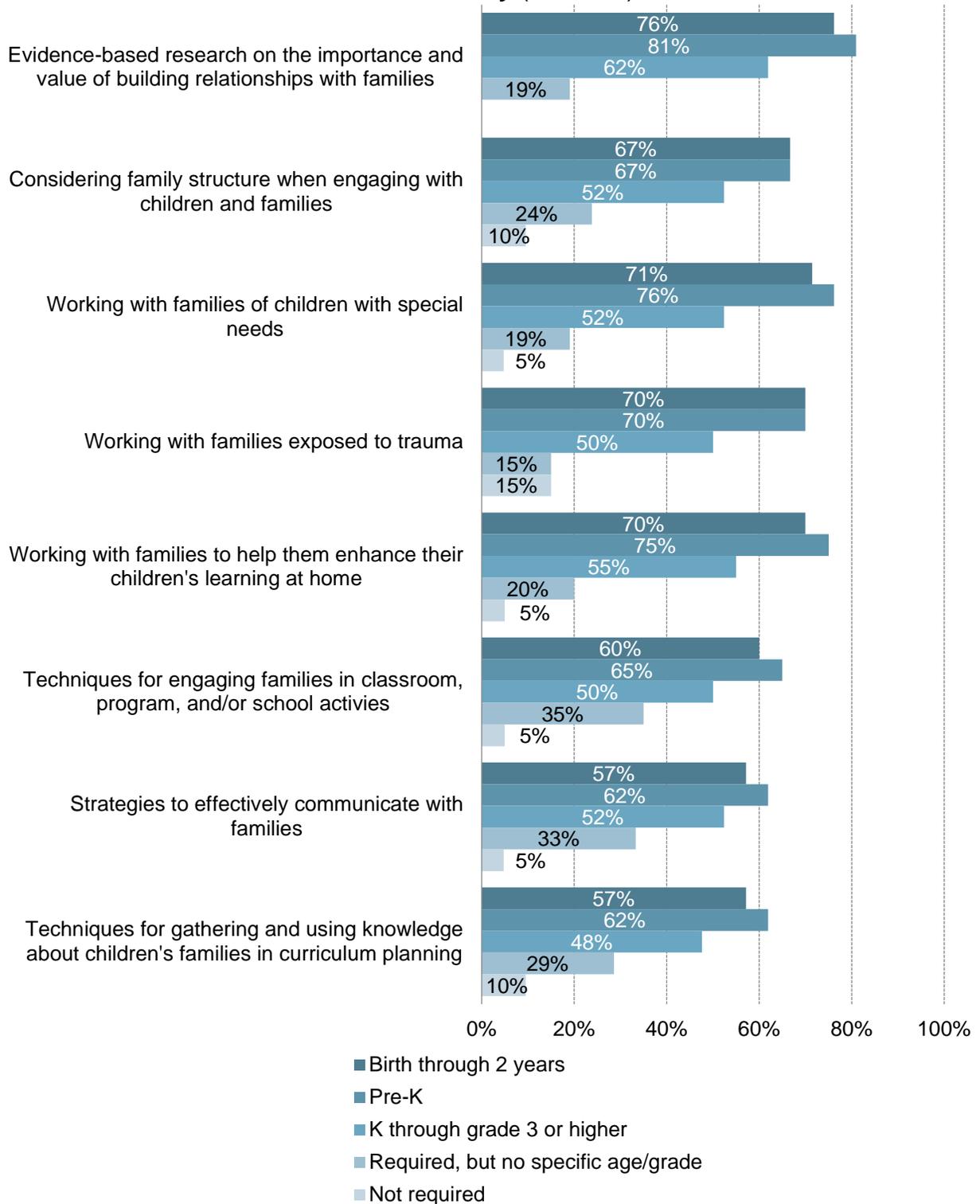
Table 3. List of Family Engagement Topics Included in the Mississippi Inventory

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

Of the eight family engagement topics noted in the *Inventory*, at least 85 percent of programs reported requiring each topic. Associate degree programs were equally likely to require family engagement content for infants and toddlers and for preschool-age children, while upper-level degree programs were slightly more likely to require family engagement content for preschool-age children than for infants and toddlers. Across degree levels, programs were least likely to require family engagement content specifically for school-age children.

For example, 76 percent of programs require course content on working with families of preschool-age children with special needs. However, 71 percent require course content on this topic specifically for infants and toddlers, and only 52 percent require it specifically for school-age children (see **Figure 17**).

Figure 17. Required Coursework Related to Family Engagement: Age-Group Focus of Programs Participating in the Mississippi Inventory (N=20-21)



Faculty Attitudes About the Importance of Family Engagement in Degree Programs

More than 90 percent of faculty members considered “understanding and implementing integrated strategies to engage families to support children’s development and learning” as “very important” for practitioners working with infants and toddlers and preschool-age children. Slightly fewer faculty members (87 percent) considered this topic “very important” for practitioners working with school-age children.

Faculty members were more likely to give a “very important” rating to the inclusion of family engagement topics than early math and early literacy topics for programs that prepare practitioners to work with preschool-age children. However, they were less likely to rate family engagement topics as “very important,” compared to socioemotional development topics. For programs that prepare practitioners to work with infants and toddlers or school-age children, faculty were more likely to give a “very important” rating to family engagement topics than early math, early literacy, or socioemotional development topics.

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. The vast majority (91 percent) of faculty members noted that they felt capable of preparing teachers to “integrate families in partnerships to support children’s learning” for at least one age group.

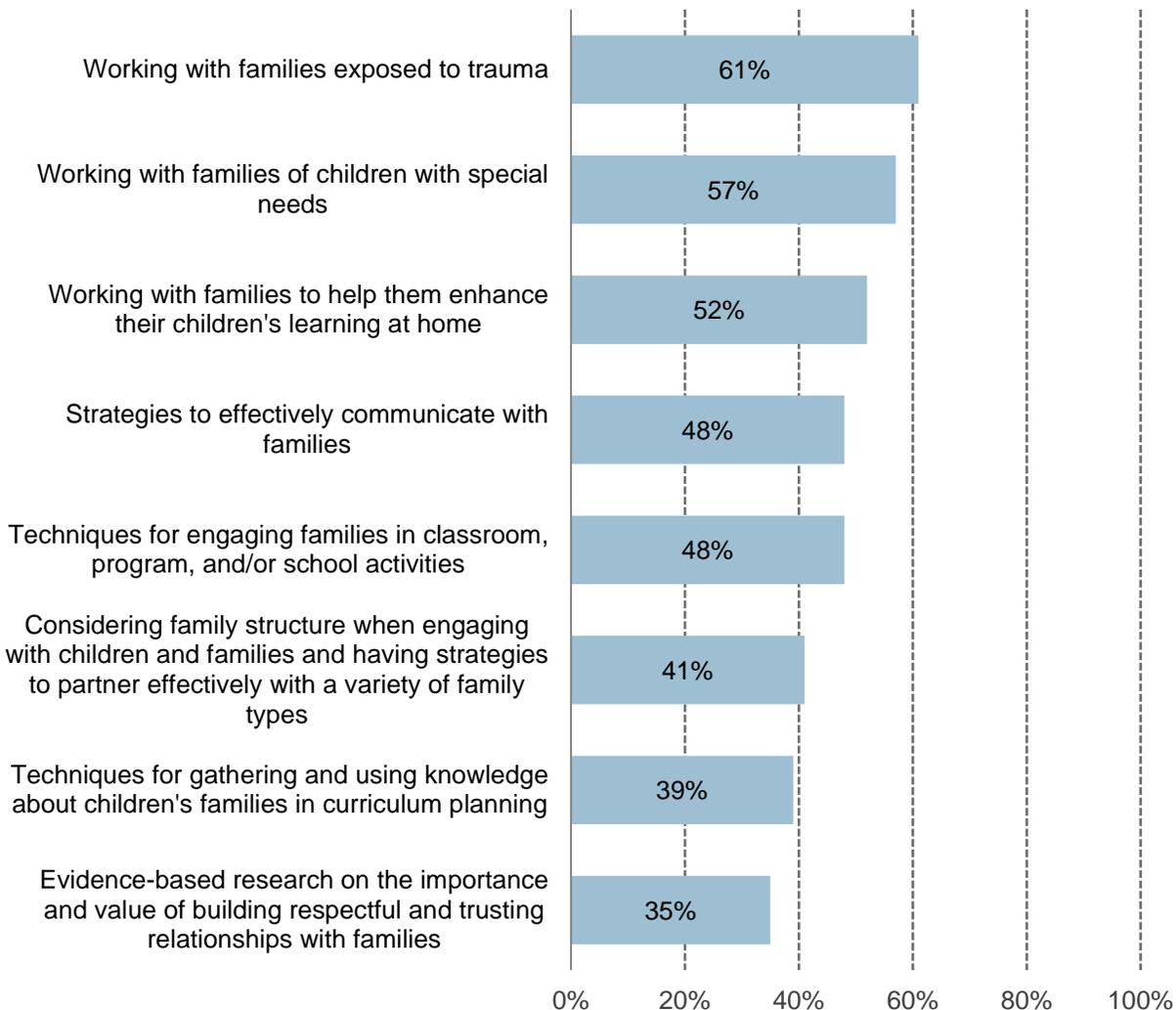
When asked about their current and recent experience teaching courses related to family engagement, 91 percent of faculty members also reported that they had taught coursework related to “partnering with families to enhance children’s learning in school and at home” during the past two years. Associate degree faculty were more likely to have taught this content as a separate course, while upper-level faculty were more likely to have taught it embedded within a broader course.

Faculty Participation and Interest in Professional Development on Family Engagement

More than two-thirds (70 percent) of faculty members reported having participated in professional development related to family engagement in the past two years. Associate degree faculty members were more likely to have received professional development in family engagement than upper-level faculty. The family engagement topic in which the greatest number of faculty had received professional development was “evidence-based research on the importance and value of building respectful and trusting relationships with families,” with more than one-half (52 percent) of faculty members having participated in professional development on this topic.

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 exposed to trauma” and “working with families of children with special needs” (see **Figure 18**).

Figure 18. Interest in Professional Development Related to Family Engagement Reported by Faculty Members Participating in the Mississippi Inventory: Percentage Reporting "Very Interested" (N=22-23)



FINDING EIGHT: EARLY MATHEMATICS

Required Offerings, Faculty Attitudes, Teaching Experience, and Professional Development Interests

Faculty were more likely to rate the inclusion of early mathematics as very important relative to other content areas for practitioners working with school-age children, and they also tended to rate it very important for practitioners working with preschoolers. 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 preschool-age children, but somewhat less likely to be confident in their ability to teach early math to practitioners working with infants, toddlers, and school-age children. Most faculty reported high interest in professional development on strategies to help practitioners who struggle with mathematics build confidence in their ability to facilitate children's mathematical understanding and skill.

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 institutions of higher education are not adequately preparing the teachers of our youngest children 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**). Of the 11 early math topics in the *Inventory*, each topic was required by at least three-quarters 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 true for topics related to teaching children specific math skills (such as measurement and geometry skills) as well as for topics related to the development of children's general mathematical understanding (such as building on children's natural interest in math and developing math vocabulary).

Table 4. List of Early Mathematics Topics Included in the Mississippi 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 in mathematics and using everyday activities as natural vehicles for developing 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 Degree Programs

Faculty members were much less likely to consider it “very important” to include the early mathematics domain for practitioners working with infants and toddlers (48 percent) than for those working with preschoolers (87 percent) and school-age children (100 percent). Faculty members were also much less likely to consider mathematics topics “very important” for infants and toddlers, compared to literacy development (87 percent) and socioemotional development (78 percent).

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 nine of the 11 specific math topics (see **Table 4**), more than 90 percent of faculty members reported being capable of preparing teachers to work with at least one age group. However, only 83 percent of faculty members reported being capable of preparing teachers to teach operations and algebraic thinking, while 87 percent of faculty members reported being capable of preparing teachers to teach mathematical reasoning/practices.

In general, faculty members were more likely to report being capable of teaching early math topics to practitioners who work with preschool-age children. Faculty were less likely to report being capable of teaching early math topics to practitioners who work with infants and toddlers or school-age children (see **Figure 19** for an example).

Figure 19. Teaching Children Measurement Skills: Capacity to Prepare Teachers to Work With Children of Various Ages, as Reported by Faculty Members Participating in the Mississippi Inventory (N=23)



Faculty members were asked whether they had taught “development of mathematical understanding” in the past two years and, if so, whether they taught this topic as a separate course or embedded within a broader course. The vast majority (86 percent) of faculty members reported teaching this topic in the past two years. When taught, mathematical understanding was more likely to be embedded within a broader course than as a separate course. All associate degree faculty members participating in the *Inventory* had taught this topic in the past two years, and more than one-third (36 percent) had taught it both as a separate course and embedded within a broader 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, 43 percent of faculty members participating in the *Inventory* did not participate in professional development related to any of the early mathematics topics listed. Associate degree faculty members were more likely to have participated in early mathematics professional

development than upper-level faculty members (67 percent and 45 percent, respectively). Almost all faculty members (92 percent) who reported participating in early mathematics professional development had engaged with the topic “teaching practitioners to implement instructional strategies that support mathematical understanding in children ages three and four.”

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 that generated the greatest interest was “strategies to help practitioners who struggle with mathematics build confidence in their ability to facilitate children’s mathematical understanding and skill,” in which 83 percent of faculty members reported being “very interested.” In addition, 78 percent of faculty members reported being “very interested” in professional development on teaching practitioners how to effectively use assessment to inform and individualize their instruction.

Table 5. List of Early Mathematics Professional Development Topics Included in the Mississippi 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

Most degree program curricula require various dual language learner (DLL) topics, and most faculty members consider the inclusion of teaching young DLLs to be important in the preparation of teachers. However, faculty reported feeling less prepared to teach this content area than the other content areas

included in the Inventory. In addition, fewer than one-half of faculty members have participated in professional development related to DLLs recently, though they reported some interest in future professional development opportunities.

What we asked about dual language learners:

Program leads were asked to identify course content topics related to teaching dual language learners and diverse families¹² 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,¹³ a small but rapidly growing population in Mississippi. From 2006 to 2016, the number of English-language learners enrolled in Mississippi public schools increased by roughly 250 percent, from about 3,300 to about 11,600 (Mississippi LifeTracks, n.d.). 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 DLLs' development and learning critical to later success in school.

¹² 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).

¹³ Dual language learners 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**). Of the 10 topics included in the *Inventory*, at least 80 percent of programs required each topic, with the exception of “how to use appropriate teaching strategies within various classroom language models,” which was required by only 74 percent of programs. In general, the most commonly reported age-group focus for most DLL topics was preschool-age children. For example, 58 percent of programs required content specific to preschool-age children on strategies to support the cognitive development of young DLLs, compared to 53 percent for content specific to infants and toddlers and 47 percent for content related to school-age children.

Table 6. List of Topics Related to Teaching Young Dual Language Learners (DLLs) Included in the Mississippi Inventory

Topic	Focus on infants and toddlers is required by at least 50% of programs (N=20)
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 Degree Programs

Understanding and implementing strategies to support dual language learners was considered “very important” by 74 percent of faculty members in programs that prepare teachers to work with infants and toddlers and 83 percent of faculty members in programs that prepare teachers to work with preschool-age and school-age children (see **Box 3** in the previous section for information about how this assessment was conducted). Across all age groups, faculty members were less likely to consider strategies to support dual language learners “very important,” compared to topics related to early literacy, socioemotional development, and family engagement.

Teaching Capacity Related to Dual Language Learning

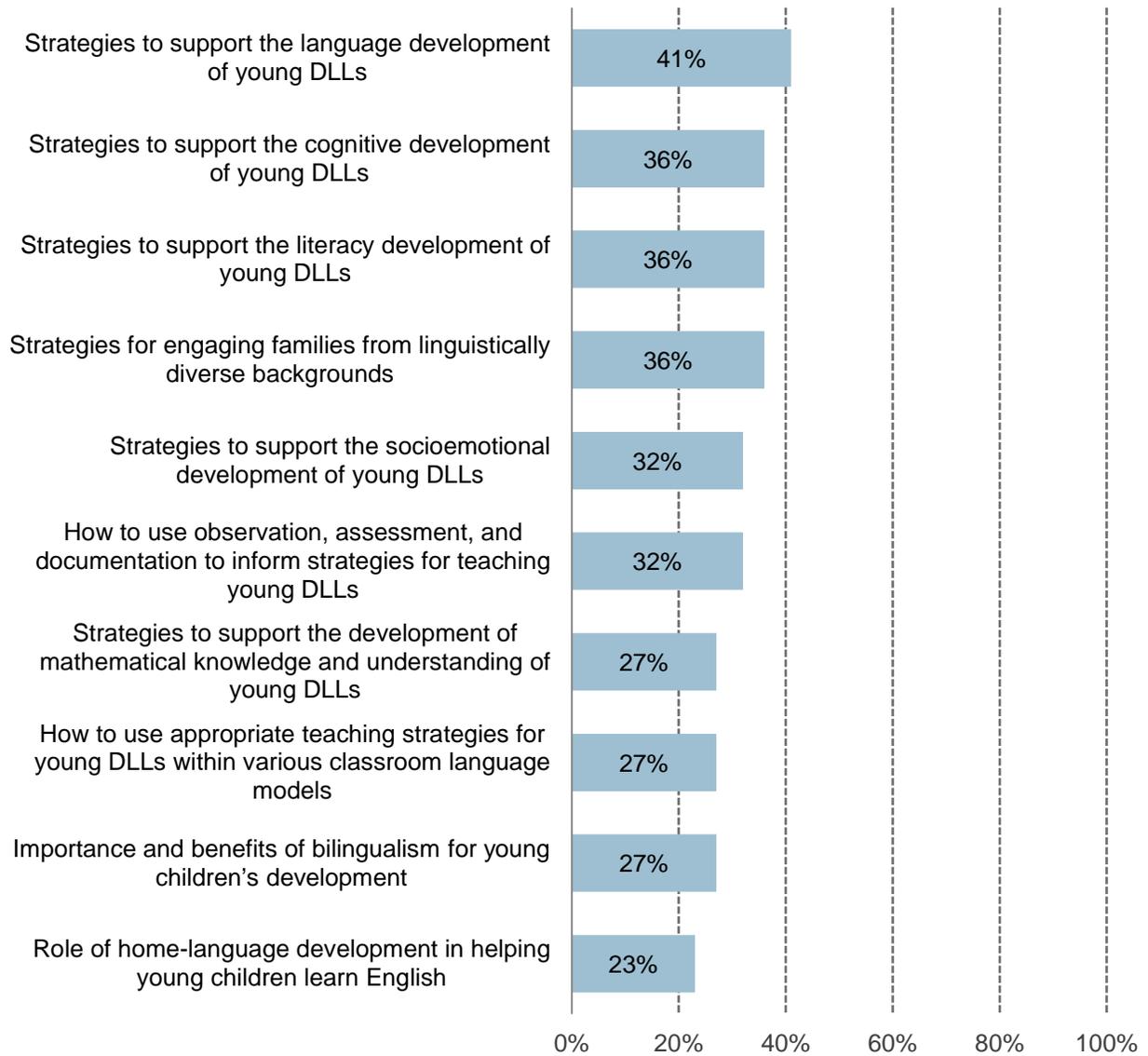
Faculty members felt less prepared to teach practitioners to work with dual language learners than to teach any other topic asked about in the *Inventory*. Only 61 percent of faculty noted that they felt capable of preparing teachers to “support the cognitive and social development of young dual language learners” for those working with preschool-age children and school-age children, and this figure decreased to 57 percent for those working with infants and toddlers.

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: only 43 percent of faculty members had participated in professional development related to any of the 10 topics. Of these topics, faculty members were most likely to have participated in professional development concerning the “importance and benefits of bilingualism for young children’s development,” “strategies to support the language development of young DLLs,” and “how to use observation, assessment, and documentation to inform strategies for teaching 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 some interest in future opportunities. Faculty members were most likely to report high interest in professional development on “strategies to support the language development of young DLLs,” “strategies to support the literacy development of young DLLs,” and “strategies for engaging families from linguistically diverse backgrounds” (see **Figure 20**).

Figure 20. Interest in Professional Development Related to Dual Language Learners (DLLs) Reported by Faculty Members Participating in the Mississippi Inventory: Percentage Reporting "Very Interested" (N=22)



Discussion and Recommendations

In this final section, we outline an approach toward strengthening early childhood workforce development in Mississippi, with an emphasis on higher education. We identify seven discrete elements that together constitute a strategy for aligning the current system with efforts to build and retain a skilled and stable workforce. The success of this approach requires ensuring that its various components be implemented in unison, calling for a research agenda to measure progress and challenges over time, and learning more about the depth of instruction delivered in early childhood higher education programs. The efforts should be coordinated among key stakeholders in Mississippi (including the Mississippi Office of Early Childhood Education, the Mississippi Institutions of Higher Learning, and the Mississippi Community College Board) 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. As evidence and experts identify the need to focus early childhood teacher preparation on ages prior to prekindergarten (IOM & NRC, 2015), Mississippi's addition of a pre-K licensure endorsement option is a step in the right direction toward preparing future educators to more effectively work with students prior to kindergarten. To build upon this progress, we recommend:

- Expanding the pre-K endorsement to begin at birth and go through preschool, with the potential option to overlap with the early elementary grades.

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

Clarity among degree programs as to their purpose and scope is required in the effort to align with the IOM/NRC recommendations and to ensure that all children receive the same quality of education regardless of their education setting. 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 Mississippi Early Learning Guidelines and Standards 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 Mississippi Early Learning Standards for Three-Year-Olds and Four-Year-Olds.

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. School-age children are most likely to be disadvantaged in the course offerings compared to preschool-age children; fewer Mississippi early childhood degree programs require the inclusion of children in kindergarten to third grade or higher in the course content and field-based experiences. 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 ECE programs.

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

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

3. Strengthen the application of field-based learning experiences

Although most early childhood degree programs in Mississippi require students to participate in a student teaching experience and at least one practicum course, there is great variation in the characteristics of these experiences. Because less than one-half of programs require students to work with school-age children, families, dual language learners, or children with disabilities during their student teaching and practica, graduates from Mississippi 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;
- Developing differentiated field experiences for pre- and in-service students. For pre-service students, extend more opportunities for in-depth student teaching experiences, and for in-service students, explore and implement models that accommodate those already working in classrooms, while also providing quality experiences (e.g., the California Early Childhood Mentor Program); and
- Providing field-based learning opportunities for students to engage with:
 - Infants and toddlers;
 - Children with special needs;
 - Children who are dual language learners;
 - Families; and
 - Community organizations that support children and families.

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

Because many early childhood education students in Mississippi are non-traditional students and because degree programs options are geographically disparate, 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, including increased online options for students residing in communities without access to a campus;
- Alternative class schedules and locations;
- Academic counseling;
- Additional support for students who struggle to pass standardized tests necessary for licensure (e.g., contextualized math course options, ACT and/or Praxis preparation courses);
- Cohort models; and
- Financial resources for students.

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

In Mississippi 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. The common curriculum across Mississippi's early childhood education technology associate degrees presumably allows for seamless transfer across community colleges and has the potential to streamline articulation from community colleges to institutions granting bachelor's degrees. However, inconsistencies currently exist in the practice and perception of articulation agreements between two- and four-year institutions. We recommend:

- Ensuring that all community colleges have a comprehensive articulation agreement with a four-year college or university that is geographically accessible to students; and
- Offering dedicated advising staff who can provide students with the necessary guidance to take full advantage of articulation agreements, including information on the transfer process, required courses, and accepted credits.

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

In Mississippi, K-12 administrators are required to have three years of teaching experience; hold a master's, specialist, or doctoral degree; and pass a school leadership assessment (Mississippi Department of Education, 2018). In contrast, directors of child care facilities are required to have some combination of certificate/credential, associate or bachelor's degree, and varying levels of experience (Mississippi State Department of Health, 2017). In light of these inconsistent and nominal expectations for ECE leadership positions and the lack of a leadership pipeline from the classroom to leadership positions, it is not surprising that across degree levels, program course content is not routinely offered to prepare practitioners for early childhood supervisory, administrative, or other leadership roles.

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

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

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

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

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 Mississippi rely heavily on faculty to perform program administrative duties, which constrains the time they have to dedicate to students. Faculty members also identify the need for greater opportunities to engage in their own professional growth in response to new developments in the field and changing characteristics of the populations they serve, particularly regarding dual language learners and children and families who have experienced trauma.

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;
- Developing additional opportunities for faculty professional development in the areas of helping practitioners who struggle with mathematics, teaching practitioners how to effectively use assessment to inform and individualize their instruction, and teaching practitioners to work with children with special needs; and
- Ensuring adequate resources, including funding, staffing, and dedicated time for program planning and improvement.

Concluding Thoughts

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

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

Institutions of higher education can play a lead role in elevating the preparation of a high-quality workforce by aligning curriculum and field-based experiences with the standards and competencies developed by early care and education experts and by supporting students in the pursuit and attainment of early childhood higher education degrees.

However, while it is crucial that early educators receive the education and training they need, the preparation of the early care and education workforce must go hand in hand with comprehensive reforms to the system, such as supportive work environments, financial investment to enable increased compensation and parity across age groups and settings, and financial resources to support the implementation of heightened expectations and standards. System-wide improvement requires a continued discourse among multiple stakeholders on how our nation prepares, supports, and rewards the early care and education workforce. Without these larger systemic changes, we will continue to disadvantage early educators and the children and families they serve.

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Appendix A: Methodology

Mapping

Through an extensive document review, CSCCE identified Mississippi's early childhood degree programs by collecting information on each college or university, the departments that house the programs, and the degrees and certificates offered.

During the fall of 2017, CSCCE compiled a comprehensive list of institutions offering degrees in early childhood education or related fields. 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 Mississippi. This search included terms such as "early childhood education," "child studies," and "human development and family studies."¹⁴ We also referenced the National Association for the Education of Young Children (NAEYC) Early Childhood Higher Education Directory and a list of institutions provided by staff from the University of Mississippi's Graduate Center for the Study of Early Learning.

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 University of Mississippi's Graduate Center for the Study of Early Learning 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 Alliance for Early Success 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., programs in elementary education without a focus on early childhood or programs that were no longer active).

¹⁴ 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.

Mississippi's Population of Early Childhood Degree Programs

During our initial research of early childhood degree programs in Mississippi, we identified 25 institutions of higher education offering a total of 47 early childhood degree programs. Among these, 13 were community colleges, which offered 15 early childhood associate degree programs. Twelve universities (seven public and five private) offered four associate degree programs, 18 bachelor's degree programs, eight master's degree programs, and two doctoral programs in early childhood. We then emailed the dean or coordinator of each program (for the remainder of this text, 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 21 institutions of higher education currently offering a total of 39 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 21 institutions of higher education offering early childhood degree programs, 86 percent of the institutions agreed to participate in the *Inventory*, including 92 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 Mississippi Offering Early Childhood Degrees

Type of Institution	Number of IHE Offering Early Childhood Degree(s)	Number of IHE Agreeing to Participate in the Inventory	Number/Percentage of IHE That Completed at Least One Survey	
			Number	Percentage
Community Colleges	12	11	8	73%
Universities	9	7	6	86%

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 Mississippi

Name of Institution	Associate Degree Program(s)
Coahoma Community College	A.A.S., Early Childhood Development Technology
Copiah-Lincoln Community College	A.A.S., Early Childhood Education Technology
East Central Community College	A.A.S., Early Childhood Education
Hinds Community College	A.A.S., Early Childhood Education Technology
Itawamba Community College	A.A.S., Early Childhood Education Technology
Jones County Junior College	A.A.S., Early Childhood Education Technology
Meridian Community College	A.A.S., Early Childhood Education Technology
Mississippi Gulf Coast Community College	A.A.S., Early Childhood Education Technology
Northeast Mississippi Community College	A.A.S., Early Childhood Education Technology
Northwest Mississippi Community College	A.A.S., Early Childhood Education Technology
Pearl River Community College	A.A.S., Early Childhood Education Technology
Rust College	A.S., Early Childhood Education
Southwest Mississippi Community College	A.A.S., Early Childhood Education Technology
Tougaloo College	A.A., Child Development

Table A-3. Early Childhood Bachelor’s and Graduate Degree Programs in Mississippi

Name of Institution	Bachelor’s Degree Program(s)	Graduate Degree Program(s)
Alcorn State University	B.S., Child Development	M.S., Elementary Education, Early Childhood Education endorsement
Delta State University	B.S., Child Development	
Jackson State University	B.S., Child Care and Family Education (traditional) B.S., Child Care and Family Education (online)	M.S., Early Childhood Education (traditional) M.S., Early Childhood Education (online) Ed.D., Early Childhood Education
Mississippi State University	B.S., Elementary Education, Early Childhood Education Concentration (traditional) B.S., Elementary Education, Early Childhood Education Concentration (online) B.S., Human Development and Family Science, Child Development Concentration B.S., Elementary Education, Early Childhood Education Concentration	M.S., Elementary Education, Early Childhood Concentration M.S., Human Development and Family Studies, Infant and Child Focus Ph.D., Human Development and Family Studies, Infant and Child Focus
Mississippi Valley State University	B.S., Early Childhood Education	
Rust College	B.S., Child Care Management	
Tougaloo College	B.A., Child Development	M.A., Child Development
University of Mississippi	B.A.Ed., Elementary Education, Pre-K/K Endorsement	M.Ed., Early Childhood Education (non-licensure) M.Ed., Early Childhood Education (pre-K licensure option)
University of Southern Mississippi	B.S., Child and Family Studies, Child Development Emphasis (traditional) B.S., Child and Family Studies, Child Development Emphasis (online)	M.S., Child and Family Studies (online)

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 60 days during the fall 2017 semester.

Response Rate

A total of 28 program surveys were emailed to the degree programs: 12 to associate degree programs; eight to bachelor's degree programs; seven to master's degree programs; and one to a doctoral program. The final sample consisted of eight associate and 13 upper-level degree program surveys.¹⁵ The response rate for associate degree programs was 67 percent, and for upper-level degree programs, it was 81 percent (see **Table A-4**).

Table A-4. Response Rate for the Program Module of the Mississippi Inventory

Program Type	Number of Program Modules Administered*	Program Module Response Rate	
		Number	Percentage
Associate	12	8	67%
Upper Level	16	13	81%

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

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;

¹⁵ The category of upper-level degree programs consists of six bachelor's degree programs, six master's programs, and one doctoral program. Due to the small sample size and in order to protect the identity of these institutions, all analyses of upper-level degree programs are reported out of the total of all 13 programs.

- 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 14.1 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 experience 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 childhood 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 53 surveys were emailed to individual faculty members, resulting in an eligible sample of 28 community college and 25 university faculty members. The final sample consisted of 25 faculty members. Of the faculty members who completed a survey, 13 teach in associate degree programs, and 12 teach in upper-level programs. The response rate for community college faculty was 46 percent and for university faculty, 48 percent (see **Table A-5**). While we cannot assume that findings from this module are representative of all early childhood teacher educators in the state, findings from the Faculty Module concerning course content topics covered and age-group focus were consistent with those from the Program Module, as documented in the body of this report.

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 2018 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 teacher preparation programs;
- 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.

Response Rate

Table A-5. Response Rate for the Faculty Module of the Mississippi Inventory

Faculty Type	Number of Faculty Modules Administered*	Number of Faculty Responses	Faculty Module Response Rate
Community College Faculty	28	13	46%
University Faculty	25	12	48%
TOTAL	53	25	47%

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

Data Analysis

Using the Statistical Package for the Social Sciences (SPSS) 24, we computed frequencies for all questions, for faculty members teaching at each degree level (associate and upper level).

Appendix B:

Early Childhood Degree Programs

What we asked about program goals, number of teaching faculty, 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 in early childhood education settings (such as preschools, child care centers, and family child care homes) for children birth to age five *only*;
- To prepare students for teaching and/or administrative roles in early childhood *and* elementary education settings;
- To prepare students for the roles of early intervention provider 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 2018 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.

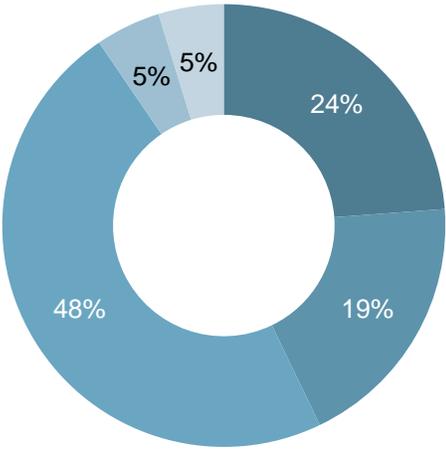
They were then asked to estimate the number of students registered in the degree program and the number of degrees conferred during the 2015-2016 academic year.

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:

- Skill 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 Mississippi Early Childhood Degree Programs

Figure B-1. Primary Goal of Mississippi Early Childhood Degree Programs (N=21)



- To prepare students for teaching and/or administrative roles in early childhood education settings ONLY
- To prepare students for teaching and/or administrative roles in early childhood AND elementary education settings
- To prepare students for multiple roles involving young children, working in many types of settings
- To prepare students for a career as a researcher or a college-level faculty member
- Other

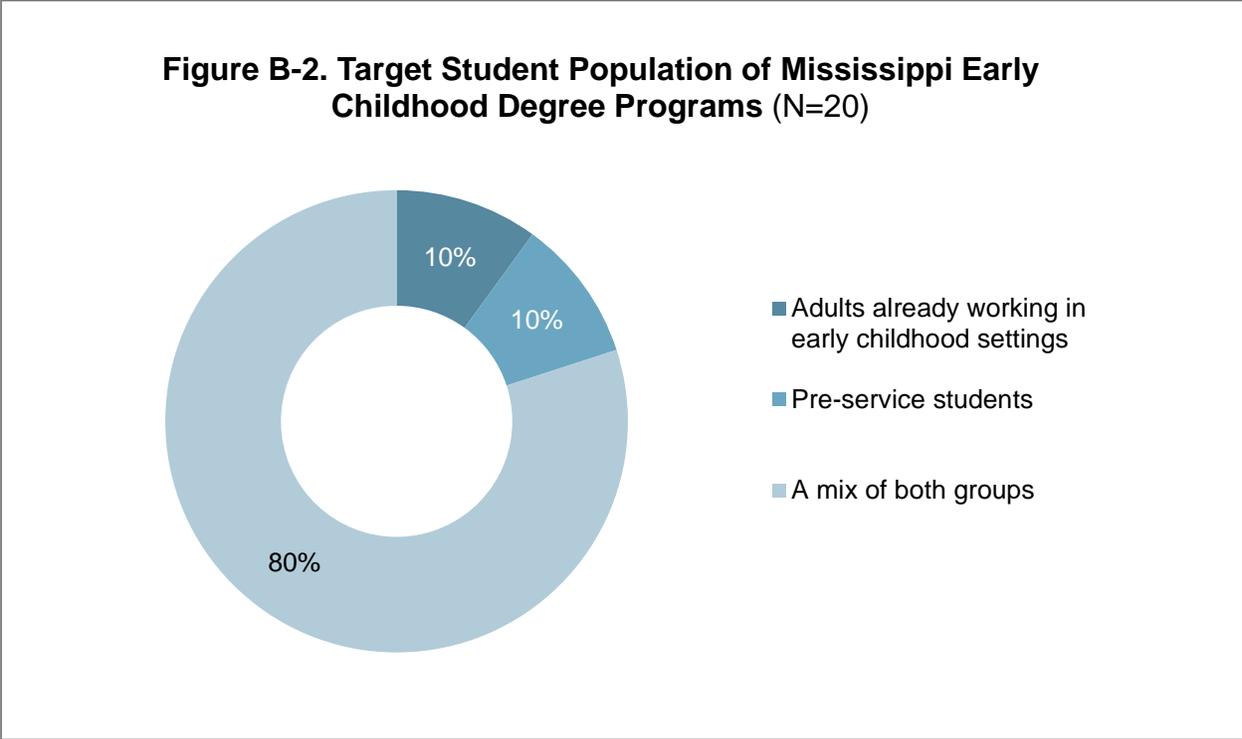
Number of Faculty Members Teaching in Mississippi Early Childhood Degree Programs

Table B-1. Number of Faculty Members Teaching in Degree Programs During Fall 2017

Number of Faculty	All Degree Levels (N=20-21)
Full-Time Faculty	
Mean	2.5
Range	1–4
Part-Time/Adjunct Faculty	
Mean	1.2
Range	0–5

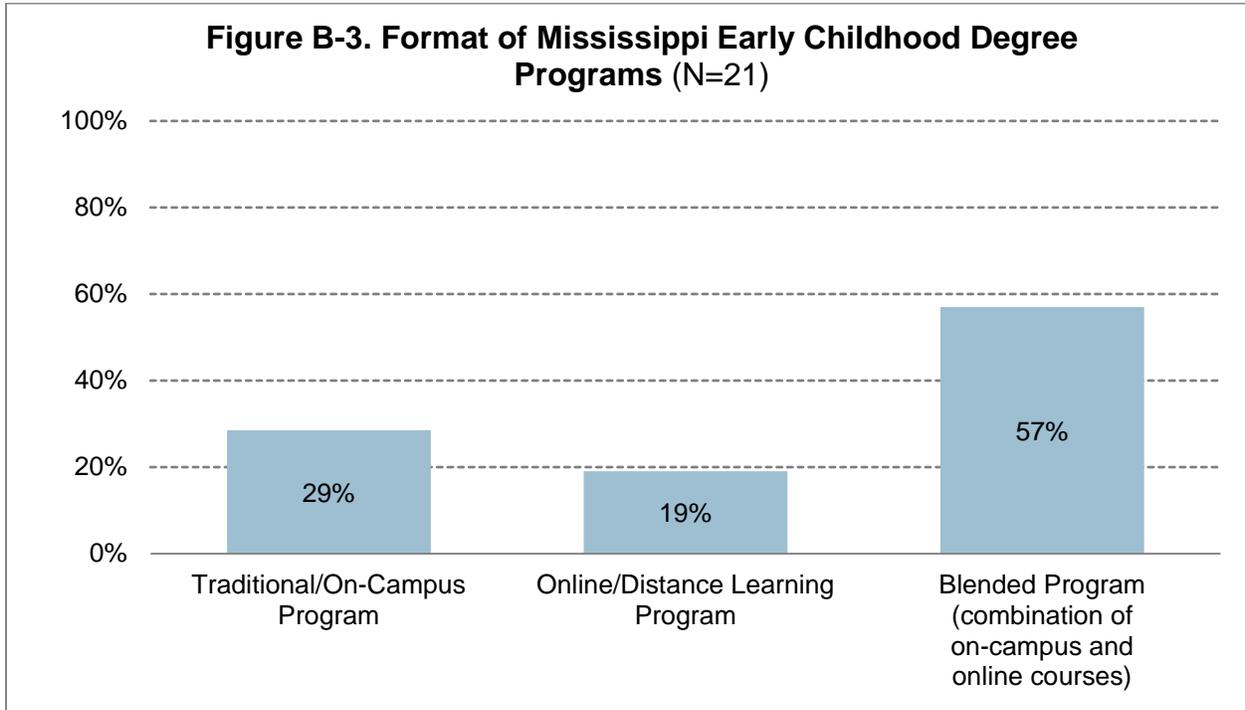
Students Served in Mississippi Early Childhood Degree Programs

Target Student Population



Format of Degree Program

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



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.

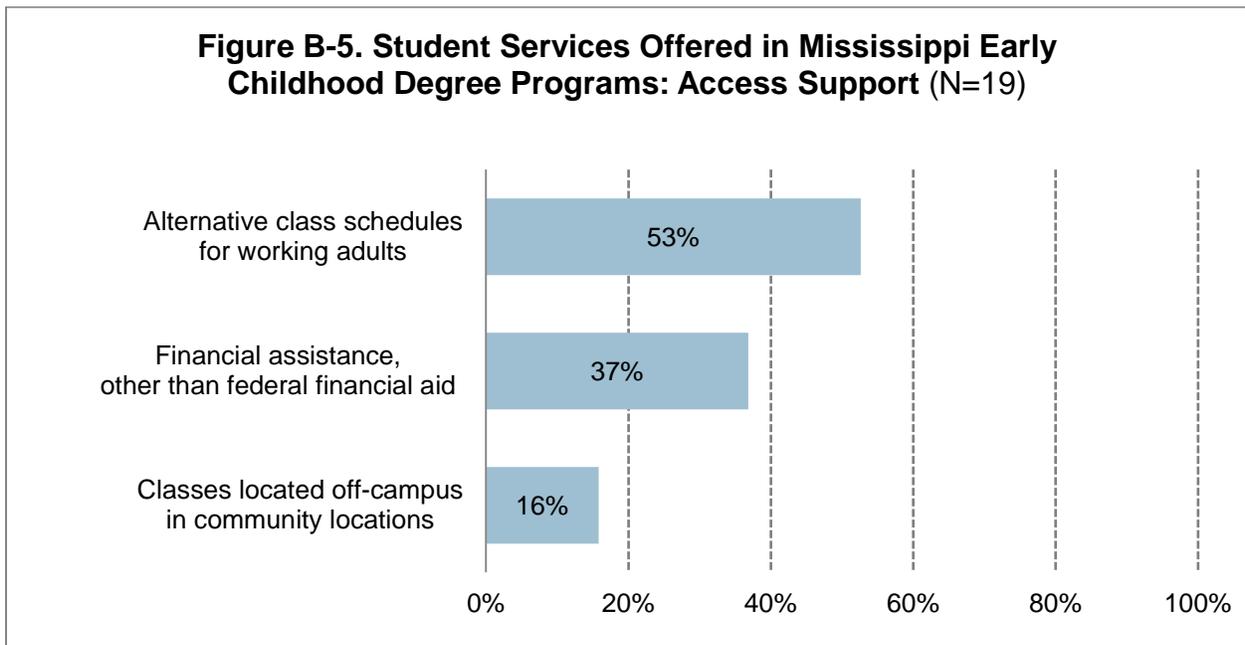
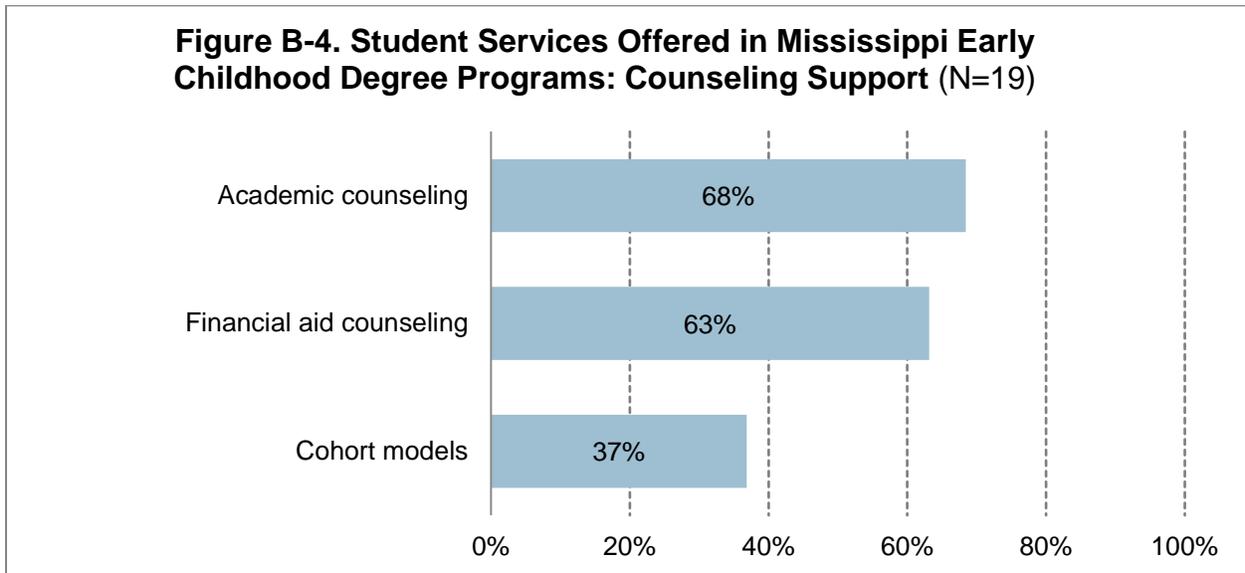
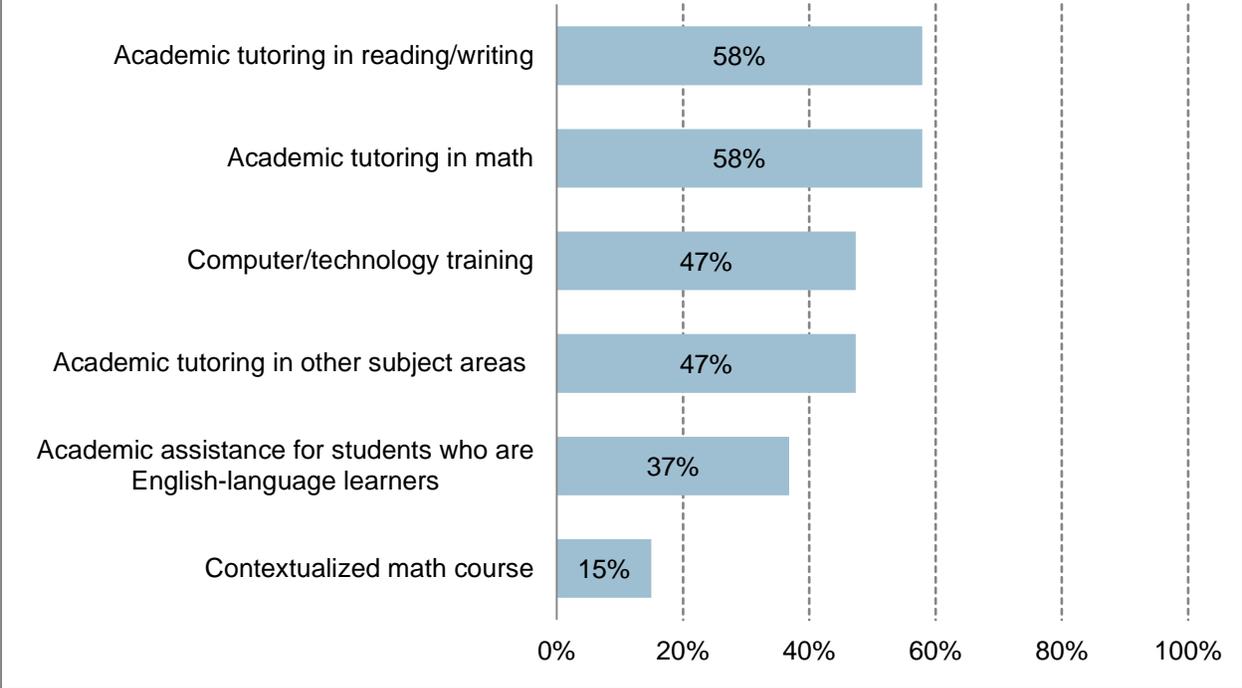


Figure B-6. Student Services Offered in Mississippi Early Childhood Degree Programs: Skill Support (N=19-20)



Content and Age-Group Focus of Mississippi 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;
- 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, whether programs offered coursework to prepare students to provide professional development services (e.g., mentoring, coaching, training), and also if programs offered coursework related to early childhood administration and leadership.

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

Child Development and Learning

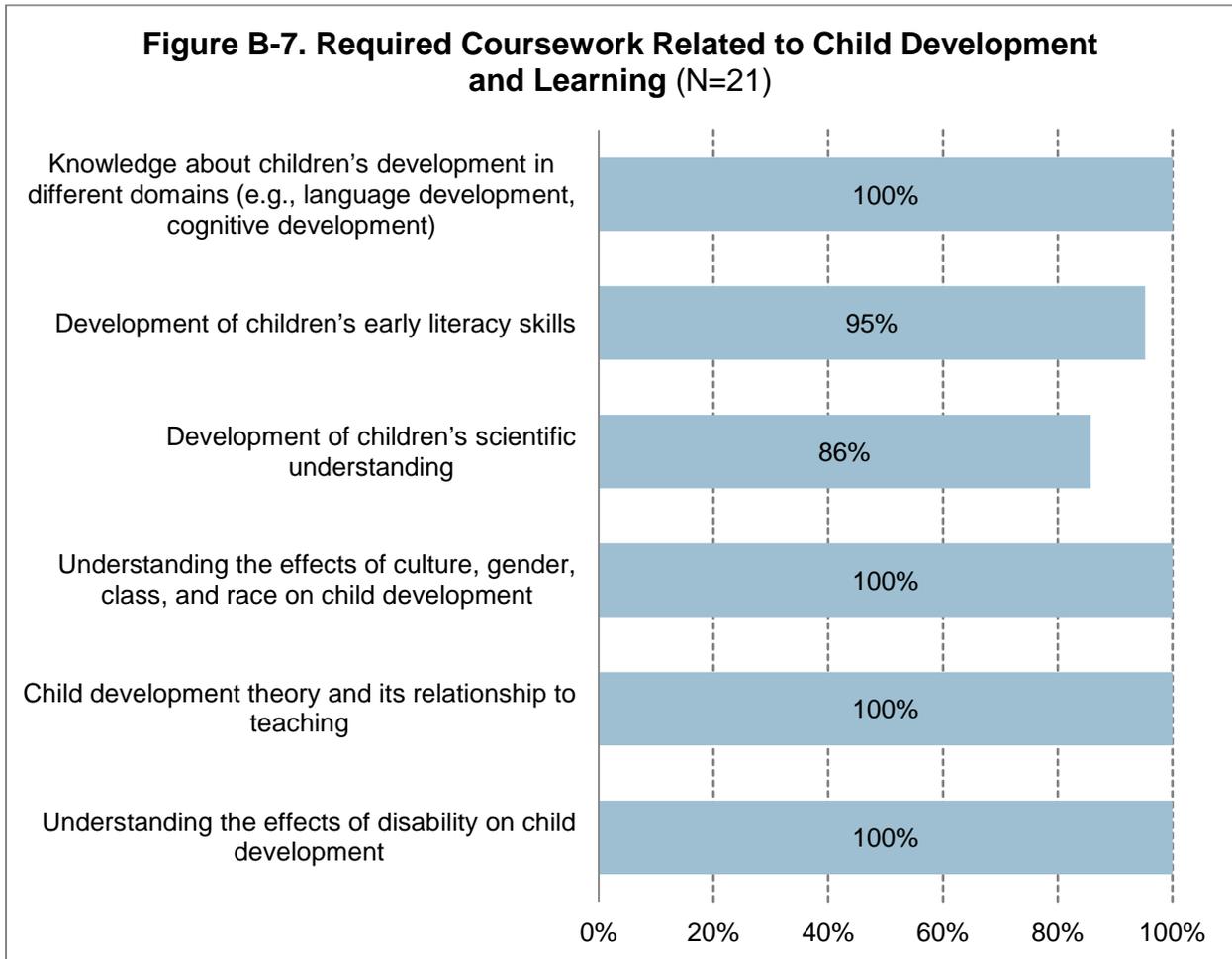


Table B-2. Coursework Related to Child Development and Learning: Required Age-Group Focus

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

Age-Group Focus	All Degree Programs (N=21)
Knowledge about children’s development in different domains (e.g., language development, cognitive development)	
Birth to 2 years	90%
3 and/or 4 years (pre-K)	95%
K-grade 3 or higher	71%
Required, but no age-group focus	5%
Content area not required	0%
Development of children’s early literacy skills	
Birth to 2 years	86%
3 and/or 4 years (pre-K)	86%
K-grade 3 or higher	71%
Required, but no age-group focus	5%
Content area not required	5%
Development of children’s scientific understanding	
Birth to 2 years	71%
3 and/or 4 years (pre-K)	71%
K-grade 3 or higher	62%
Required, but no age-group focus	10%
Content area not required	14%
Understanding the effects of culture, gender, class, and race on child development	
Birth to 2 years	86%
3 and/or 4 years (pre-K)	86%
K-grade 3 or higher	67%
Required, but no age-group focus	14%
Content area not required	0%
Child development theory and its relationship to teaching	
Birth to 2 years	86%
3 and/or 4 years (pre-K)	86%
K-grade 3 or higher	67%
Required, but no age-group focus	14%
Content area not required	0%
Understanding the effects of disability on child development	
Birth to 2 years	86%
3 and/or 4 years (pre-K)	86%
K-grade 3 or higher	71%
Required, but no age-group focus	14%
Content area not required	0%

Teaching Diverse Child Populations

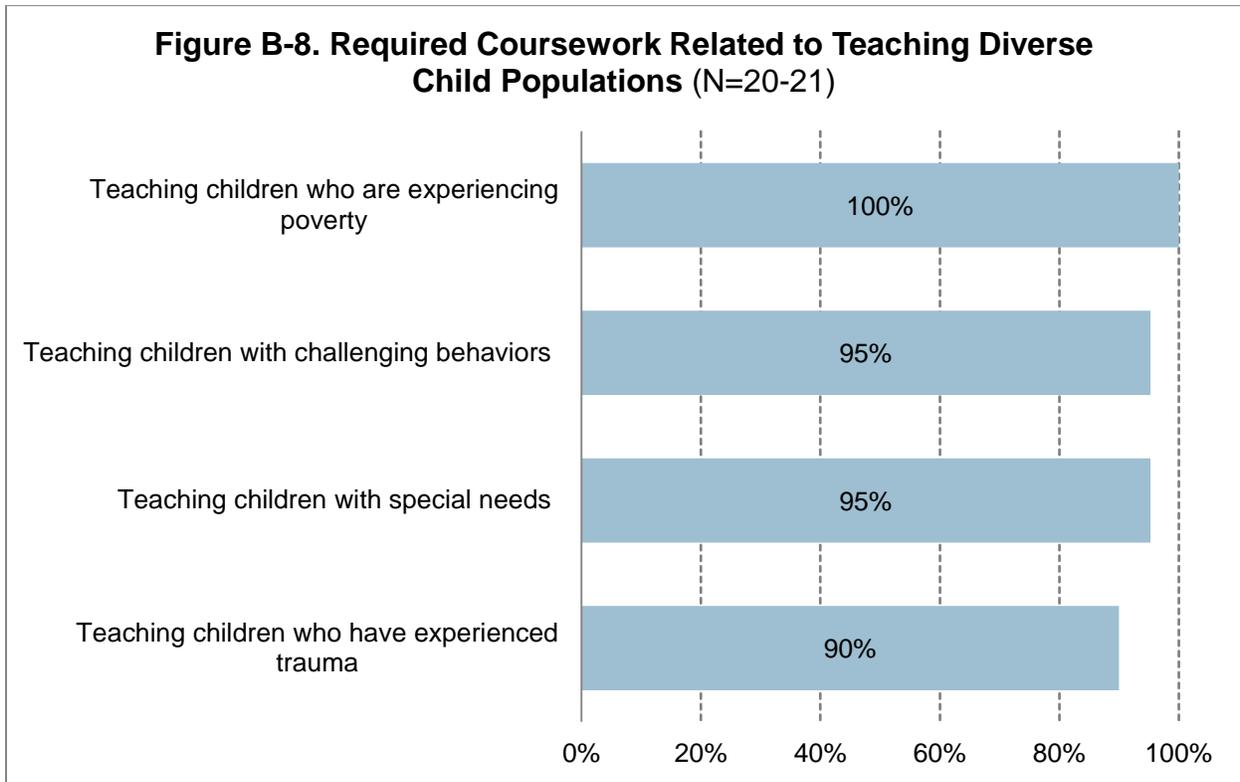


Table B-3. Coursework Related to Teaching Diverse Child Populations: Required Age-Group Focus

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

Age-Group Focus	All Degree Programs (N=20-21)
Teaching children who are experiencing poverty	
Birth to 2 years	85%
3 and/or 4 years (pre-K)	85%
K-grade 3 or higher	75%
Required, but no age-group focus	15%
Content area not required	0%
Teaching children with challenging behaviors	
Birth to 2 years	76%
3 and/or 4 years (pre-K)	81%
K-grade 3 or higher	71%
Required, but no age-group focus	14%
Content area not required	5%
Teaching children with special needs	
Birth to 2 years	76%
3 and/or 4 years (pre-K)	81%
K-grade 3 or higher	67%
Required, but no age-group focus	14%
Content area not required	5%
Teaching children who have experienced trauma	
Birth to 2 years	80%
3 and/or 4 years (pre-K)	80%
K-grade 3 or higher	70%
Required, but no age-group focus	10%
Content area not required	10%

Teaching and Curriculum

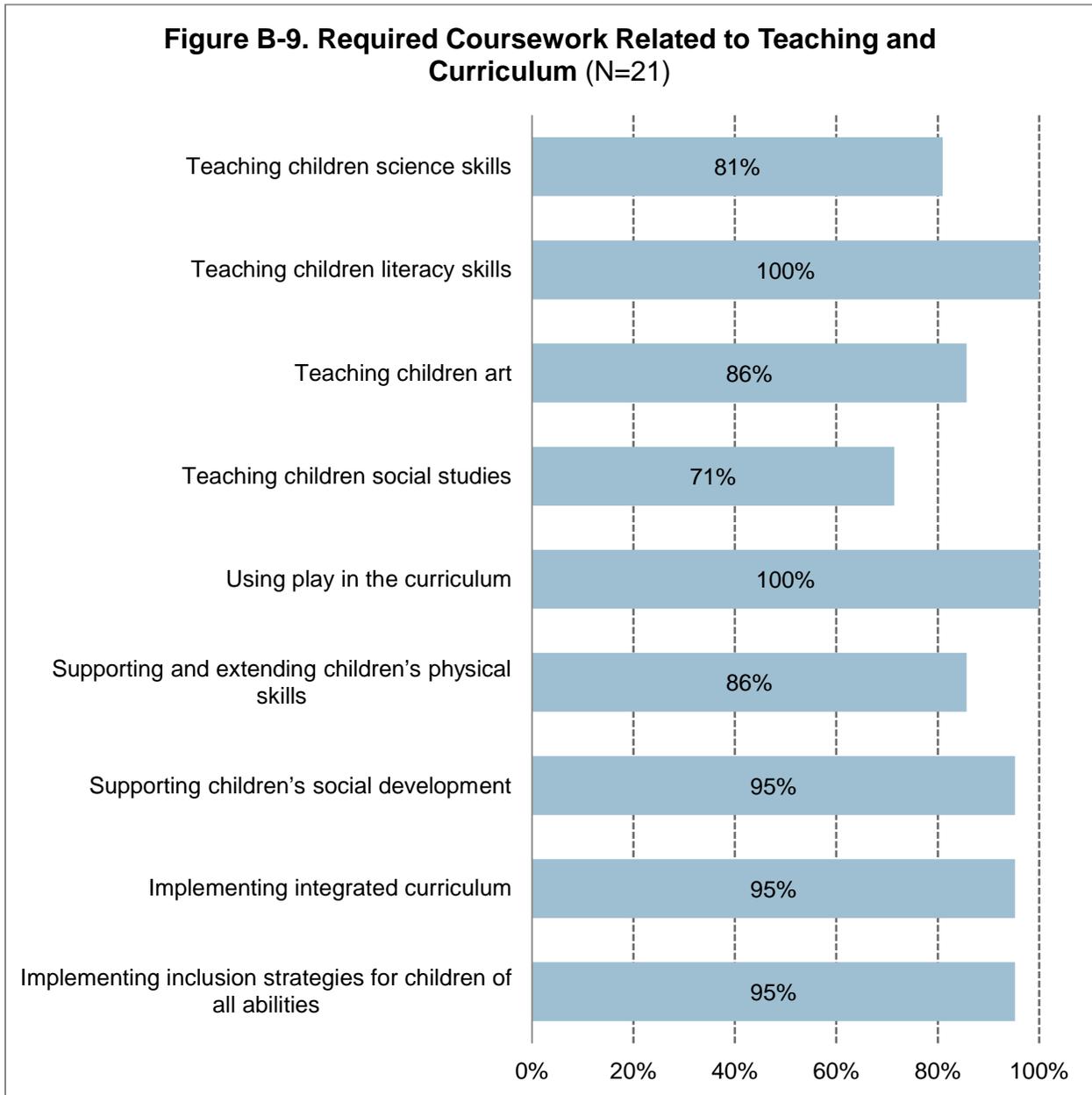


Table B-4. Coursework Related to Teaching and Curriculum: Required Age-Group Focus
Required age-group focus of topic and percentage of programs not requiring this content

Age-Group Focus	All Degree Programs (N=21)
Teaching children science skills	
Birth to 2 years	52%
3 and/or 4 years (pre-K)	62%
K-grade 3 or higher	52%
Required, but no age-group focus	14%
Content area not required	19%
Teaching children literacy skills	
Birth to 2 years	81%
3 and/or 4 years (pre-K)	90%
K-grade 3 or higher	62%
Required, but no age-group focus	10%
Content area not required	0%
Teaching children art	
Birth to 2 years	52%
3 and/or 4 years (pre-K)	67%
K-grade 3 or higher	48%
Required, but no age-group focus	19%
Content area not required	14%
Teaching children social studies	
Birth to 2 years	48%
3 and/or 4 years (pre-K)	57%
K-grade 3 or higher	48%
Required, but no age-group focus	10%
Content area not required	29%
Using play in the curriculum	
Birth to 2 years	71%
3 and/or 4 years (pre-K)	86%
K-grade 3 or higher	57%
Required, but no age-group focus	14%
Content area not required	0%
Supporting and extending children's physical skills	
Birth to 2 years	52%
3 and/or 4 years (pre-K)	67%
K-grade 3 or higher	48%
Required, but no age-group focus	19%
Content area not required	14%

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

Age-Group Focus	All Degree Programs
Supporting children’s social development	
Birth to 2 years	71%
3 and/or 4 years (pre-K)	81%
K-grade 3 or higher	52%
Required, but no age-group focus	14%
Content area not required	5%
Implementing integrated curriculum	
Birth to 2 years	71%
3 and/or 4 years (pre-K)	86%
K-grade 3 or higher	62%
Required, but no age-group focus	10%
Content area not required	5%
Implementing inclusion strategies for children of all abilities	
Birth to 2 years	67%
3 and/or 4 years (pre-K)	76%
K-grade 3 or higher	48%
Required, but no age-group focus	19%
Content area not required	5%

Teaching Skills in Early Childhood Settings

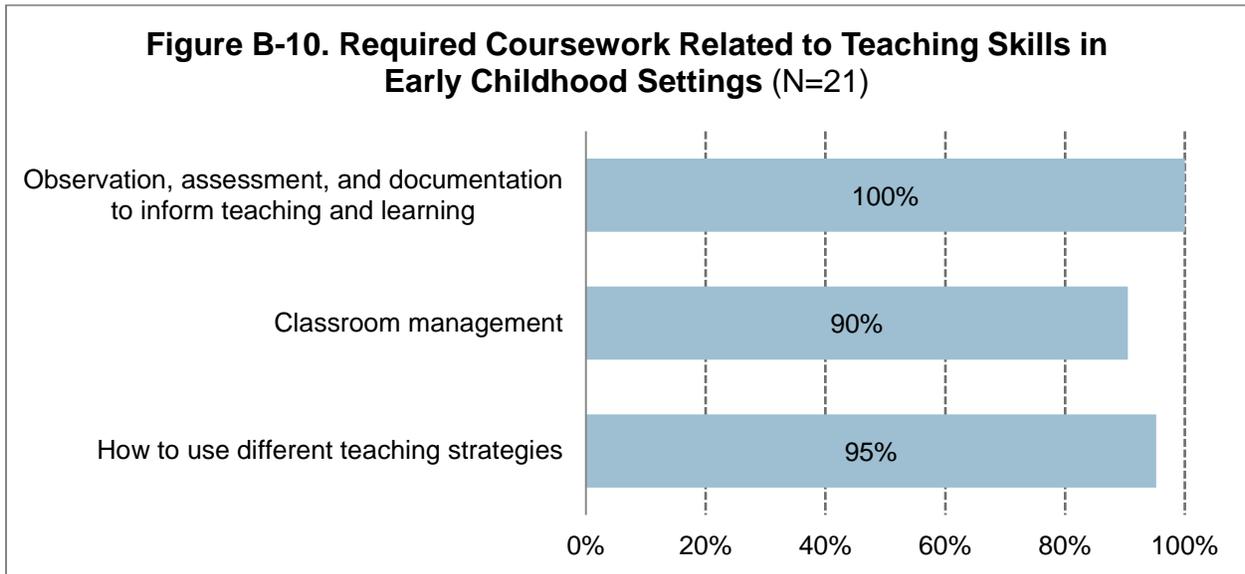


Table B-5. Coursework Related to Teaching Skills in Early Childhood Settings: Required Age-Group Focus

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

Age-Group Focus	All Degree Programs (N=21)
Observation, assessment, and documentation to inform teaching and learning	
Birth to 2 years	81%
3 and/or 4 years (pre-K)	86%
K-grade 3 or higher	62%
Required, but no age-group focus	14%
Content area not required	0%
Classroom management	
Birth to 2 years	71%
3 and/or 4 years (pre-K)	76%
K-grade 3 or higher	52%
Required, but no age-group focus	14%
Content area not required	10%
How to use different teaching strategies (e.g., planning, instructing, facilitating)	
Birth to 2 years	71%
3 and/or 4 years (pre-K)	81%
K-grade 3 or higher	62%
Required, but no age-group focus	14%
Content area not required	5%

Administration and Leadership

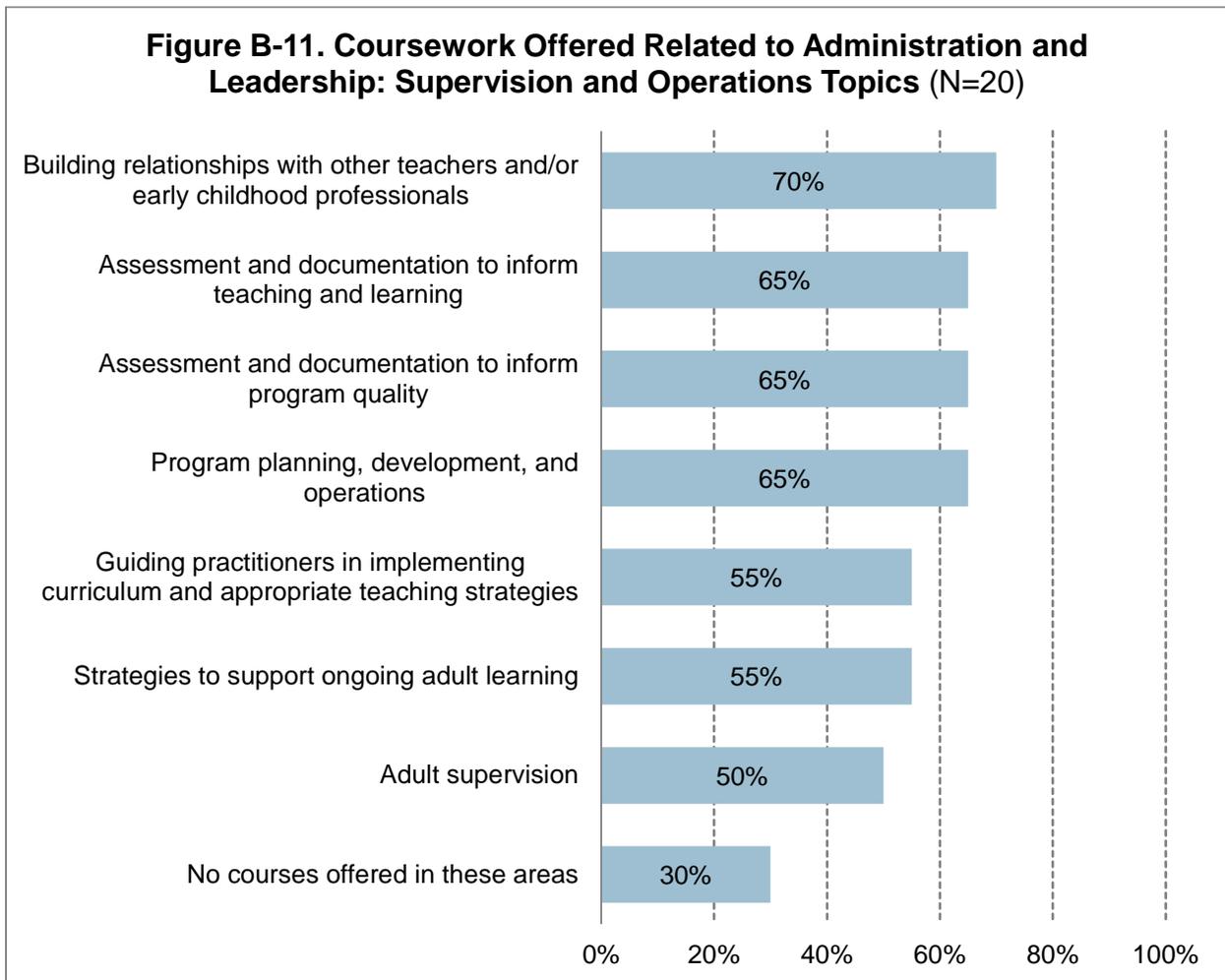
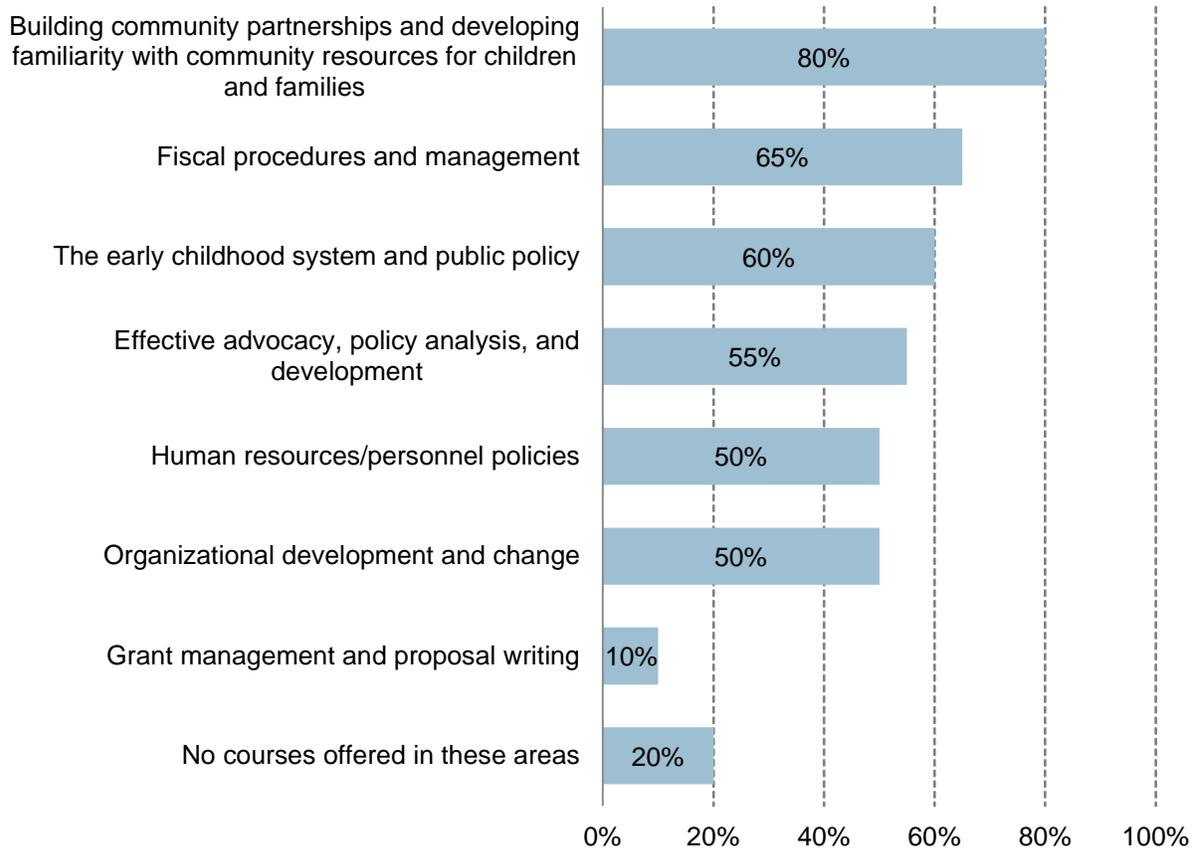


Figure B-12. Coursework Offered Related to Administration and Leadership: Organization and Systems Topics (N=20)



Family Engagement

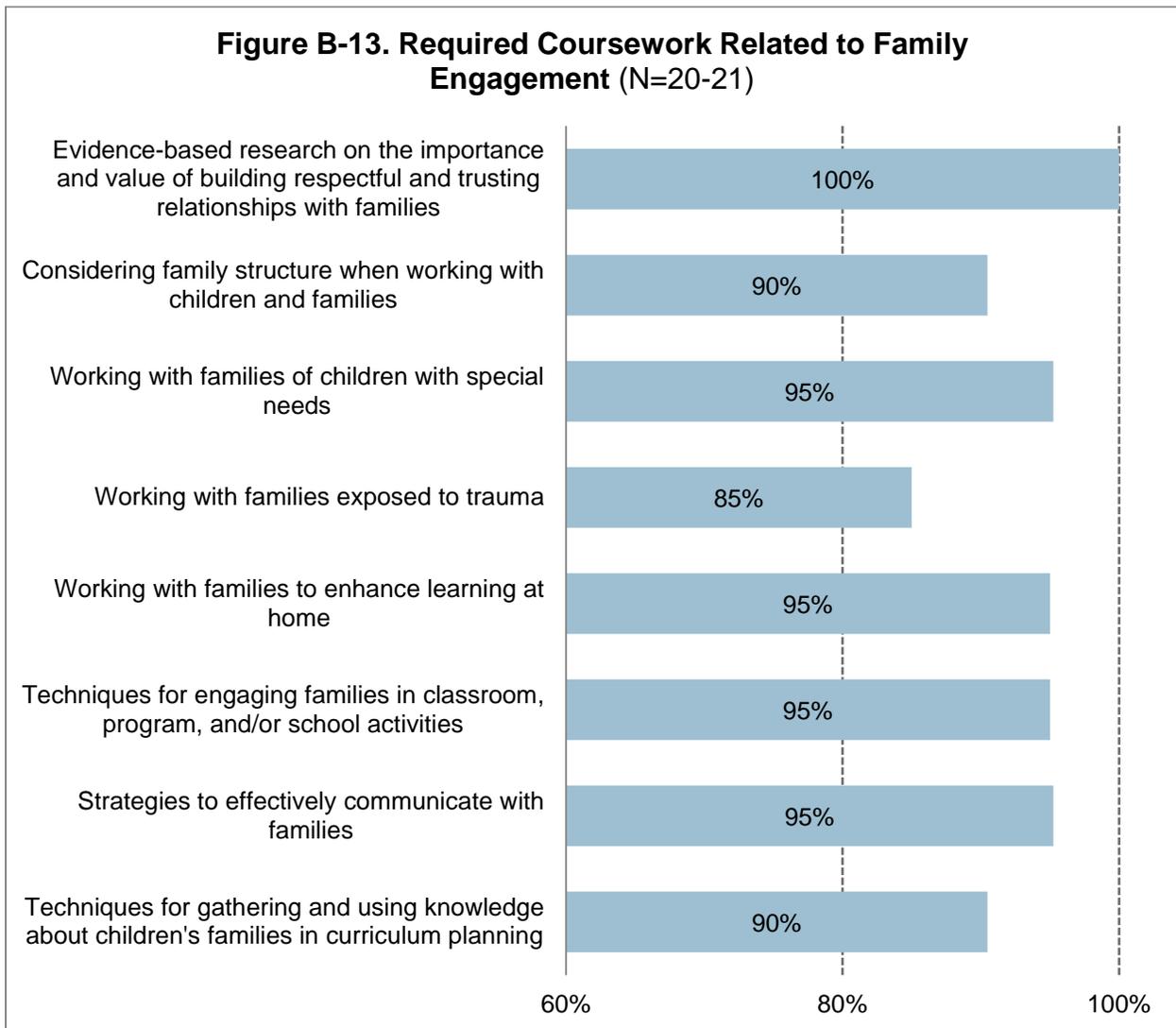


Table B-6. Coursework Related to Family Engagement: Required Age-Group Focus*Required age-group focus of topic and percentage of programs not requiring this content*

Age-Group Focus	All Degree Programs (N=21)
Evidence-based research on the importance and value of building respectful and trusting relationships with families	
Birth to 2 years	76%
3 and/or 4 years (pre-K)	81%
K-grade 3 or higher	62%
Required, but no age-group focus	19%
Content area not required	0%
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	67%
3 and/or 4 years (pre-K)	67%
K-grade 3 or higher	52%
Required, but no age-group focus	24%
Content area not required	10%
Working with families of children with special needs	
Birth to 2 years	71%
3 and/or 4 years (pre-K)	76%
K-grade 3 or higher	52%
Required, but no age-group focus	19%
Content area not required	5%
Working with families exposed to trauma	
Birth to 2 years	70%
3 and/or 4 years (pre-K)	70%
K-grade 3 or higher	50%
Required, but no age-group focus	15%
Content area not required	15%
Working with families to help them enhance their children’s learning at home	
Birth to 2 years	70%
3 and/or 4 years (pre-K)	75%
K-grade 3 or higher	55%
Required, but no age-group focus	20%
Content area not required	5%
Techniques for engaging families in classroom, program, and/or school activities	
Birth to 2 years	57%
3 and/or 4 years (pre-K)	62%
K-grade 3 or higher	48%
Required, but no age-group focus	33%
Content area not required	5%

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

Age-Group Focus	All Degree Programs (N=20-21)
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	57%
3 and/or 4 years (pre-K)	62%
K-grade 3 or higher	52%
Required, but no age-group focus	33%
Content area not required	5%
Techniques for gathering and using knowledge about children's families in curriculum planning	
Birth to 2 years	57%
3 and/or 4 years (pre-K)	62%
K-grade 3 or higher	48%
Required, but no age-group focus	29%
Content area not required	10%

Early Mathematics

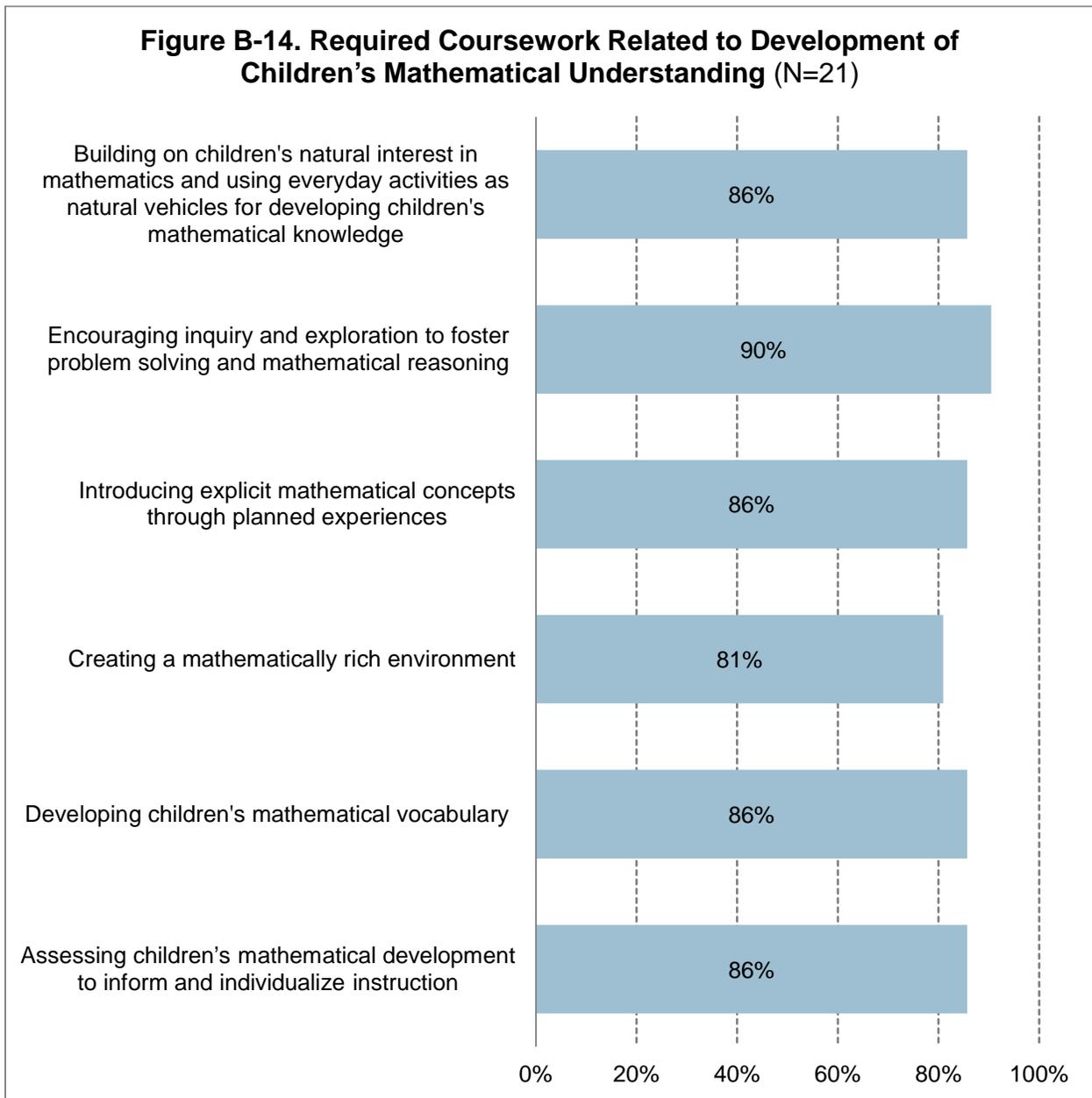


Table B-7. Coursework Related to Development of Children’s Mathematical Understanding: Required Age-Group Focus

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

Age-Group Focus	All Degree Programs (N=21)
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	62%
3 and/or 4 years (pre-K)	76%
K-grade 3 or higher	52%
Required, but no age-group focus	10%
Content area not required	14%
Encouraging children’s inquiry and exploration to foster problem solving and mathematical reasoning	
Birth to 2 years	57%
3 and/or 4 years (pre-K)	71%
K-grade 3 or higher	48%
Required, but no age-group focus	19%
Content area not required	10%
Introducing explicit mathematical concepts through planned experiences	
Birth to 2 years	48%
3 and/or 4 years (pre-K)	62%
K-grade 3 or higher	43%
Required, but no age-group focus	19%
Content area not required	14%
Creating a mathematically rich environment	
Birth to 2 years	48%
3 and/or 4 years (pre-K)	67%
K-grade 3 or higher	43%
Required, but no age-group focus	14%
Content area not required	19%
Developing children’s mathematical vocabulary	
Birth to 2 years	48%
3 and/or 4 years (pre-K)	62%
K-grade 3 or higher	43%
Required, but no age-group focus	19%
Content area not required	14%
Assessing children’s mathematical development to inform and individualize instruction	
Birth to 2 years	38%
3 and/or 4 years (pre-K)	62%
K-grade 3 or higher	43%
Required, but no age-group focus	19%
Content area not required	14%

Figure B-15. Required Coursework Related to Teaching Children Specific Math Skills (N=21)

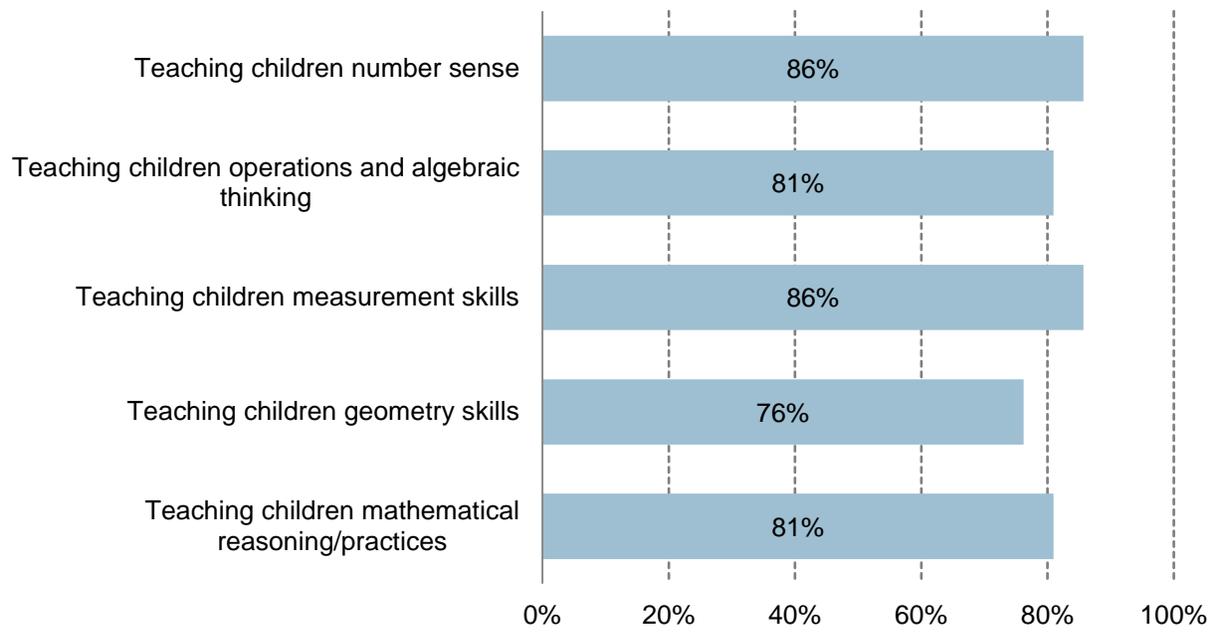


Table B-8. Coursework Related to Teaching Children Specific Math Skills: Required Age-Group Focus

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

Age-Group Focus	All Degree Levels (N=21)
Teaching children number sense (counting and cardinality)	
Birth to 2 years	52%
3 and/or 4 years (pre-K)	67%
K-grade 3 or higher	48%
Required, but no age-group focus	14%
Content area not required	14%
Teaching children operations and algebraic thinking	
Birth to 2 years	33%
3 and/or 4 years (pre-K)	57%
K-grade 3 or higher	38%
Required, but no age-group focus	19%
Content area not required	19%
Teaching children measurement skills	
Birth to 2 years	43%
3 and/or 4 years (pre-K)	62%
K-grade 3 or higher	43%
Required, but no age-group focus	19%
Content area not required	14%
Teaching children geometry skills	
Birth to 2 years	43%
3 and/or 4 years (pre-K)	52%
K-grade 3 or higher	38%
Required, but no age-group focus	19%
Content area not required	24%
Teaching children mathematical reasoning/practices	
Birth to 2 years	38%
3 and/or 4 years (pre-K)	57%
K-grade 3 or higher	43%
Required, but no age-group focus	19%
Content area not required	19%

Dual Language Learners

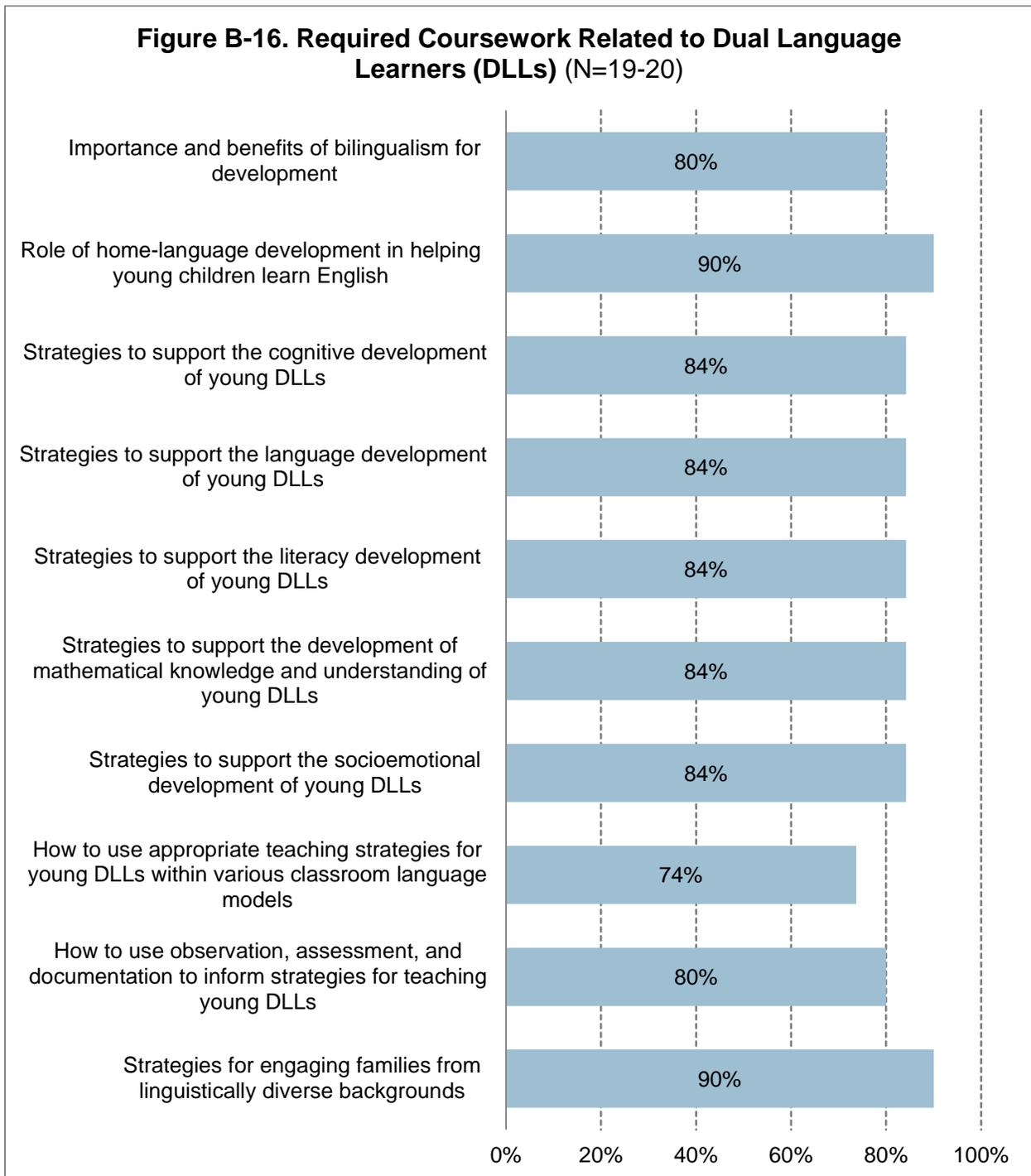


Table B-9. Coursework Related to Dual Language Learners (DLLs): Required Age-Group Focus

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

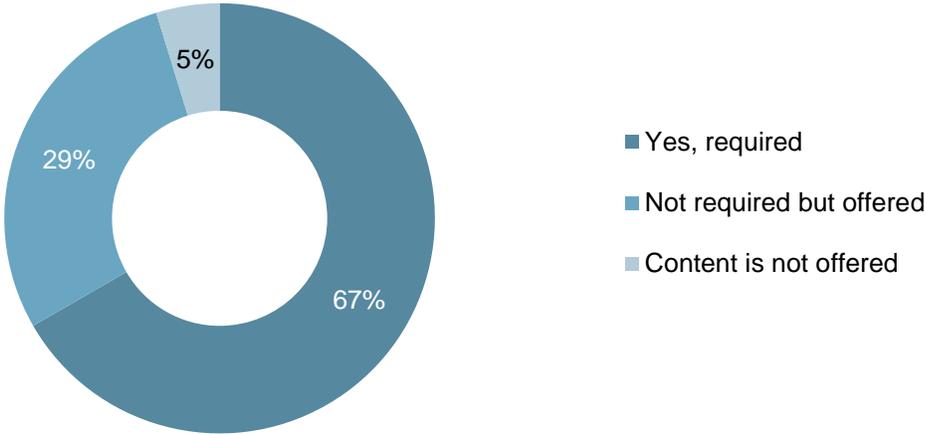
Age-Group Focus	All Degree Programs (N=19-20)
Importance and benefits of bilingualism for young children’s development	
Birth to 2 years	50%
3 and/or 4 years (pre-K)	50%
K-grade 3 or higher	50%
Required, but no age-group focus	25%
Content area not required	20%
Role of home-language development in helping young children learn English	
Birth to 2 years	60%
3 and/or 4 years (pre-K)	60%
K-grade 3 or higher	60%
Required, but no age-group focus	25%
Content area not required	10%
Strategies to support the cognitive development of young DLLs	
Birth to 2 years	53%
3 and/or 4 years (pre-K)	58%
K-grade 3 or higher	47%
Required, but no age-group focus	21%
Content area not required	16%
Strategies to support the language development of young DLLs	
Birth to 2 years	58%
3 and/or 4 years (pre-K)	63%
K-grade 3 or higher	53%
Required, but no age-group focus	16%
Content area not required	16%
Strategies to support the literacy development of young DLLs	
Birth to 2 years	58%
3 and/or 4 years (pre-K)	63%
K-grade 3 or higher	53%
Required, but no age-group focus	16%
Content area not required	16%
Strategies to support the development of mathematical knowledge and understanding of young DLLs	
Birth to 2 years	53%
3 and/or 4 years (pre-K)	58%
K-grade 3 or higher	47%
Required, but no age-group focus	21%
Content area not required	16%

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

Age-Group Focus	All Degree Programs (N=19-20)
Strategies to support the socioemotional development of young DLLs	
Birth to 2 years	58%
3 and/or 4 years (pre-K)	63%
K-grade 3 or higher	53%
Required, but no age-group focus	16%
Content area not required	16%
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	32%
3 and/or 4 years (pre-K)	37%
K-grade 3 or higher	37%
Required, but no age-group focus	32%
Content area not required	26%
How to use observation, assessment, and documentation to inform strategies for teaching young DLLs	
Birth to 2 years	35%
3 and/or 4 years (pre-K)	40%
K-grade 3 or higher	40%
Required, but no age-group focus	35%
Content area not required	20%
Strategies for engaging families from linguistically diverse backgrounds	
Birth to 2 years	45%
3 and/or 4 years (pre-K)	50%
K-grade 3 or higher	45%
Required, but no age-group focus	35%
Content area not required	10%

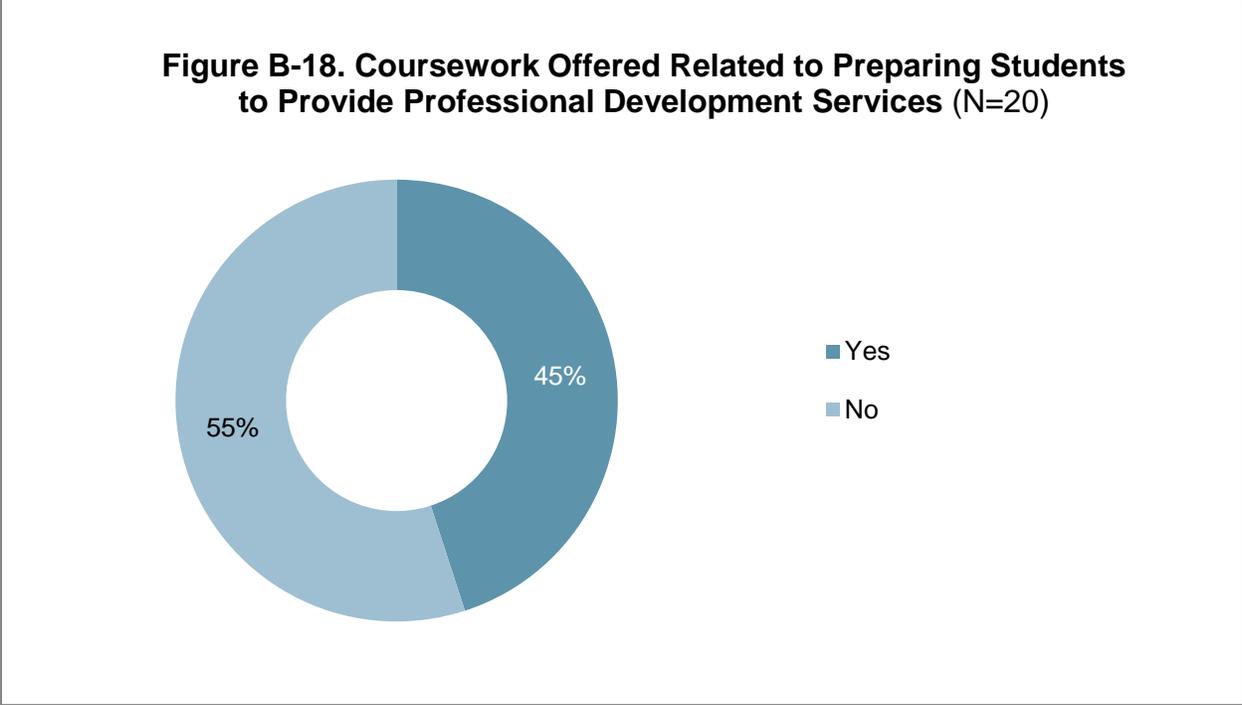
Self-Reflection and Awareness of Culture and Bias

Figure B-17. Required Coursework Related to Self-Reflection and Awareness of Issues Related to Culture and Bias (N=21)



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).



Structure of Course Content

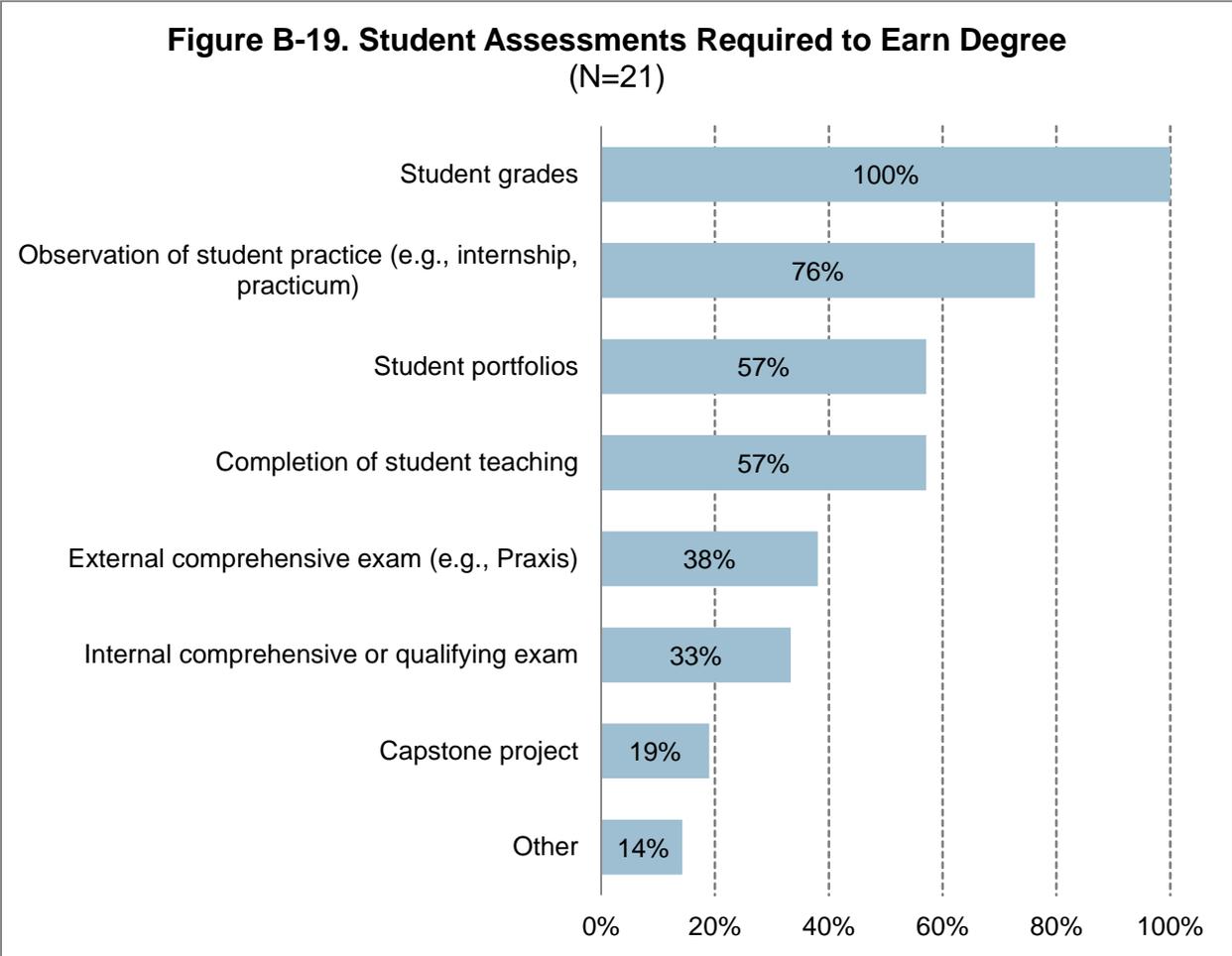
Table B-10. Structure of Course Content Instruction in Mississippi Early Childhood Degree Programs

Course Content Structure	All Degree Programs (N=21)
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	19%
Taught within a broader course	43%
Taught <u>both</u> as a separate course <u>and</u> embedded within a broader course	24%
Not taught	14%
Literacy development in young children and how to promote their skills related to oral and written language	
Taught as a separate course	48%
Taught within a broader course	14%
Taught <u>both</u> as a separate course <u>and</u> embedded within a broader course	33%
Not taught	5%
Socioemotional development, its relationship to learning, and how to support children's socioemotional skills	
Taught as a separate course	38%
Taught within a broader course	33%
Taught <u>both</u> as a separate course <u>and</u> embedded within a broader course	29%
Not taught	0%
Typical 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	33%
Taught within a broader course	38%
Taught <u>both</u> as a separate course <u>and</u> embedded within a broader course	19%
Not taught	10%
Strategies for working with children who are dual language learners	
Taught as a separate course	14%
Taught within a broader course	52%
Taught <u>both</u> as a separate course <u>and</u> embedded within a broader course	14%
Not taught	19%

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

Course Content Structure	All Degree Programs (N=21)
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	57%
Taught within a broader course	24%
Taught <u>both</u> as a separate course <u>and</u> embedded within a broader course	19%
Not taught	0%
Implementing assessments effectively to inform and individualize instruction with children	
Taught as a separate course	33%
Taught within a broader course	48%
Taught <u>both</u> as a separate course <u>and</u> embedded within a broader course	14%
Not taught	5%

Student Assessments



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:

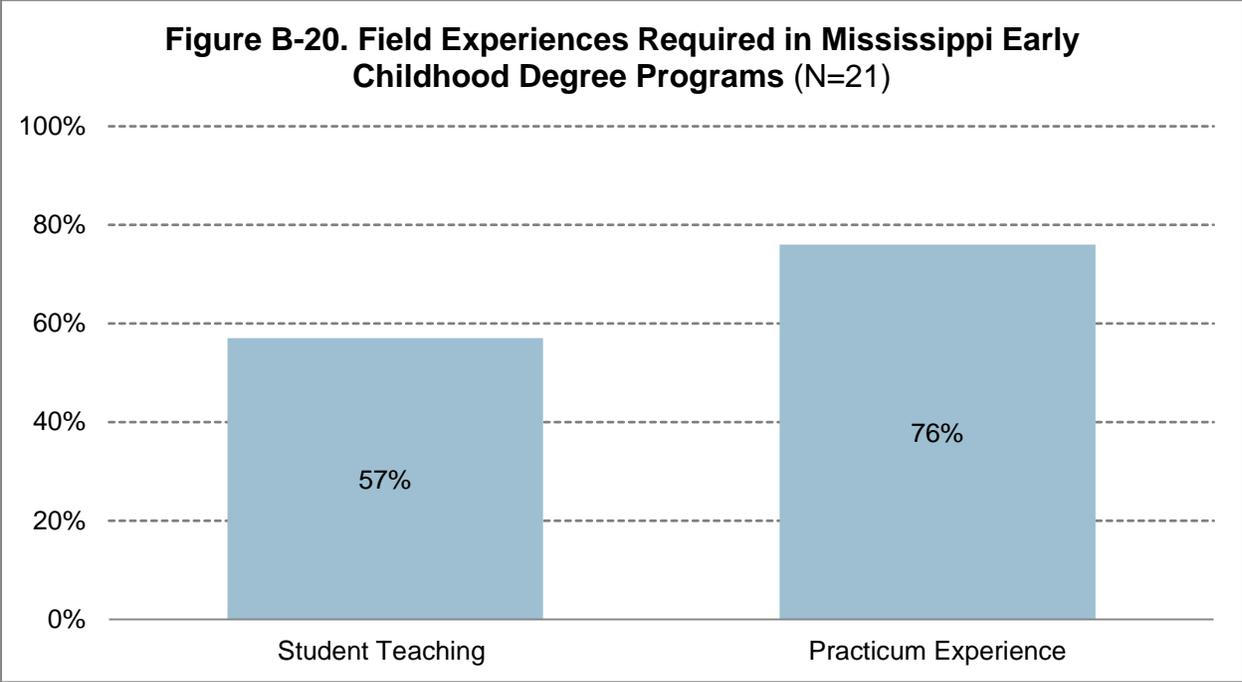
1. Student Teaching: Defined as full-time immersion in a classroom, with increasing responsibility for curriculum planning and teaching, as well as supervision by a faculty member, cooperating teacher, and/or mentor.
2. Practicum: Defined as an experience that is short in duration, associated with a 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,¹⁶ the *Inventory* asked about:

- Timing and duration of the field experience;
- Requirements of the field experience:
 - Populations of students or families; and
 - 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.

¹⁶ 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

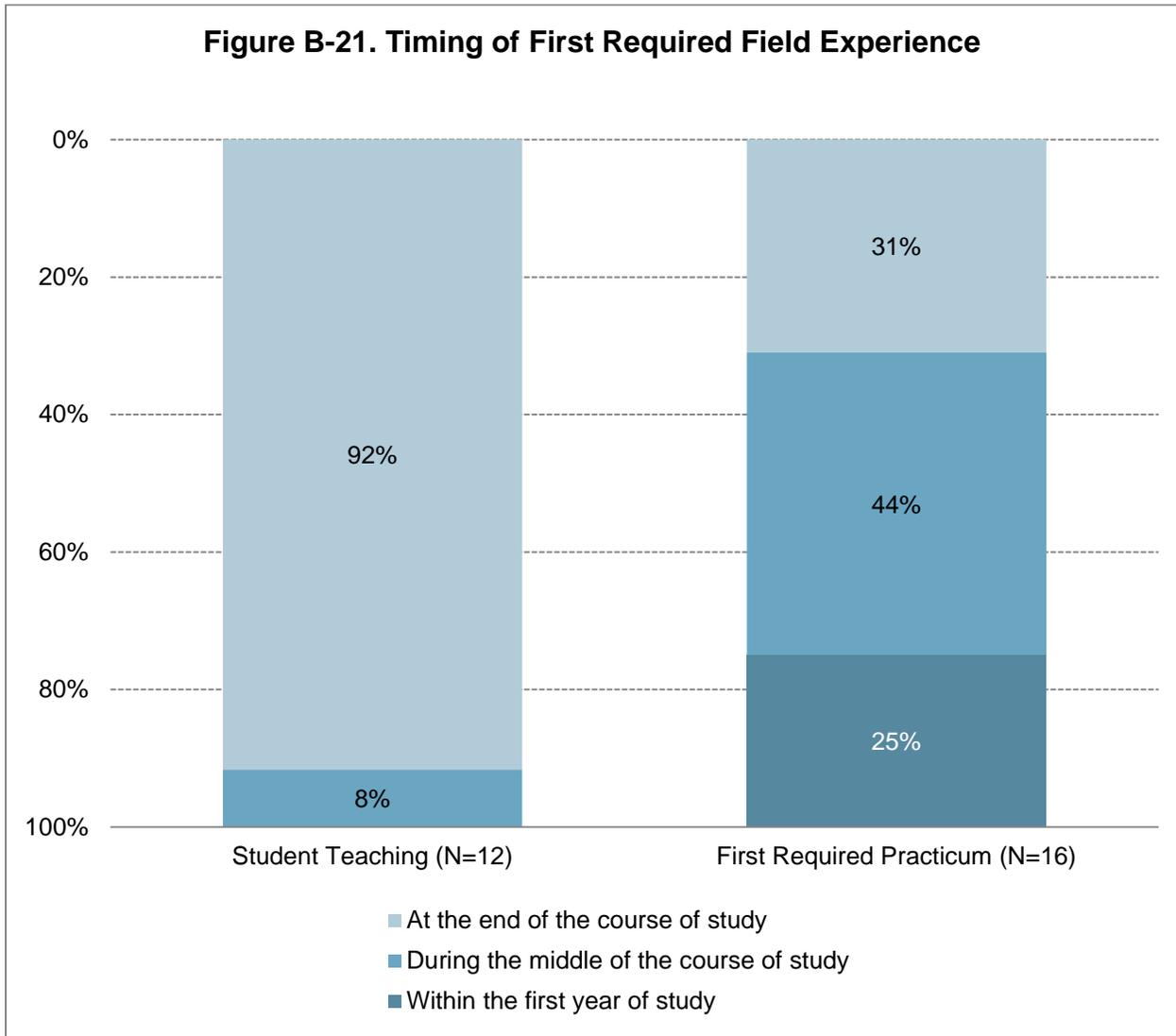


Table B-11. Duration and Course Requirements of Required Field Experiences

Required Duration	All Degree Levels
Student Teaching (N=11)	
Average (weeks)	15
Range (weeks)	1–32
Practica (N=13)	
Average (hours)	97
Range (hours)	10–300
Average number of courses required	4
Range	1–18

Requirements of Field Experiences

Table B-12. Required Age-Group Focus and Elements of Field Experiences in Mississippi Early Childhood Degree Programs

Age Group Focus or Element	Required	Optional	Not Offered
Student Teaching (N=11-12)			
Working with children birth to 2 years	50%	33%	17%
Working with children 3 or 4 years old (pre-K)	75%	25%	0%
Working with children kindergarten to grade 3 or higher	25%	33%	42%
Working with children who are DLLs	9%	64%	27%
Working with children with disabilities	36%	45%	18%
Working with families	64%	18%	18%
Scaffolding math development and understanding	91%	9%	0%
Scaffolding literacy development	91%	9%	0%
Supporting socioemotional development	100%	0%	0%
Facilitating motor development	91%	9%	0%
Developing partnerships with families	64%	18%	18%
Using assessment to inform instruction	100%	0%	0%
Collaborating with community organizations	45%	36%	18%
Practica (N=15-16)			
Working with children birth to 2 years	67%	33%	0%
Working with children 3 or 4 years old (pre-K)	87%	13%	0%
Working with children kindergarten to grade 3 or higher	40%	53%	7%
Working with children who are DLLs	25%	50%	25%
Working with children with disabilities	25%	50%	25%
Working with families	50%	25%	25%
Scaffolding math development and understanding	80%	13%	7%
Scaffolding literacy development	93%	7%	0%
Supporting socioemotional development	87%	13%	0%
Facilitating motor development	73%	27%	0%
Developing partnerships with families	44%	38%	19%
Using assessment to inform instruction	80%	13%	7%
Collaborating with community organizations	63%	25%	13%

Criteria for Selecting Field Experience Sites

Table B-13. Criteria Used to Select Field Experience Sites

Criteria	All Degree Programs
Student Teaching	
Site is at a college laboratory school	50%
Site is a public school	60%
Observed quality rating of the site	20%
Site is a nationally accredited early childhood program	30%
Degree program/college has a partnership with a school district	30%
Location of site	40%
Student currently works at the site	40%
Children with disabilities served at the site	0%
Age of children served at the site	20%
Demographic background of children served at the site	0%
Teacher qualifications	30%
	N= 10*
Practica	
Site is at a college laboratory school	46%
Site is a public school	92%
Observed quality rating of the site	31%
Site is a nationally accredited early childhood program	54%
Degree program/college has a partnership with a school district	46%
Location of site	38%
Student currently works at the site	38%
Children with disabilities served at the site	0%
Age of children served at the site	54%
Demographic background of children served at the site	15%
Teacher qualifications	46%
Other	8%
	N= 13**

* Excludes two degree programs that require student teaching but do not use criteria or declined to state whether they use criteria to select site.

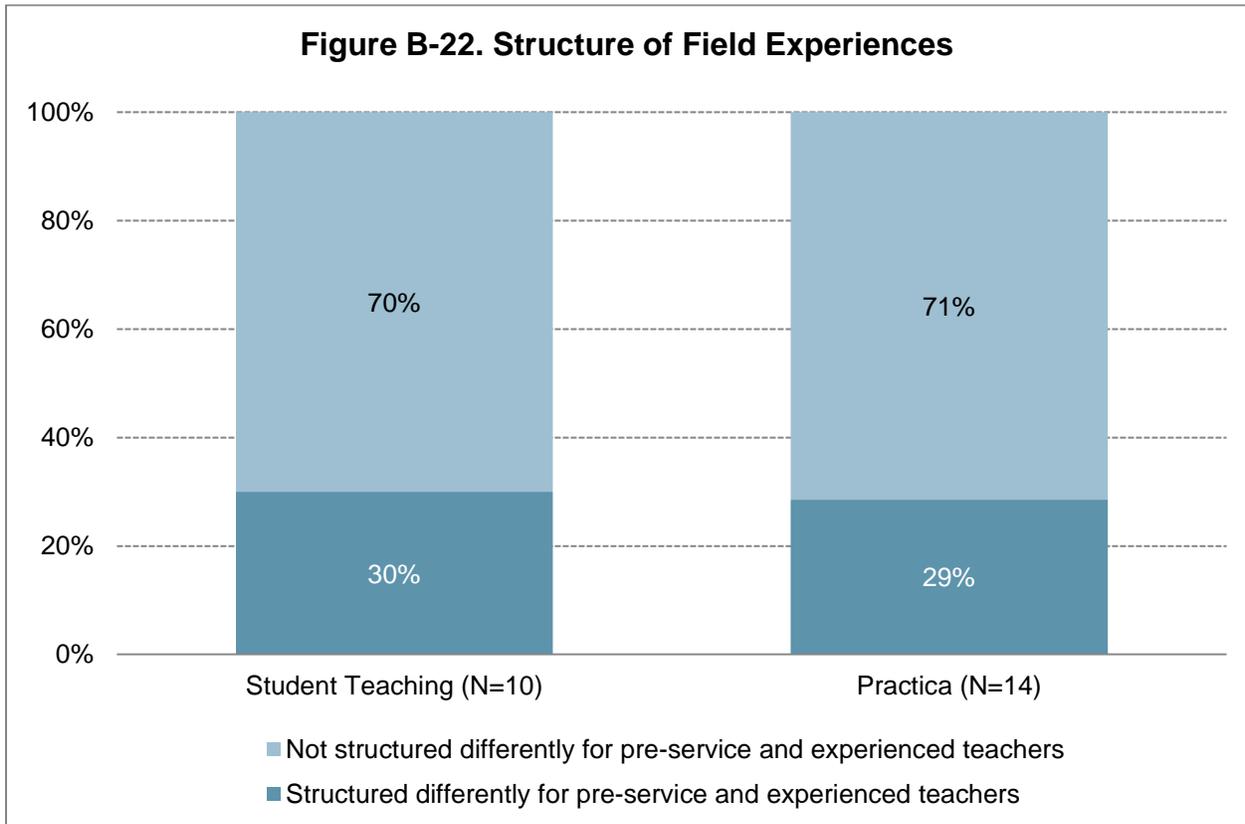
** Excludes three degree programs that require one or more practicum courses but do not use criteria to select site.

Supervision of Field Experiences

Table B-14. Typical Supervisors of Field Experiences

Supervisors	All Degree Programs
Student Teaching	
Typical Supervisors (N=12)	
Cooperating teacher	83%
Field supervisor	17%
Field mentor	8%
Faculty	67%
Practica	
Typical Supervisors (N=16)	
Cooperating teacher	81%
Field supervisor	6%
Field mentor	13%
Faculty	75%
Status of Supervising Faculty (N=12)	
Tenure-track/Tenured	50%
Non-tenured	67%
Clinical faculty	17%
Adjunct/Part-time	25%
Other	8%

Field Experience Structure for Pre-Service and Experienced Teachers



Articulation and Alignment With the Mississippi Professional Development System

What we asked about articulation and alignment:

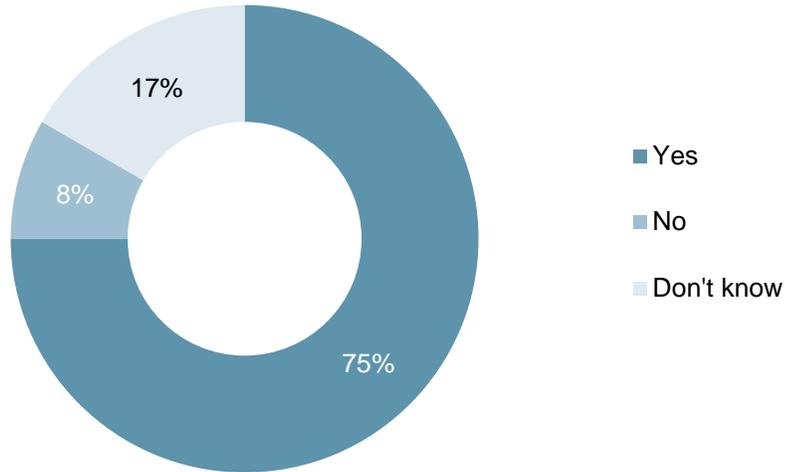
The *Inventory* asked program leads whether their degree programs had formal articulation agreements with other degree programs. Respondents were also asked the status of students entering the program (so we could understand how many students are transferring versus starting as first-year students) and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



Integration of Standards and Competencies

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

Standards	All Degree Programs
State or National Math Standards (N=12)	
Mississippi Early Learning Guidelines for Classrooms Serving Three- and Four-Year-Olds	83%
Mississippi Early Learning Standards for Three-Year-Olds	67%
Mississippi Early Learning Standards for Four-Year-Olds	67%
State or National Family Engagement Standards (N=10)	
NAEYC Professional Preparation Standards/CAEP: Standard 2, Building Family and Community Relationships	90%
NAEYC Principles of Effective Family Engagement	90%
Mississippi Early Learning Guidelines for Classrooms Serving Three- and Four-Year-Olds (parent participation)	90%
NAEYC Program Accreditation Standards: Standard 7, Families	80%
Other State Standards and Competencies (N=18)	
Mississippi Early Learning Standards for Three-Year-Olds	94%
Mississippi Early Learning Standards for Four-Year-Olds	94%
Mississippi College- and Career-Ready Standards for English and Language Arts	28%

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

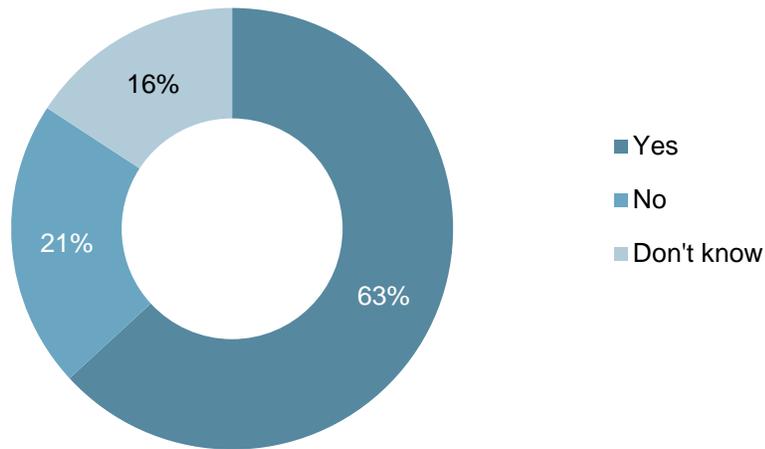
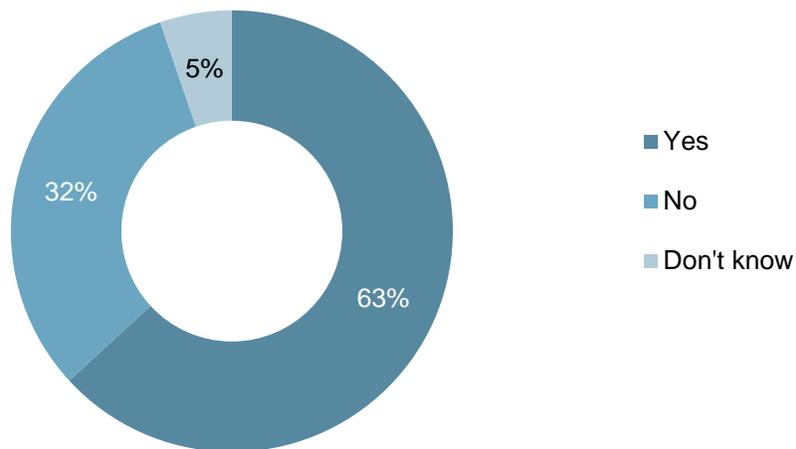
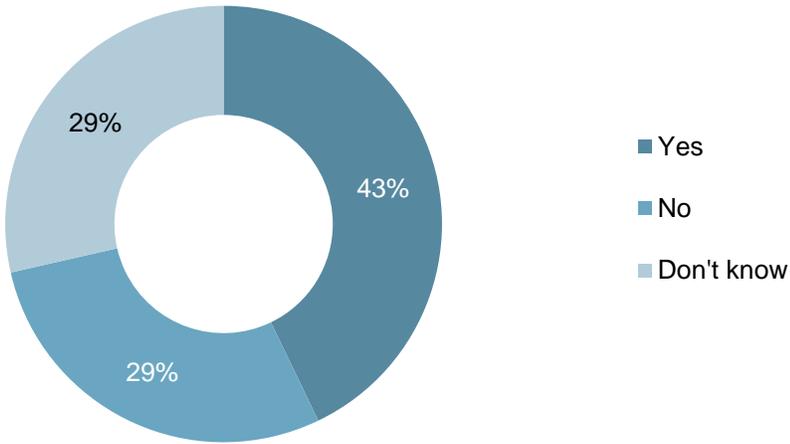


Figure B-25. State or National Math Standards Incorporated Into Early Math Course Content of Mississippi Early Childhood Degree Programs (N=19)

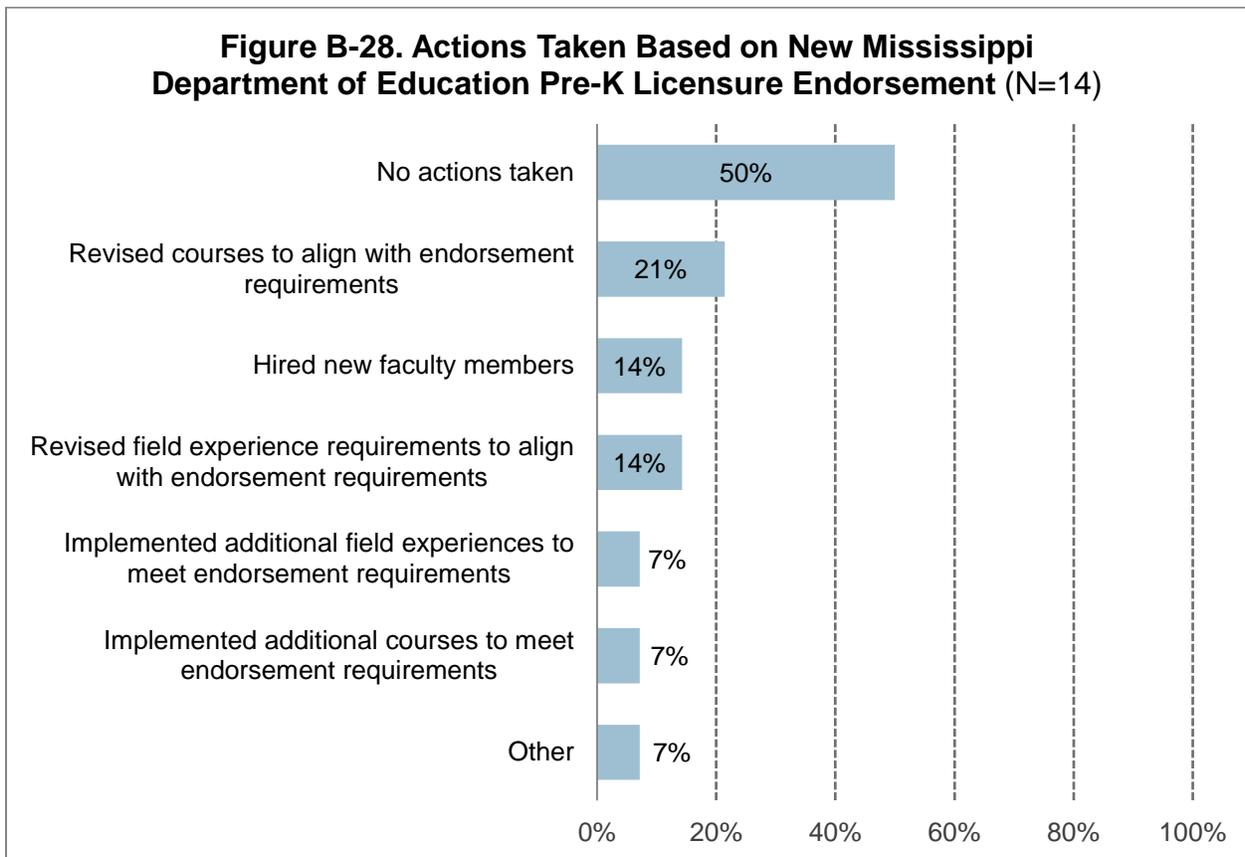
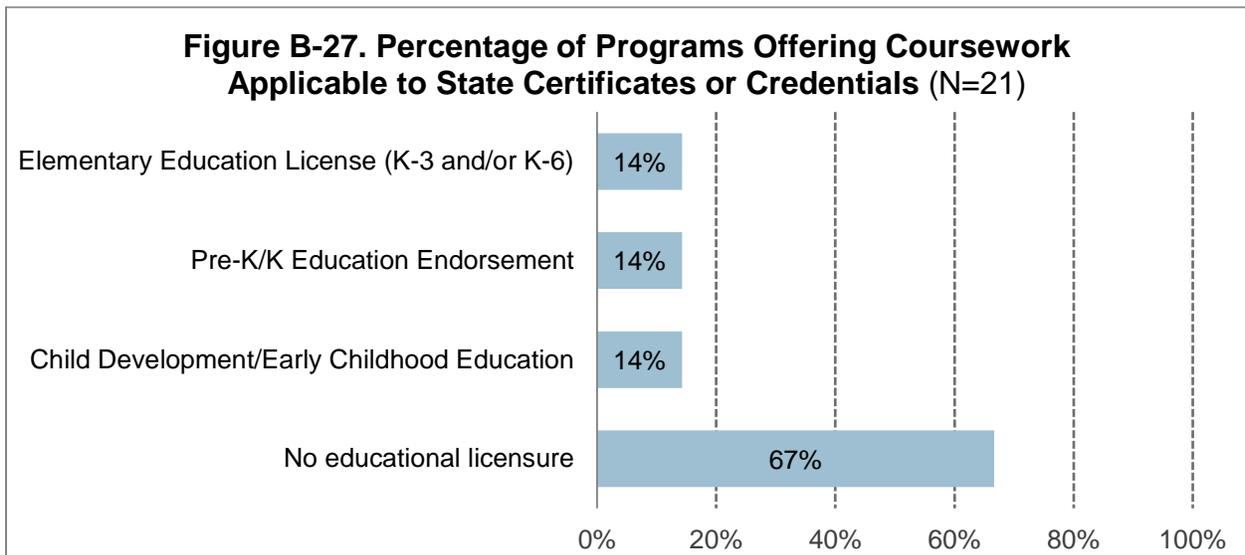


Alignment With Child Development Associate (CDA) Credential

Figure B-26. Percentage of Programs Offering Coursework Applicable to National CDA Credential (N=21)



Alignment With State Credentials



Appendix C: Early Childhood Degree Program Faculty Members

Demographics of Faculty Members Participating in the Mississippi Inventory

What we asked faculty members:

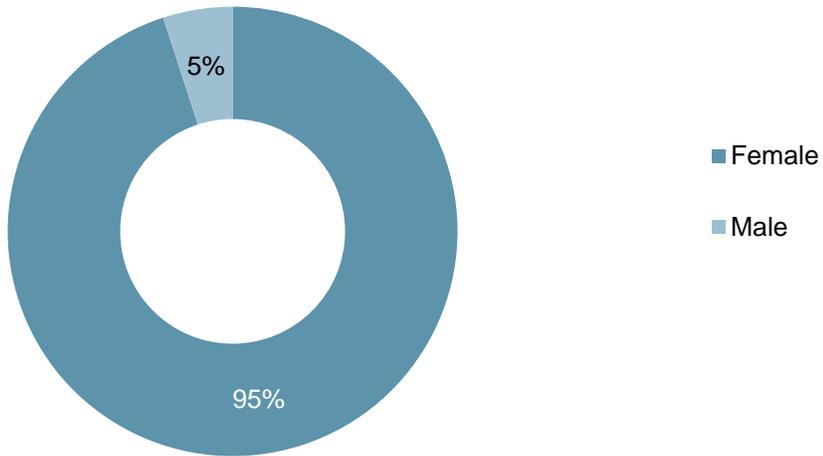
The *Inventory* asked faculty members about their demographic identification and language status, their educational and professional backgrounds, and their current employment status.

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.

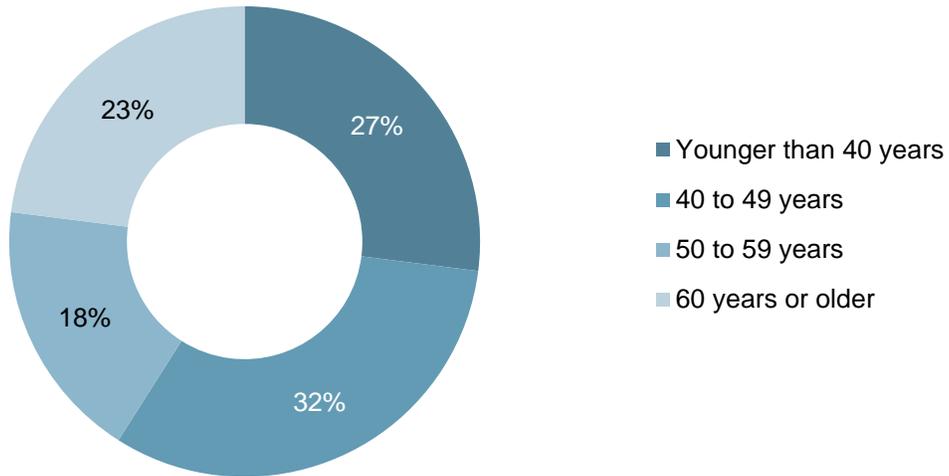
Gender

Figure C-1. Gender of Faculty Members Participating in the Mississippi Inventory (N=22)



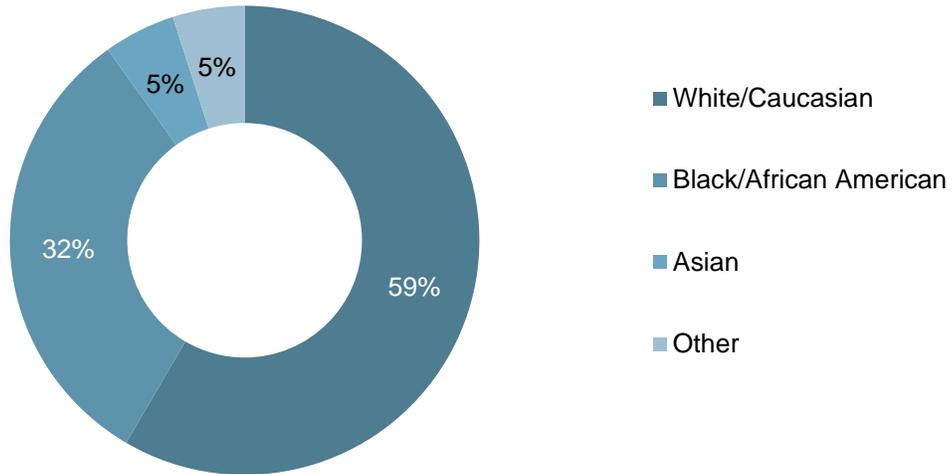
Age

Figure C-2. Age of Faculty Members Participating in the Mississippi Inventory (N=22)

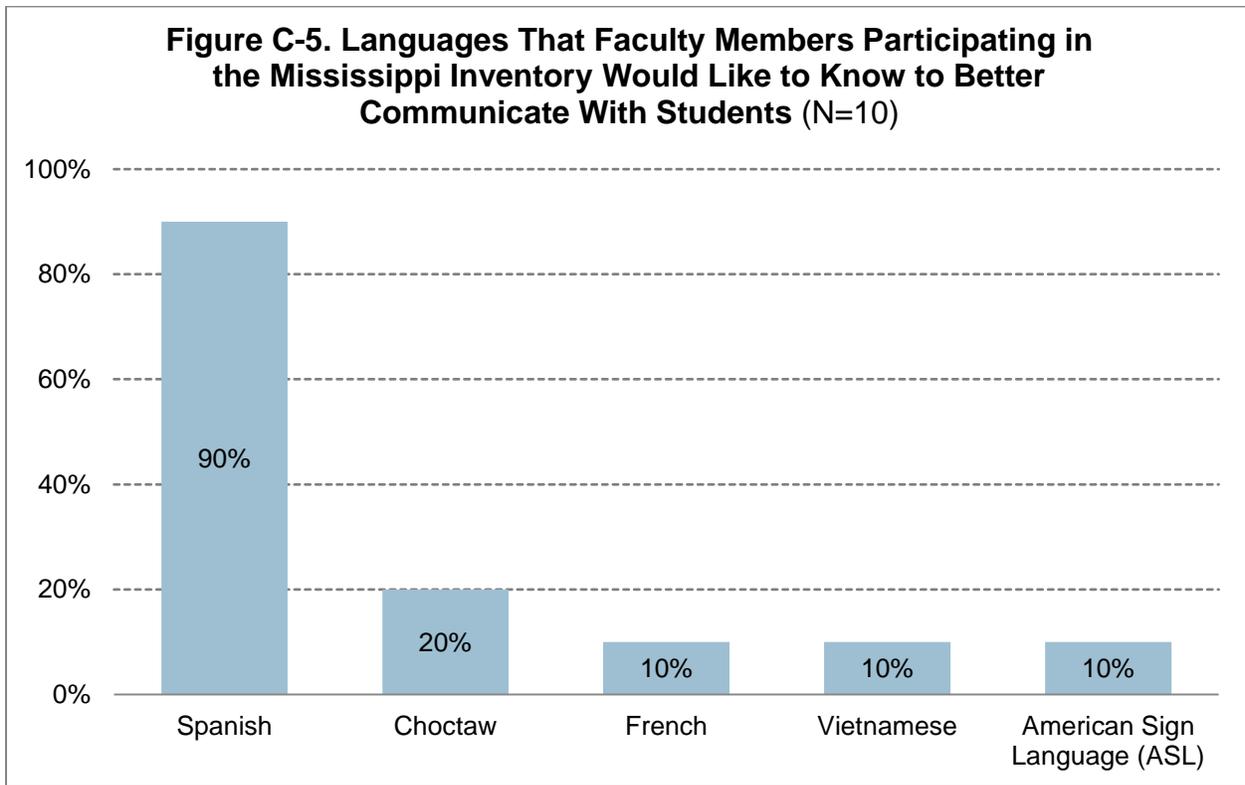
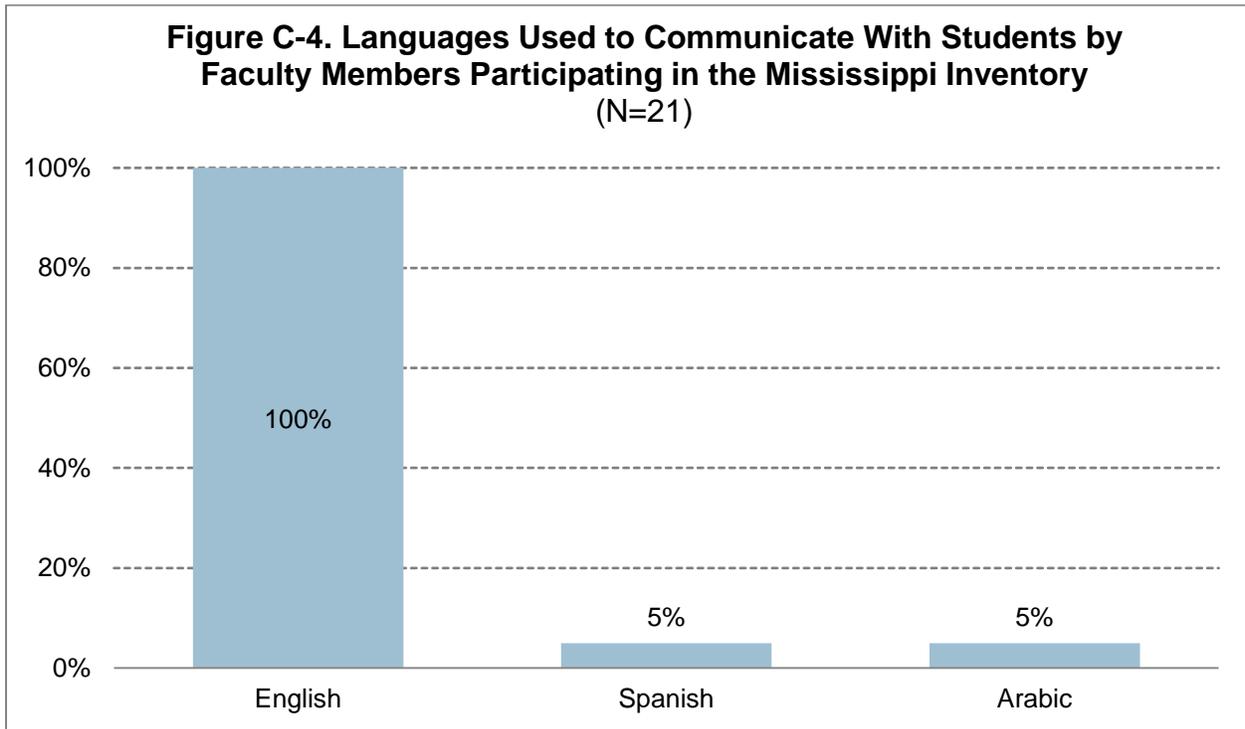


Race/Ethnicity

Figure C-3. Race/Ethnicity of Faculty Members Participating in the Mississippi Inventory (N=22)



Languages



Educational Levels of Faculty Members Participating in the Mississippi Inventory

Figure C-6. Highest Level of Education Attained by Faculty Members Participating in the Mississippi Inventory (N=22)

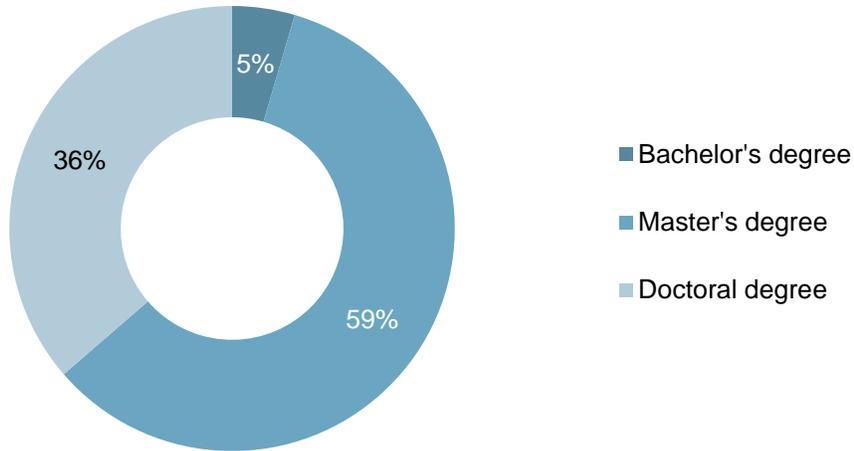
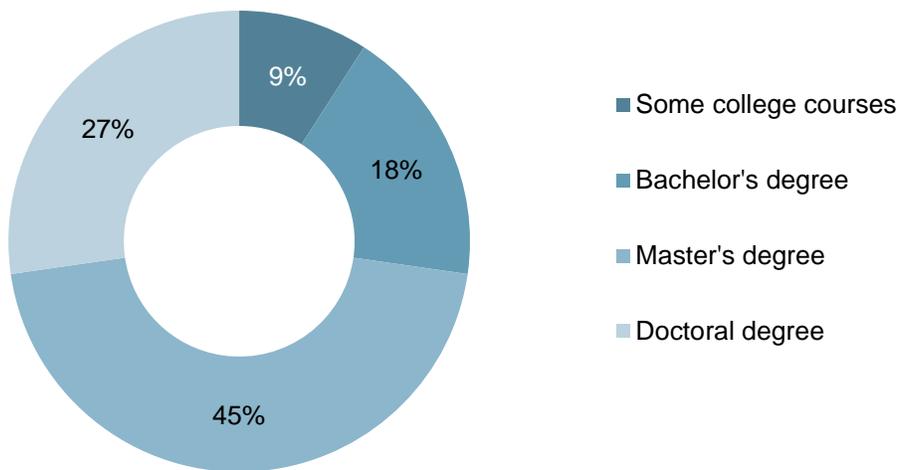


Figure C-7. Early Childhood Education or Child Development Degree Attainment by Faculty Members Participating in the Mississippi Inventory (N=22)



Professional Experience and Current Employment Status of Faculty Members Participating in the Mississippi Inventory

Teaching Experience

Figure C-8. Number of Years Teaching at the College or University Level for Faculty Members Participating in the Mississippi Inventory (N=25)

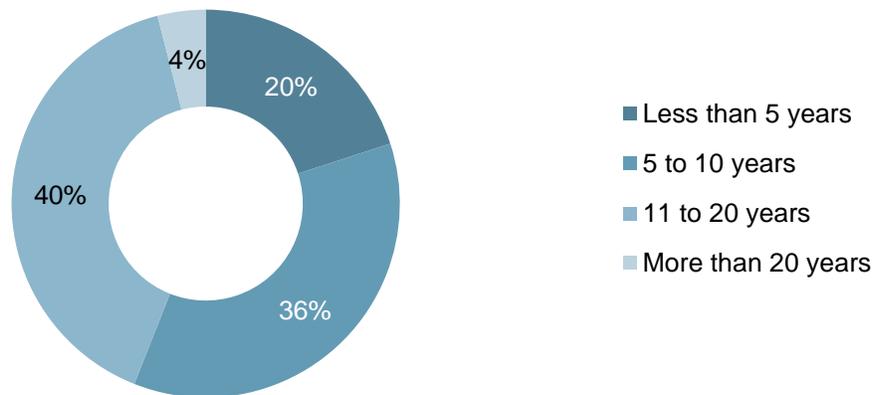
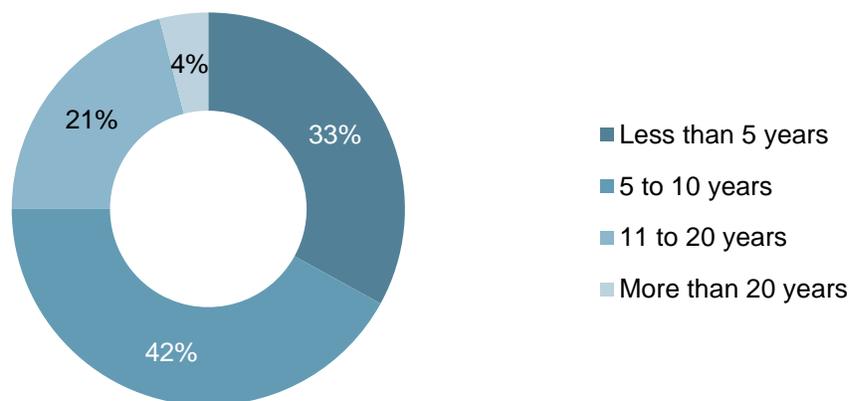
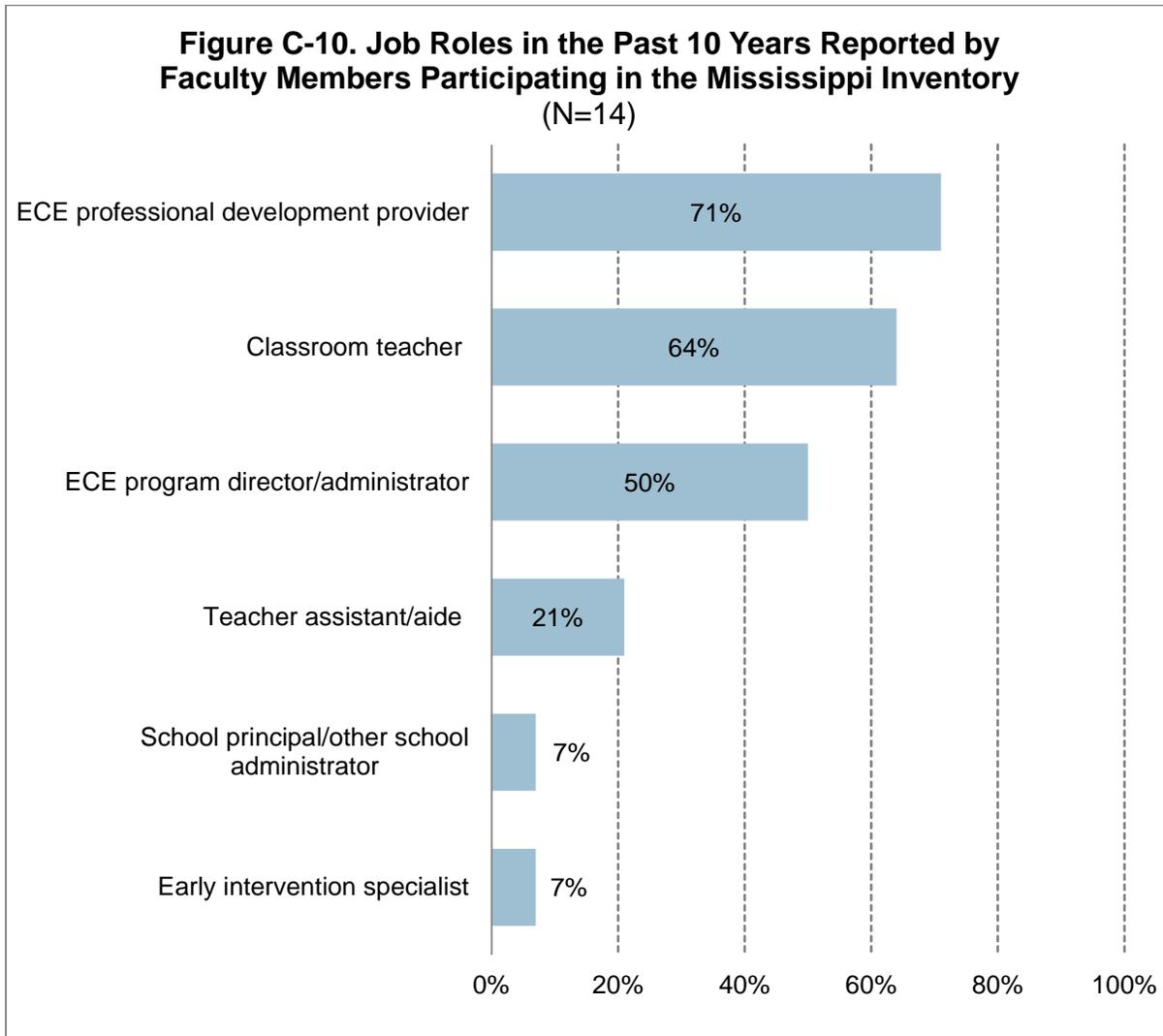


Figure C-9. Number of Years Teaching at Current College or University for Faculty Members Participating in the Mississippi Inventory (N=24)



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.



Current Employment

Figure C-11. Employment Status of Faculty Members Participating in the Mississippi Inventory (N=25)

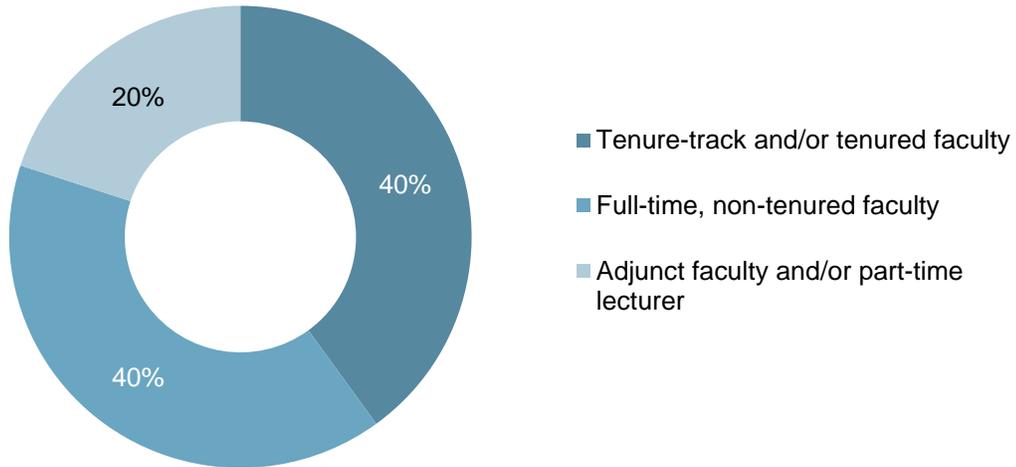


Figure C-12. Primary Responsibility of Faculty Members Participating in the Mississippi Inventory (N=25)

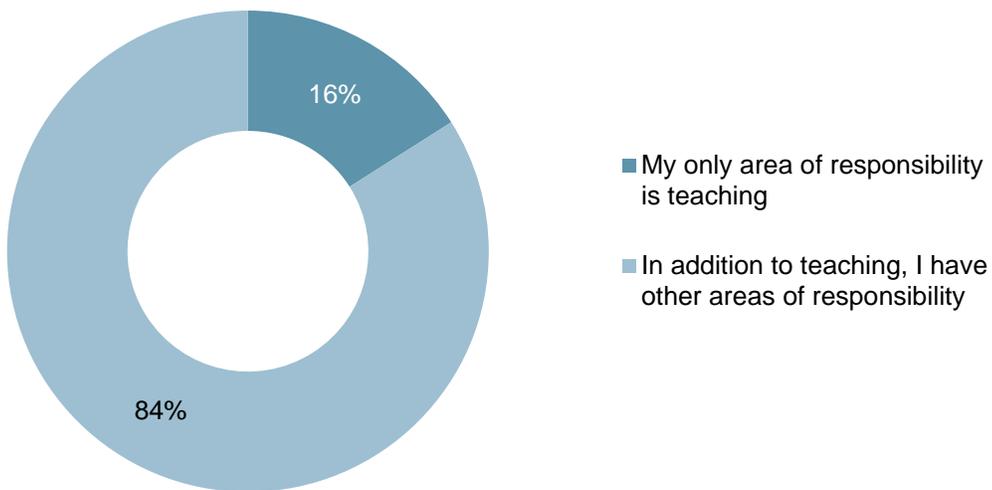


Figure C-13. Additional Responsibilities of Teaching Faculty Members Participating in the Mississippi Inventory (N=21)

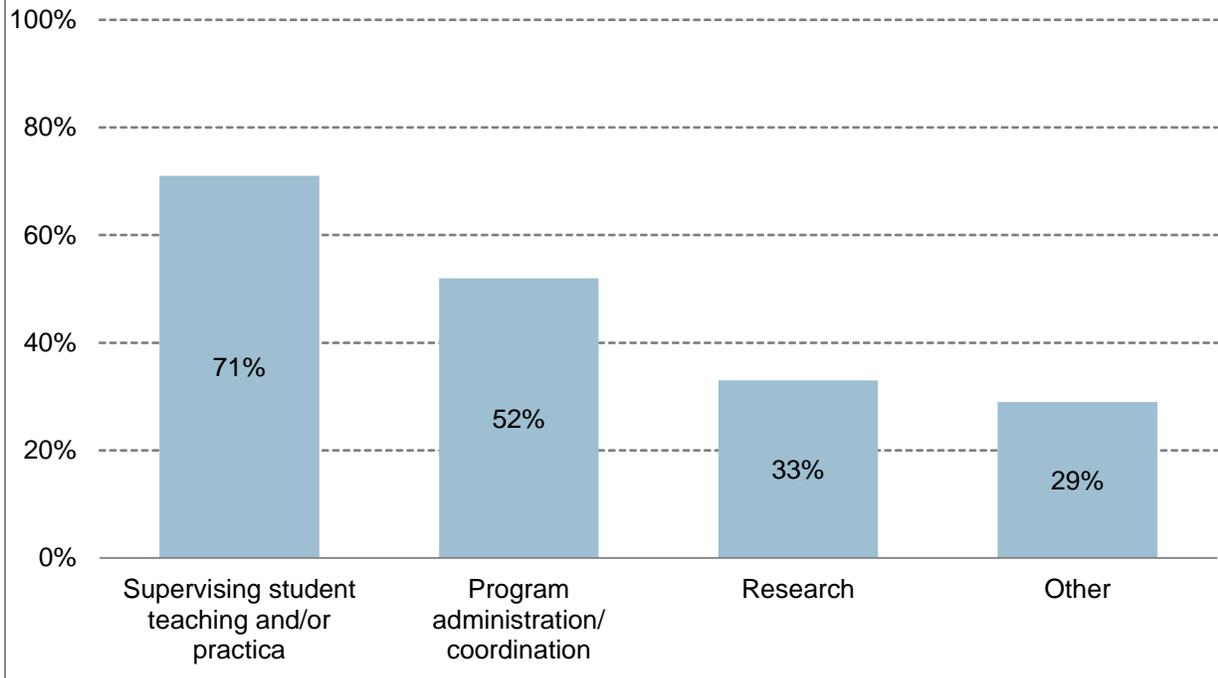


Figure C-14. Number of Courses Taught in a Typical Academic Year by Faculty Members Participating in the Mississippi Inventory (N=25)

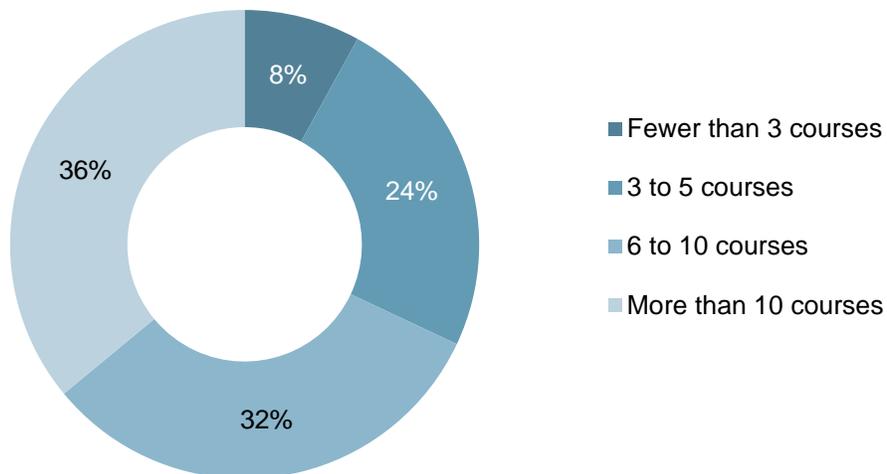


Table C-1. Number of Students Advised in a Typical Academic Year by Faculty Members Participating in the Mississippi Inventory

Student Advising Load	All Degree Faculty (N=25)
Mean	29
Median	25
Range	0–90

Teaching Focus and Age-Group Expertise of Faculty Members Participating in the Mississippi Inventory

Figure C-15. Primary Teaching Focus of Faculty Members Participating in the Mississippi Inventory (N=24)

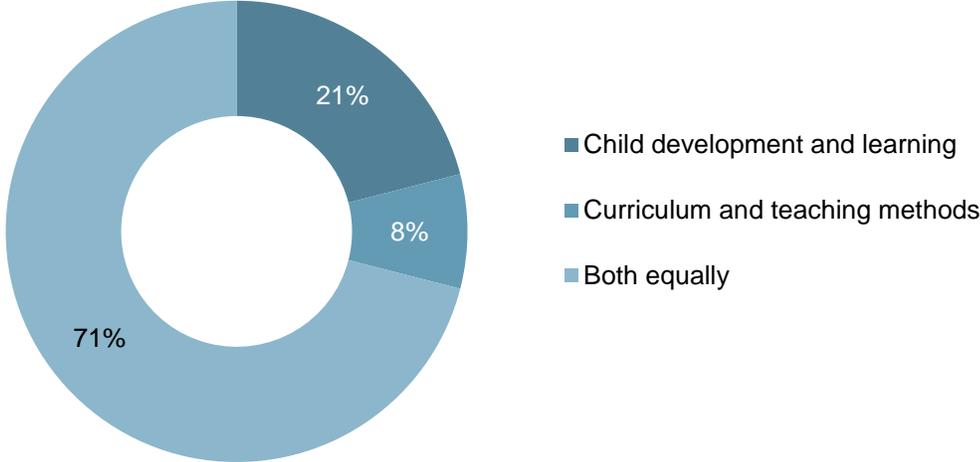
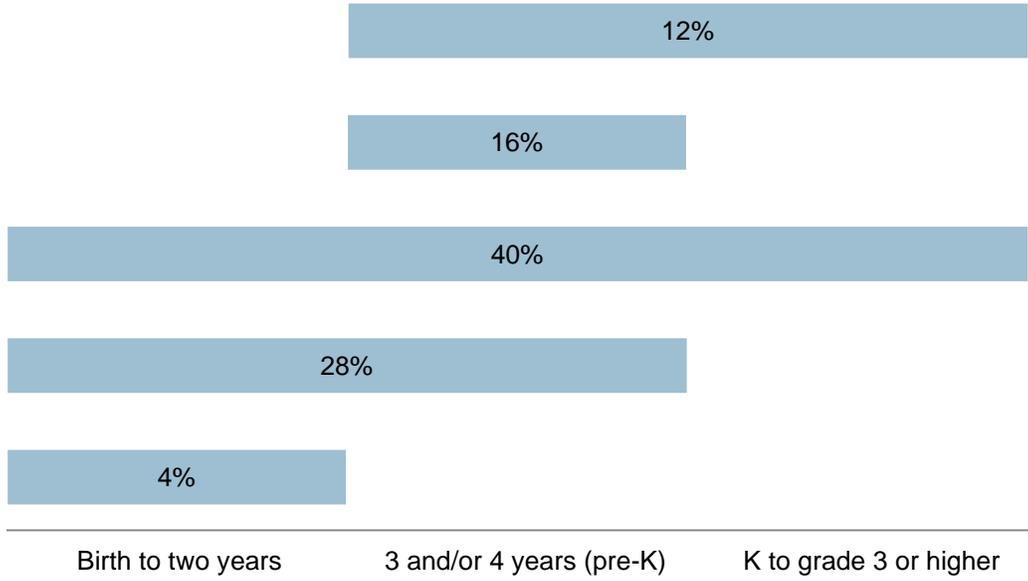


Figure C-16. Primary Age-Group Expertise of Faculty Members Participating in the Mississippi Inventory (N=25)



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:

- **Early Mathematics:** Understanding the domains and sequence of mathematical knowledge in young children and how to promote children’s mathematical understanding and ability to solve problems;
- **Literacy 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 typical and atypical motor development in young children, its relationship to learning, and how to support the development of children’s motor skills;
- **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;
- **Assessment:** Utilizing assessment effectively to inform and individualize instruction;
- **Collaboration:** Collaborating with community organizations to support children and families;
- **Dual Language Learners:** Supporting the cognitive and social development of young dual language learners; and
- **Diverse Families:** Working with families of various ethnic, racial, and cultural backgrounds.

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
All Degree Faculty (N=23)				
Understanding the domains and sequence of mathematical knowledge in young children and how to promote children’s mathematical understanding and ability to solve problems				
Birth to 2 years	4%	13%	35%	48%
3 and/or 4 years (pre-K)	0%	0%	13%	87%
K-grade 3 or higher	0%	0%	0%	100%
Understanding the components and sequence of literacy development in young children and how to promote children’s skills related to oral and written language				
Birth to 2 years	0%	9%	4%	87%
3 and/or 4 years (pre-K)	0%	0%	13%	87%
K-grade 3 or higher	0%	4%	0%	96%
Understanding socioemotional development, its relationship to learning, and how to support children’s socioemotional skills				
Birth to 2 years	4%	0%	17%	78%
3 and/or 4 years (pre-K)	0%	0%	4%	96%
K-grade 3 or higher	0%	0%	9%	91%
Understanding typical and atypical motor development in young children, its relationship to learning, and how to facilitate motor skills				
Birth to 2 years	0%	0%	9%	91%
3 and/or 4 years (pre-K)	0%	0%	26%	74%
K-grade 3 or higher	0%	4%	26%	70%
Understanding and implementing an integrated strategy to engage families in ongoing and reciprocal partnerships and the relationship of such partnerships to outcomes for children				
Birth to 2 years	0%	0%	4%	96%
3 and/or 4 years (pre-K)	0%	0%	9%	91%
K-grade 3 or higher	0%	4%	9%	87%
Utilizing assessment effectively to inform and individualize instruction				
Birth to 2 years	0%	4%	9%	87%
3 and/or 4 years (pre-K)	0%	0%	0%	100%
K-grade 3 or higher	0%	0%	0%	100%
Collaborating with community organizations to support children and families				
Birth to 2 years	0%	0%	30%	70%
3 and/or 4 years (pre-K)	0%	0%	22%	78%
K-grade 3 or higher	0%	4%	26%	70%

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
All Degree Faculty (Continued) (N=23)				
Supporting the cognitive and social development of young dual language learners				
Birth to 2 years	0%	9%	17%	74%
3 and/or 4 years (pre-K)	0%	9%	9%	83%
K-grade 3 or higher	0%	9%	9%	83%
Working with families of various ethnic, racial, and cultural backgrounds				
Birth to 2 years	0%	0%	4%	96%
3 and/or 4 years (pre-K)	0%	0%	4%	96%
K-grade 3 or higher	0%	0%	4%	96%

Teaching Capacity of Faculty Members Participating in the Mississippi Inventory

What we asked about teaching capacity of faculty members:

The *Inventory* asked faculty members to describe their own knowledge and skills 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=23)
Scaffolding children’s mathematical development and promoting their ability to solve problems	
Birth to 2 years	74%
3 and/or 4 years (pre-K)	87%
K-grade 3 or higher	65%
Scaffolding children’s literacy development and promoting their oral and written skills	
Birth to 2 years	78%
3 and/or 4 years (pre-K)	83%
K-grade 3 or higher	70%
Supporting children’s socioemotional development and skills	
Birth to 2 years	78%
3 and/or 4 years (pre-K)	83%
K-grade 3 or higher	78%
Facilitating the developmental course of motor development in young children	
Birth to 2 years	74%
3 and/or 4 years (pre-K)	83%
K-grade 3 or higher	61%
Integrating families in partnerships to support children’s learning	
Birth to 2 years	70%
3 and/or 4 years (pre-K)	78%
K-grade 3 or higher	83%
Utilizing assessment effectively to inform and individualize instruction	
Birth to 2 years	70%
3 and/or 4 years (pre-K)	83%
K-grade 3 or higher	65%
Collaborating with community organizations to support children and families	
Birth to 2 years	70%
3 and/or 4 years (pre-K)	83%
K-grade 3 or higher	70%
Supporting the cognitive and social development of young dual language learners	
Birth to 2 years	57%
3 and/or 4 years (pre-K)	61%
K-grade 3 or higher	61%
Working with families of various ethnic, racial, and cultural backgrounds	
Birth to 2 years	70%
3 and/or 4 years (pre-K)	74%
K-grade 3 or higher	78%

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=23)
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	74%
3 and/or 4 years (pre-K)	83%
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	74%
3 and/or 4 years (pre-K)	83%
K-grade 3 or higher	65%
Creating a mathematically rich environment	
Birth to 2 years	74%
3 and/or 4 years (pre-K)	83%
K-grade 3 or higher	65%
Developing children's mathematical vocabulary	
Birth to 2 years	74%
3 and/or 4 years (pre-K)	78%
K-grade 3 or higher	65%
Assessing children's mathematical development to inform and individualize instruction	
Birth to 2 years	70%
3 and/or 4 years (pre-K)	78%
K-grade 3 or higher	61%

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=23)
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	65%
Teaching children operations and algebraic thinking	
Birth to 2 years	61%
3 and/or 4 years (pre-K)	65%
K-grade 3 or higher	57%
Teaching children measurement skills	
Birth to 2 years	65%
3 and/or 4 years (pre-K)	78%
K-grade 3 or higher	70%
Teaching children geometry skills	
Birth to 2 years	65%
3 and/or 4 years (pre-K)	78%
K-grade 3 or higher	70%
Teaching children mathematical reasoning/practices	
Birth to 2 years	61%
3 and/or 4 years (pre-K)	74%
K-grade 3 or higher	65%

Recent Teaching Experience of Faculty Members Participating in the Mississippi 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-17. Recent Teaching Experience: Percentage of Faculty Members Reporting Having Taught Content Area in Past Two Years (N=22-23)

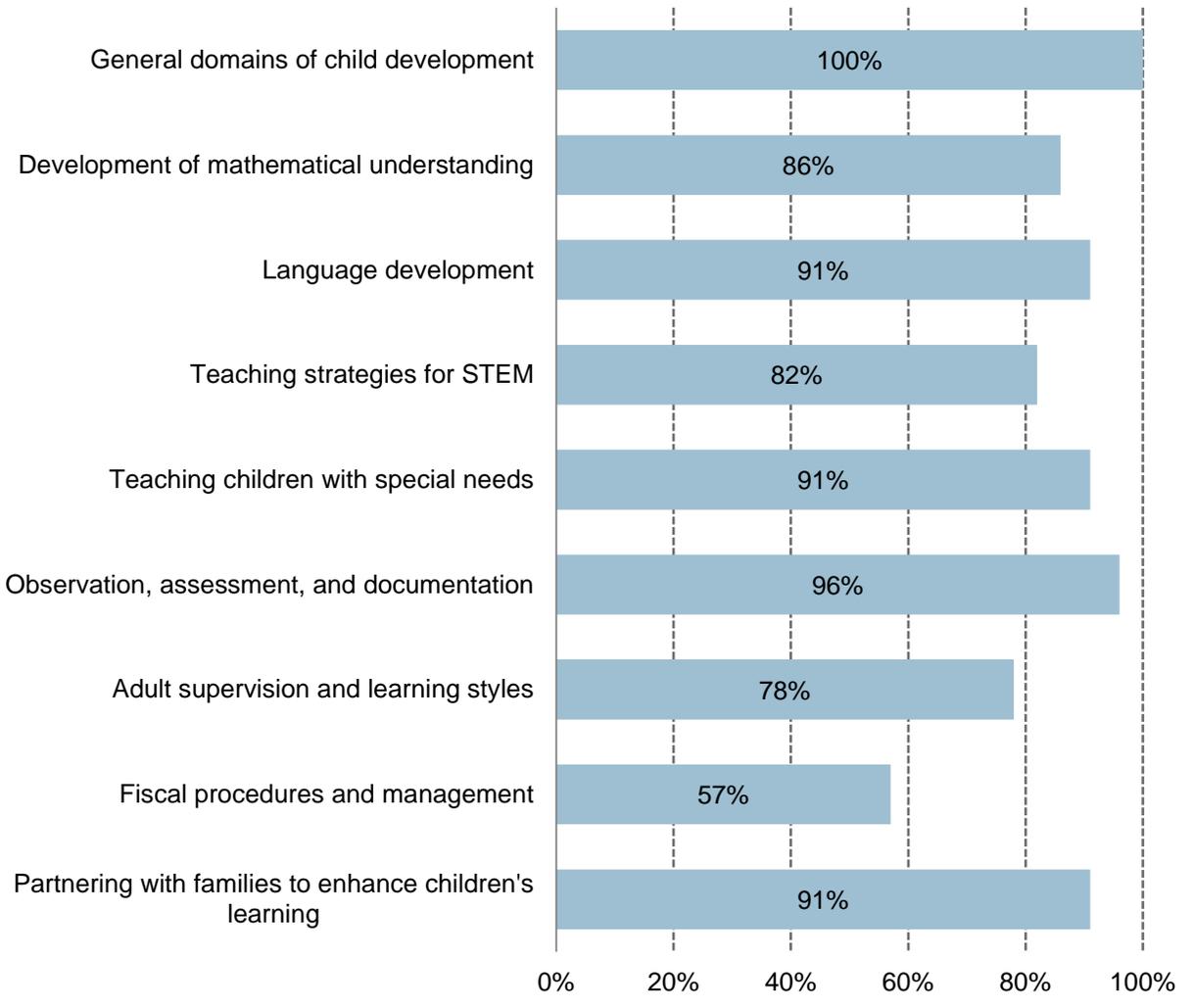


Table C-6. Structure of Recent Teaching Experience: Percentage of Faculty Reporting Having Taught Content Area in Past Two Years

Course Content Structure	All Degree Faculty (N=22-23)
General domains of child development (e.g., cognitive development, socioemotional development, physical development)	
Taught as a separate course	26%
Taught within a broader course	39%
Taught <u>both</u> as a separate course <u>and</u> embedded within a broader course	35%
Not taught	0%
Development of mathematical understanding	
Taught as a separate course	14%
Taught within a broader course	55%
Taught <u>both</u> as a separate course <u>and</u> embedded within a broader course	18%
Not taught	14%
Language development (e.g., first and second language acquisition)	
Taught as a separate course	35%
Taught within a broader course	30%
Taught <u>both</u> as a separate course <u>and</u> embedded within a broader course	26%
Not taught	9%
Teaching strategies for STEM (science, technology, engineering, math)	
Taught as a separate course	18%
Taught within a broader course	41%
Taught <u>both</u> as a separate course <u>and</u> embedded within a broader course	23%
Not taught	18%
Teaching children with special needs	
Taught as a separate course	45%
Taught within a broader course	36%
Taught <u>both</u> as a separate course <u>and</u> embedded within a broader course	9%
Not taught	9%
Observation, assessment, and documentation to inform teaching and learning	
Taught as a separate course	22%
Taught within a broader course	52%
Taught <u>both</u> as a separate course <u>and</u> embedded within a broader course	22%
Not taught	4%
Adult supervision and learning styles	
Taught as a separate course	17%
Taught within a broader course	52%
Taught <u>both</u> as a separate course <u>and</u> embedded within a broader course	9%
Not taught	22%

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 (N=22-23)
Fiscal procedures and program management	
Taught as a separate course	39%
Taught within a broader course	13%
Taught <u>both</u> as a separate course <u>and</u> embedded within a broader course	4%
Not taught	43%
Partnering with families to enhance children’s learning in school and at home	
Taught as a separate course	39%
Taught within a broader course	43%
Taught <u>both</u> as a separate course <u>and</u> embedded within a broader course	9%
Not taught	9%

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 41 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 41 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=23)
Teaching practitioners to work with children from diverse backgrounds	48%
Teaching practitioners to work with children with special needs	52%
Teaching practitioners to work with children who have experienced trauma	39%
None of the above	35%

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

Professional Development Topic	All Degree Faculty (N=23)
Strategies and techniques for mentoring/coaching of adult students	43%
Strategies to supervise adult students in clinical/field experiences	39%
Strategies to provide quality academic/career advising to adult students	39%
Using technology to promote adult learning	57%
Teaching adult students who are English-language learners	17%
Teaching culturally and ethnically diverse college students	22%
Teaching economically diverse college students	22%
None of the above	35%

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

Professional Development Topic	All Degree Faculty (N=23)
Teaching practitioners to use technology with children	35%
Child assessment (e.g., portfolios, using particular assessment tools)	57%
Early childhood program assessment (e.g., Environment Rating Scale)	48%
Early childhood teacher assessment (e.g., CLASS)	57%
Teaching practitioners developmentally appropriate practice in infant and toddler settings	43%
None of the above	13%

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

Professional Development Topic	All Degree Faculty (N=23)
Early childhood systems and policy	48%
Organizational development	30%
Theories of leadership	26%
None of the above	43%

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

Professional Development Topic	All Degree Faculty (N=23)
Evidence-based research on the importance and value of building respectful and trusting relationships with families	52%
Considering family structure when engaging with children and families	17%
Working with families of children with special needs	39%
Working with families to help them enhance their children's learning at home	35%
Working with families exposed to trauma	30%
Techniques for engaging families in classroom, program, and/or school activities	26%
Strategies to effectively communicate with families	17%
Techniques for gathering and using knowledge about children's families in curriculum planning	26%
None of the above	30%

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

Professional Development Topic	All Degree Faculty (N=23)
Teaching practitioners to implement instructional strategies that support mathematical understanding in children from birth through age 2	39%
Teaching practitioners to implement instructional strategies that support mathematical understanding in children ages 3 and 4 (pre-K)	52%
Teaching practitioners to implement instructional strategies that support mathematical understanding in children in kindergarten through grade 3 or higher	26%
Teaching practitioners how to effectively use assessment to inform and individualize their mathematical instruction	22%
Strategies to help practitioners who struggle with mathematics build confidence in their ability to facilitate children's mathematical understanding and skill	30%
None of the above	43%

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

Professional Development Topic	All Degree Faculty (N=21)
Importance and benefits of bilingualism for young children's development	19%
Role of home-language development in helping young children learn English	14%
Strategies to support the cognitive development of young DLLs	5%
Strategies to support the language development of young DLLs	19%
Strategies to support the literacy development of young DLLs	14%
Strategies to support the development of mathematical knowledge and understanding of young DLLs	5%
Strategies to support the socioemotional development of young DLLs	5%
How to use appropriate teaching strategies for young DLLs within various classroom language models	10%
How to use observation, assessment, and documentation to inform strategies for teaching young DLLs	19%
Strategies for engaging families from linguistically diverse backgrounds	10%
None of the above	57%

Professional Development Interest

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

Professional Development Topic	Not Interested			Very Interested	
	1	2	3	4	5
All Degree Faculty (N=23)					
Teaching practitioners to work with children from diverse backgrounds	0%	9%	9%	22%	61%
Teaching practitioners to work with children with special needs	0%	0%	17%	9%	74%
Teaching practitioners to work with children who have experienced trauma	4%	0%	13%	13%	70%

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

Professional Development Topic	Not Interested			Very Interested	
	1	2	3	4	5
All Degree Faculty (N=21-22)					
Strategies and techniques for mentoring/coaching adult students	9%	0%	9%	18%	64%
Strategies to supervise adult students in clinical/field experiences	5%	5%	5%	19%	67%
Strategies to provide quality academic/career advising to adult students	5%	5%	24%	10%	57%
Using technology to promote adult learning	5%	5%	18%	9%	64%
Teaching adult students who are English-language learners	18%	9%	18%	18%	36%
Teaching culturally and ethnically diverse college students	14%	0%	14%	18%	55%
Teaching economically diverse college students	5%	0%	18%	18%	59%

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

Professional Development Topic	Not Interested			Very Interested	
	1	2	3	4	5
All Degree Faculty (N=22-23)					
Teaching practitioners to use technology with children	9%	4%	22%	26%	39%
Using child assessment effectively (e.g., portfolios, using particular assessment tools)	0%	4%	30%	0%	65%
Using early childhood program assessment effectively (e.g., Environment Rating Scale)	4%	9%	22%	0%	65%
Using early childhood teacher assessment effectively (e.g., CLASS)	4%	4%	17%	13%	61%
Teaching practitioners developmentally appropriate practice in infant and toddler settings	0%	5%	18%	14%	64%

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

Professional Development Topic	Not Interested			Very Interested	
	1	2	3	4	5
All Degree Faculty (N=23)					
Early childhood systems and policy	4%	4%	13%	13%	65%
Organizational development	9%	4%	26%	17%	43%
Theories of leadership	0%	13%	26%	17%	43%

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

Professional Development Topic	Not Interested			Very Interested	
	1	2	3	4	5
All Degree Faculty (N=22-23)					
Evidence-based research on the importance and value of building respectful and trusting relationships with families	4%	9%	30%	22%	35%
Considering family structures when working with children and families and having strategies to partner effectively with a variety of family types	14%	5%	32%	9%	41%
Working with families of children with special needs	0%	9%	17%	17%	57%
Working with families exposed to trauma	0%	4%	17%	17%	61%
Working with families to help them enhance their children's learning at home	0%	0%	26%	22%	52%
Techniques for engaging families in classroom, program, and/or school activities	0%	0%	35%	17%	48%
Strategies to effectively communicate with families	4%	0%	35%	13%	48%
Techniques for gathering and using knowledge about children's families in curriculum planning	4%	4%	39%	13%	39%

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

Professional Development Topic	Not Interested			Very Interested	
	1	2	3	4	5
All Degree Faculty (N=23)					
Teaching practitioners to implement strategies that support mathematical understanding in children birth to age 2	4%	4%	17%	30%	43%
Teaching practitioners to implement strategies that support mathematical understanding in children ages 3 and 4 (pre-K)	0%	9%	13%	26%	52%
Teaching practitioners to implement strategies that support mathematical understanding in children in grades K-3 or higher	9%	0%	30%	22%	39%
Teaching practitioners how to effectively use assessment to inform and individualize instruction	0%	4%	13%	4%	78%
Strategies to help practitioners who struggle with math build confidence in their ability to facilitate children's mathematical understanding and skill	0%	4%	9%	4%	83%

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

Professional Development Topic	Not Interested			Very Interested	
	1	2	3	4	5
All Degree Faculty (N=22)					
Importance and benefits of bilingualism for young children’s development	5%	9%	32%	27%	27%
Role of home-language development in helping young children learn English	5%	0%	32%	41%	23%
Strategies to support the cognitive development of young DLLs	5%	5%	23%	32%	36%
Strategies to support the language development of young DLLs	5%	5%	23%	27%	41%
Strategies to support the literacy development of young DLLs	5%	5%	23%	32%	36%
Strategies to support the development of mathematical knowledge and understanding of young DLLs	5%	5%	27%	36%	27%
Strategies to support the socioemotional development of young DLLs	5%	5%	27%	32%	32%
How to use appropriate teaching strategies for young DLLs within various classroom language models	5%	5%	27%	36%	27%
How to use observation, assessment, and documentation to inform strategies for teaching young DLLs	9%	0%	32%	27%	32%
Strategies for engaging families from linguistically diverse backgrounds	5%	5%	32%	23%	36%

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.

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.

Challenges Facing Early Childhood Degree Programs

Figure D-1. Challenges Facing Mississippi Early Childhood Degree Programs Related to Lack of Resources and/or Support (N=20)

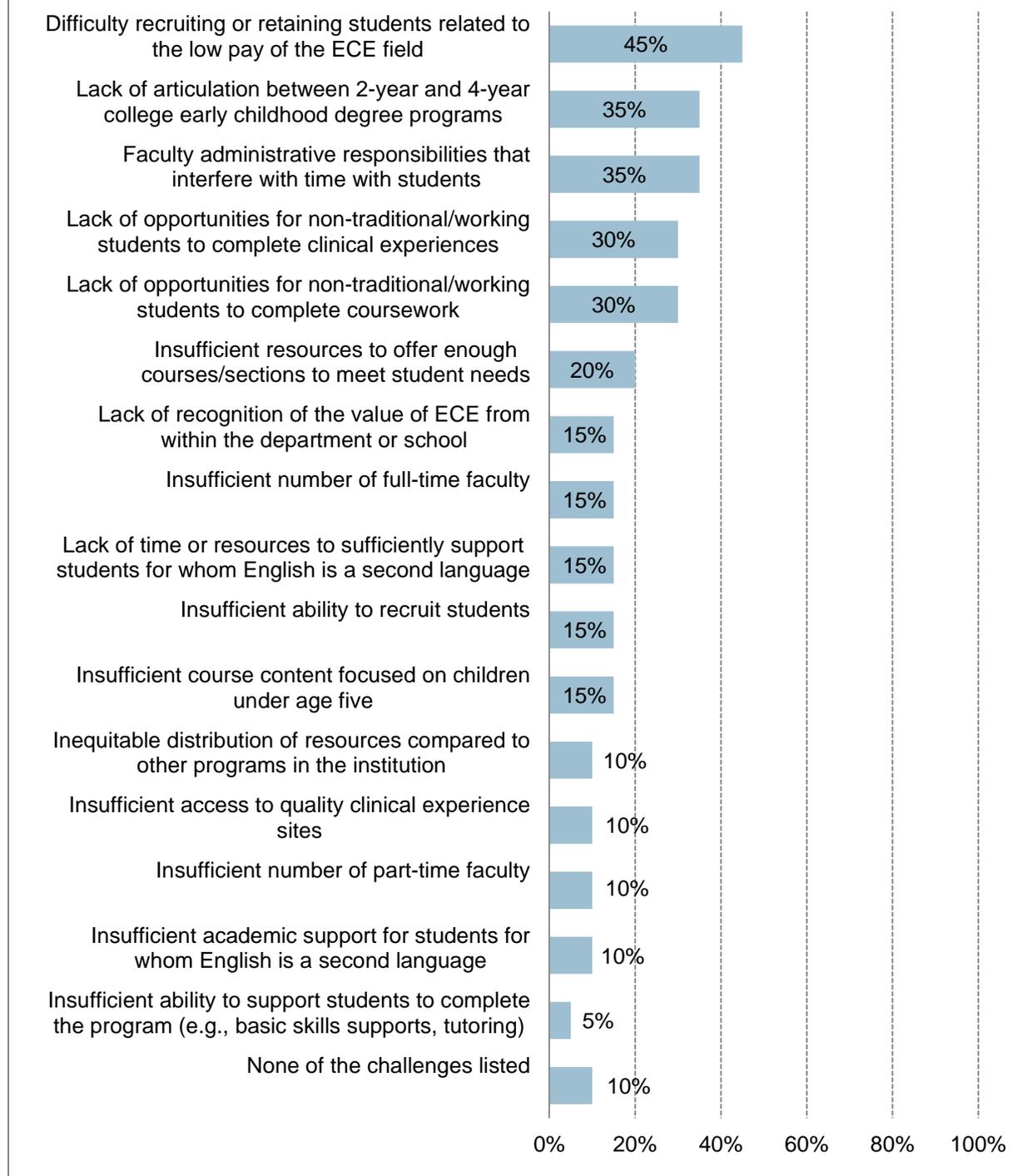
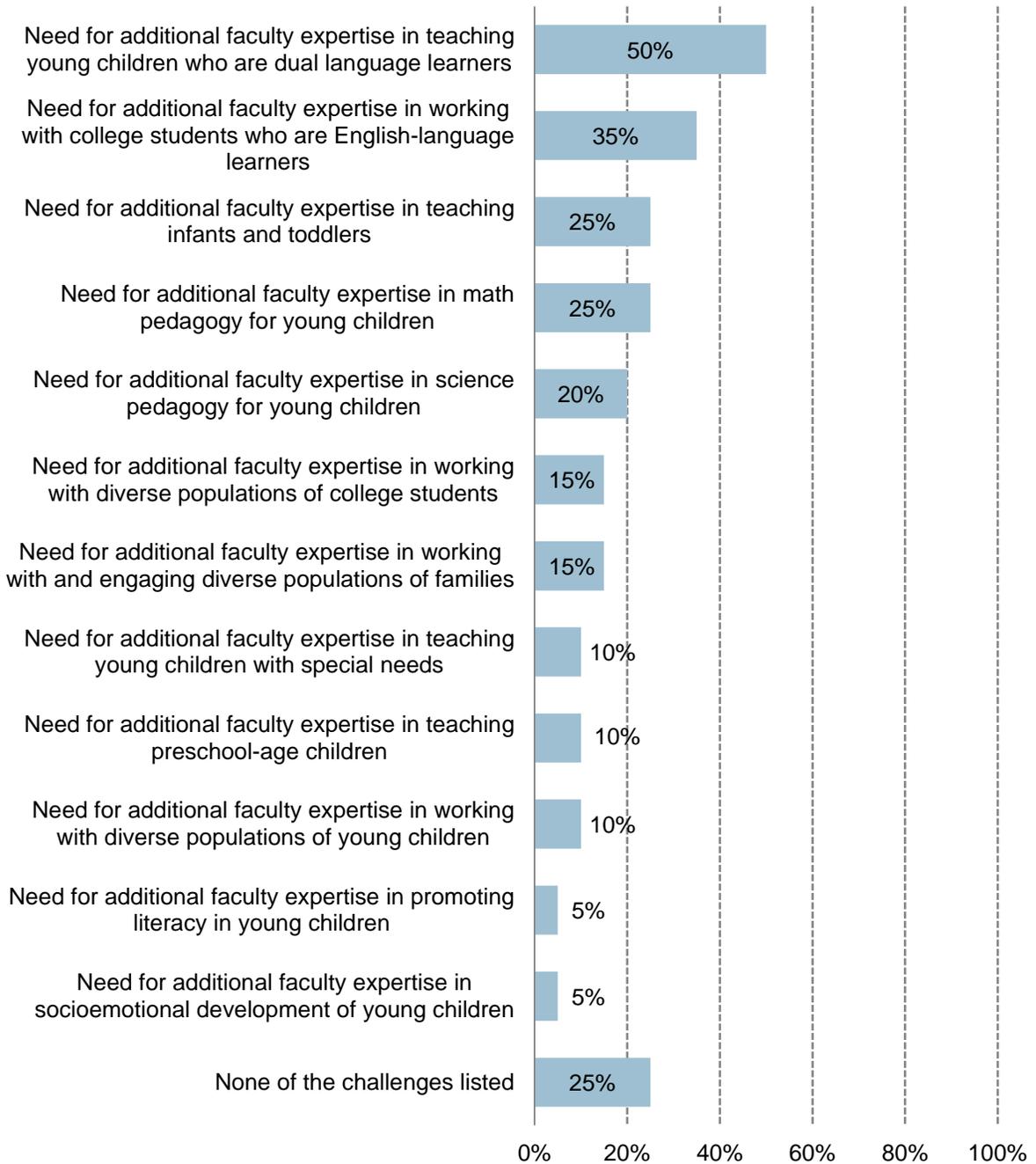


Figure D-2. Challenges Facing Mississippi Early Childhood Degree Programs Related to Need for Additional Faculty Expertise (N=20)



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=23)

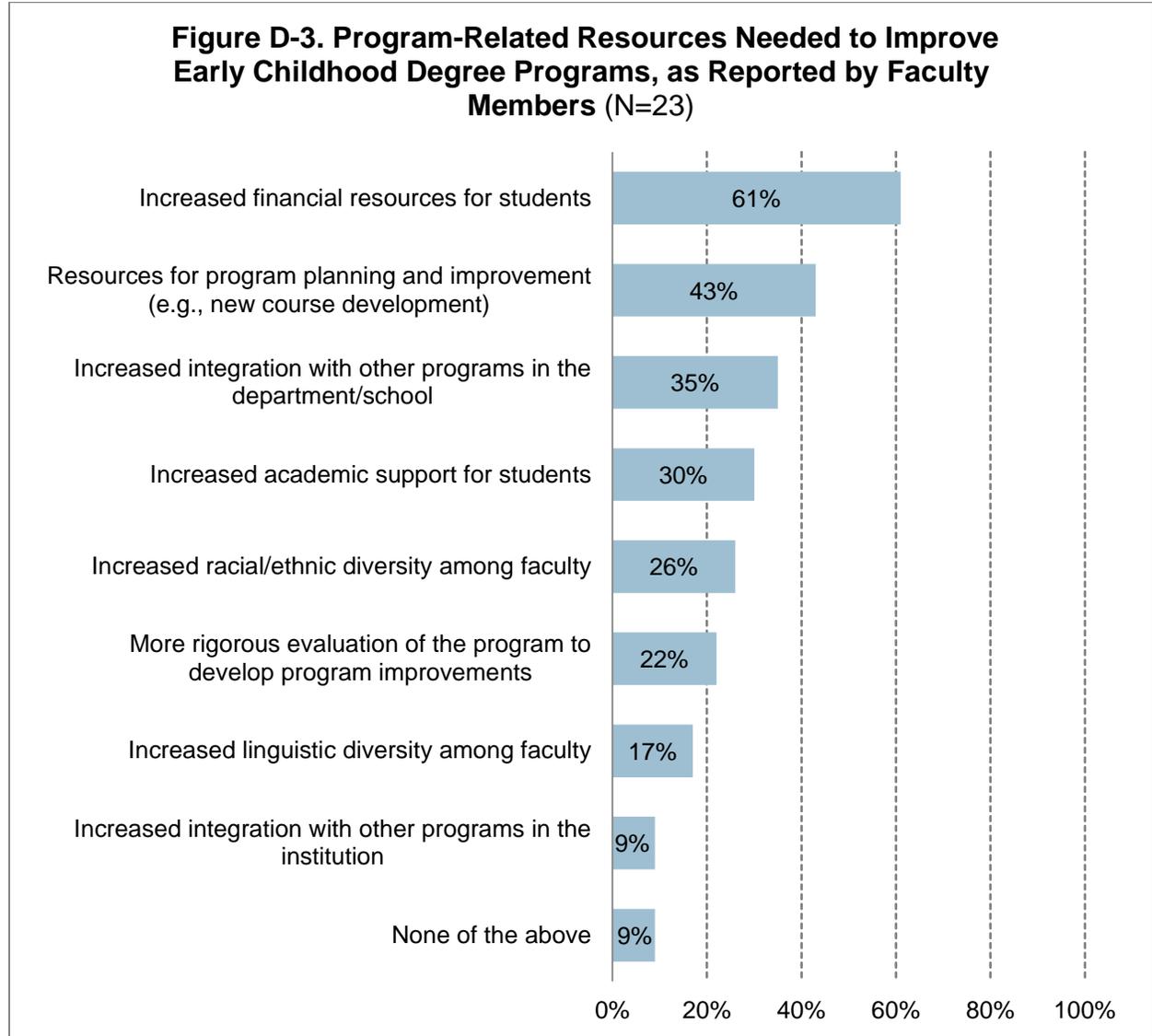


Figure D-4. Faculty-Related Resources Needed to Improve Early Childhood Degree Programs, as Reported by Faculty Members (N=23)

