THE STATE OF EARLY CHILDHOOD HIGHER EDUCATION IN **INDIANA**

TECHNICAL REPORT
SEPTEMBER 2015

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

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TABLE OF CONTENTS

The State of Early Childhood Higher Education in Indiana, Technical Report

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

LIST OF TABLES & FIGURES

CHAPTER 1: Introduction

CHAPTER 2: Early Childhood Higher Education Programs

CHAPTER 3: Early Childhood Higher Education Faculty

APPENDIX

CHAPTER 1: INTRODUCTION

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

Indiana has long recognized the specific knowledge base needed for practitioners to successfully teach young children, and includes public-school preschool teachers in the teacher licensing system. However, there remains great variability in what constitutes an appropriate course of study and licensure for teachers and administrators working with young children, across multiple settings.

In 2010, the state implemented a new licensing system, requiring public-school preschool teachers to have an Early Childhood Education P-3 (Pre-kindergarten – Grade 3) license. (The early childhood license issued under earlier licensing rules was named the Early Childhood Education and Generalist: Preschool.)[1] Indiana's teacher licensure system operates under the Rules for Educator Preparation and Accountability (REPA), administered by the Office of Educator Licensing and Development, Indiana Department of Education. The state's teacher licensing system is closely aligned with the state's higher education system. The various routes to licensing all require REPA-approved teacher preparation programs, or REPA-approved courses of study for students who have already attained non-education degrees.

While preschool teachers in public schools are required to have the Early Childhood Education P-3 license, early childhood educators in other sectors of the field do not have this requirement. Certain staff requirements, however, intersect with the higher education system. Child care center directors are required to have a college degree plus education and experience in early childhood development, including 15 college credit hours in early childhood education. Lead teachers in centers must have one of the following: 1) a current Child Development Associate (CDA) credential[2]; 2) a bachelor's degree in early childhood or elementary education

[1] Licenses for other age groups of children include Kindergarten to Grade 6, Grade 5 through Grade 9, Grade 5 through Grade 12, and Pre-kindergarten through Grade 12.
[2] The CDA is a credential issued by the Council for Professional Recognition. It can be earned through college and/or non-college based training.

(with a kindergarten endorsement); 3) a bachelor's degree in another field that includes 15 credit hours in early childhood; or 4) an associate degree in early childhood education. Family child care providers are required to have a CDA within three years of licensing; "other college degrees or higher learning experiences" could exempt the provider from the CDA requirement.

The Indiana Association for the Education of Young Children (Indiana AEYC) is the state affiliate of the National Association for the Education of Young Children. Indiana AEYC has a 50-year history of promoting and supporting quality care and education for all young children in Indiana, birth through age eight. To gain a clearer picture of early childhood-related offerings in the state's higher education and teacher preparation systems, Indiana AEYC and the Indiana Office of Early Childhood and Out of School Time engaged the Center for the Study of Child Care Employment (CSCCE) at the University of California, Berkeley to conduct the *Early Childhood Higher Education Inventory* (Kipnis, Ryan, Austin, Whitebook, & Sakai, 2012).

The Inventory describes early childhood degree programs offered in a given state, focusing on variations in program content, age-group focus, student field-based learning, and faculty characteristics.

In addition, a series of questions developed for the Inventory focuses specifically on the issues of early mathematics and family engagement, with particular attention to program content and faculty attitudes. While the link between young children's math competency and later school success has been demonstrated in recent research, there is concern that institutions of higher education are not adequately preparing teachers of young children to assess or facilitate children's mathematical understanding and skills (Ryan, Whitebook, & Cassidy, 2014). Additionally, given research evidence that family involvement in children's learning at home and at school contributes to school success (Dearing & Tang, 2010; Reynolds & Shlafer, 2010), we were interested in learning the extent to which ECE higher education programs are addressing the topic of family involvement.

This Inventory comes during a major expansion of Indiana's early childhood education system. The state is now embarking on a state-funded preschool program outside the public schools.[3] In 2013, the Indiana legislature passed legislation to support preschool for four-year-olds in low-income families through the Early Childhood Matching Grants. The competitive grants program provides matching funds to approved high-quality early childhood programs to serve additional four-year olds in low-income families. During the 2014-15 school year, 30 programs received grants in 15 counties, serving approximately 500 children. In 2015, the program was extended for an additional two years.

In 2014, the Indiana legislature passed additional legislation to support a preschool pilot program for four-year-olds in low-income families. This preschool pilot program, operating in five counties, provides scholarships for such four-year-olds to attend approved high-quality

[3] http://www.in.gov/fssa/carefinder/4980.htm.

early learning programs. This program will begin in fall 2015 and could serve up to 4,000 children.

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

The Inventory was implemented in Indiana during the 2014-2015 academic year. This Technical Report presents detailed findings collected by implementing the Inventory's mapping, program, and faculty modules (Kipnis et al., 2012). An accompanying report, *Teaching the Teachers of our Youngest Children: The State of Early Childhood Higher Education in Indiana, 2015,* summarizes the major findings and provides recommendations for policy changes that could lead to more effective teacher practices to support children's learning.

METHODOLOGY

Mapping Module

Through an extensive document review, the Mapping Module identifies a state's early childhood higher education programs by collecting information on each college or university, the departments in which programs are housed, and degrees and certificates offered..

In the fall of 2014, Indiana AEYC provided CSCCE with a list of colleges and universities that offered early childhood degree programs.

For each college and university identified, CSCCE conducted an extensive web 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.

A letter from Indiana AEYC was then emailed to each contact, introducing CSCCE, and describing the purpose of the Inventory and its importance to the early care and education community. We then attempted to contact, via telephone, the identified deans or program coordinators (herein referred to as program leads) to verify the information gathered through our web searches. Institutions that did not offer an early childhood degree *per se* were excluded from the sample (e.g., an identified program was found to focus on developmental psychology, but with no mention of early education or of preparing students to work as classroom teachers).

Indiana's population of early childhood higher education programs

Through this process, we identified public and private institutions of higher education in Indiana. Appendix Tables A1-1 and A1-2 display the early childhood degrees offered by these institutions.

Twenty-nine institutions of higher education in Indiana were identified as offering a total of 83 early childhood degree programs. Among these were:

- 35 associate degrees offered by:
  - 14 public community colleges,
  - 1 public college/university, and
  - 5 private colleges/universities

- 35 bachelor's degrees offered by:
  - 6 public colleges/universities, and
  - 9 private colleges/universities

- 7 master's degrees offered by:
  - 3 public colleges/universities, and
  - 2 private colleges/universities.

- 6 doctoral degrees offered by:
  - 2 public colleges/universities, and
  - 1 private college/university.

In addition to offering degrees at different levels, colleges and universities could offer more than one degree within a level:

- All but one of the public community colleges offered two associate degree programs: an Associate of Applied Science in Early Childhood Education, and an Associate of Science in Early Childhood Education.

- 15 institutions offered a bachelor's degree:
  - 8 offered one bachelor's degree program,
  - 2 offered two bachelor's degree programs, and
  - 5 offered three or more bachelor's degree programs.

- Five institutions offered a master's degree:
  - 3 offered one master's degree program, and
  - 2 offered two master's degree programs.

- Three institutions offered a doctoral degree:
  - 1 offered one doctoral degree program,
  - 1 offered two doctoral degree programs, and
  - 1 offered three doctoral degree programs.

Program Module

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

Sample Development, and Participation and Response Rate

During the telephone call with program leads, CSCCE identified the appropriate person to respond to the Program Module of the Inventory. We then asked the appropriate respondent whether s/he was willing to participate. Of the 29 institutions of higher education offering early childhood degree programs, 27 (93 percent) agreed to participate in the Inventory. This included 19 of the 20 institutions offering associate degrees (95 percent) and 13 of the 15 institutions offering bachelor's and/or graduate degrees (87 percent). (This is a duplicated count, as five institutions offered associate degrees in addition to bachelor's and/or graduate degrees.) (See **Table 1.1**.)

Response Rate

Table 1.1
Population of Institutions of Higher Education (IHE) in Indiana Offering Early Childhood Education Degree Programs [1]

Program Type	Number of IHE Identified as Offering ECE Degree[1]	Number of IHE Agreeing to Participate in the Inventory	Number/Percentage of IHE that Completed at Least One Survey	
			Number	Percentage
Associate	20	19	18	95%
Bachelor's	15	13	12	92%
Master's	5	4	4	100%
Doctoral	3	3	3	100%

[1]Duplicated count, as colleges and universities may offer multiple program types.

Institutions offering early childhood degree programs at multiple levels (e.g., bachelor's and master's degrees) 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 representative prior to sending the online survey, 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 would be sent to them to complete.

A total of 66 program surveys were emailed to the degree programs: 33 to associate, 23 to bachelor's, six to master's, and four to doctoral degree programs. The final sample consisted of 32 associate, 22 bachelor's, six master's, and four doctoral degree program surveys. The response rates were as follows for each degree level: associate degree programs, 97 percent; bachelor's degree programs, 96 percent; master's degree programs, 100 percent; and doctoral degree programs, 100 percent. (See **Table 1.2**.)

Table 1.2
Response Rate for the Program Module of the Indiana Early Childhood Higher Education Inventory

Program Type	Number of Degrees Offered by IHE in Sample[1]	Number of Program Modules Administered [2]	Program Module Response Rate	
			Number[3]	Percentage
Associate	34	33	32	97%
Bachelor's	30	23	22	96%
Master's	6	6	6	100%
Doctorate	6	4	4	100%

[1] This includes only institutions that agreed to participate in the Inventory. See Table 1.1.
[2] For those institutions offering more than one degree program at the same level (e.g., multiple bachelor's degrees), a member of our research team engaged in a phone conversation with the identified program representative to determine whether one or more program modules would be sent to them to complete. As a result, some institutions were sent one program module to be completed for multiple degree programs at the same level.
[3] During the data analysis phase, two records were deleted from the sample because respondents completed fewer than five survey questions.

Data Collection

The Program Module was emailed to all respondents using SurveyMonkey, an online survey software program. The Program Module was open for respondents for approximately 45 days during the spring 2015 semester. Respondents received up to six reminder emails and telephone calls during the data collection period.

Program Content of Degree Programs

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.
- Program content and age-group focus. Respondents were asked to indicate whether topics within the following categories were required in order for students to complete the degree program. For each topic, the respondent was also asked to indicate whether coursework focused on infants and toddlers (birth through two years), preschoolers (three through four years), or children in grades K-3 or higher.
    - Child Development and Learning
    - Teaching Diverse Child Populations
    - Teaching and Curriculum
    - Teaching Skills in Early Childhood Settings
    - Family and Community
    - Teaching Math Skills to Children
    - Development of Children's Mathematical Understanding
    - Early Childhood Administration and Leadership (asked if offered, not required).
- Alignment of coursework 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:
    - Timing and duration
    - Age-group focus (infant, preschool, early elementary)
    - Supervision: who supervises, criteria for selecting cooperating teachers at the site, resources for cooperating teachers
    - Field sites: criteria for selection
    - Differences in experiences for pre-service and experienced teachers
- Student population
    - Target: Pre-service teachers and/or experienced teachers
    - Number of students enrolled, and number attaining degrees
    - Available student services
- Challenges facing the degree program.

Data Analysis

Using SPSS (Statistical Package for the Social Sciences 22), we computed frequencies for all questions, by program degree level or type (associate, bachelor's, master's, or doctoral). Data are reported by program level or type, rather than aggregated, as the preponderance of associate and bachelor's degree programs would skew the findings.

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 demographics, employment status, teaching experience and expertise, professional development experiences and needs, and past experience within the early childhood field.

Sample Development

During the telephone conversations with the program lead described above, we requested a list of names and email addresses for all full- and part-time/adjunct faculty members teaching in the early care and education program. All but two of the institutions that agreed to participate in the Inventory sent CSCCE the list of faculty names. If the program lead also taught in the early childhood program, he or she was included in the Faculty Module sample.

A total of 179 surveys were emailed to individual faculty members, resulting in an eligible sample of 113 associate degree faculty members and 66 bachelor's and/or graduate degree faculty members. The final sample consisted of the 88 associate degree faculty members and 46 bachelor's and/or graduate degree faculty members who responded to the Faculty Module. The response rate for associate degree faculty was 78 percent, and for bachelor's and graduate degree faculty, 70 percent. (See **Table 1.3**.) 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.

Table 1.3
Response Rate for the Faculty Module of the Indiana Early Childhood Higher Education Inventory

Faculty Type	Number of Faculty Modules Administered[1]	Number of Faculty Responses[2]	Faculty Module Response Rate
Associate Degree Faculty	113	88	78%
Bachelor's and Graduate Degree Faculty	66	46	70%
TOTAL	179	134	75%

[1]This number is adjusted for email bounces, and reflects the eligible sample from the faculty list supplied by program leads.
[2]During the data analysis process, four records were deleted because respondents answered fewer than 10 survey questions.

Data Collection

Each faculty member received a letter from Indiana AEYC introducing CSCCE, describing the Inventory, and encouraging participation. The Faculty Module was emailed to all faculty

identified for the sample using SurveyMonkey. The Faculty Module was open for approximately 45 days during the spring 2015 semester. Respondents received up to six reminder emails during the data collection period.

Faculty Module Content: All Degree Types

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

- Current employment
  - Faculty status
  - Primary responsibility
  - Number of courses taught in a typical year
  - Number of students advised in a typical year
  - Primary teaching focus
  - Age-group expertise
- Current teaching expertise. Respondents were asked to indicate whether, within the past two years, they had taught topics within the following categories. For each topic, respondents were also asked to indicate whether the coursework focused on infants and toddlers, preschoolers, or children in grades K-3 or higher.
  - Child Development and Learning
  - Teaching Diverse Child Populations
  - Teaching and Curriculum
  - Teaching Skills in Early Childhood Settings
  - Teaching Math Skills to Children
  - Development of Children's Mathematical Understanding
  - Early Childhood Administration and Leadership
- Inclusion of early childhood standards and measures in coursework
- Professional development and experience in the early childhood field
  - Professional development experience in the past three years
  - Professional roles in the past 10 years
  - Additional professional development that would be helpful
- Resources that would be helpful to the degree program
- Demographics and educational background
  - Highest level of education
  - Credits in early childhood/child development
  - Gender
  - Race/ethnicity
  - Age
  - Language capacity

Data Analysis

Using SPSS (Statistical Package for the Social Sciences 22), we computed frequencies for all questions for each degree program (associate, bachelor's, master's, doctoral). If faculty members reported that they taught in more than one degree program at their institution, they were included in the analysis for each degree program in which they taught.

CHAPTER 2: EARLY CHILDHOOD HIGHER EDUCATION PROGRAMS

Please note that data for the master's and doctoral degree programs are not included in the figures because of very small sample sizes. These data are included in the narrative as appropriate.

Primary Goals of Indiana Early Childhood Degree Programs

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

- To prepare students for teaching and/or administrative roles only in early childhood education settings, such as preschools, child care centers, and family child care homes - for children birth to five.
- To prepare students for teaching and/or administrative roles in early childhood and elementary education settings.
- To prepare students for the roles of early interventionists or early childhood special educators.
- 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 college-level faculty member.

See **Figure 2.1.**

- About 60 percent of associate degree programs reported that their primary goal was "to prepare students to work in multiple roles involving young children, working in many types of settings."

  ⇒ Approximately 20 percent reported "to prepare students for teaching and/or administrative roles, only in early childhood education settings for children birth to five."

⇒ Approximately 20 percent reported "to prepare students for teaching and/or administrative roles, in early childhood and elementary education settings."

⇒ Less than five percent reported any other goals.

- Fifty-seven percent of bachelor's degree programs reported that their primary goal was "to prepare students for teaching and/or administrative roles", in early childhood settings only or in early childhood and elementary education settings.

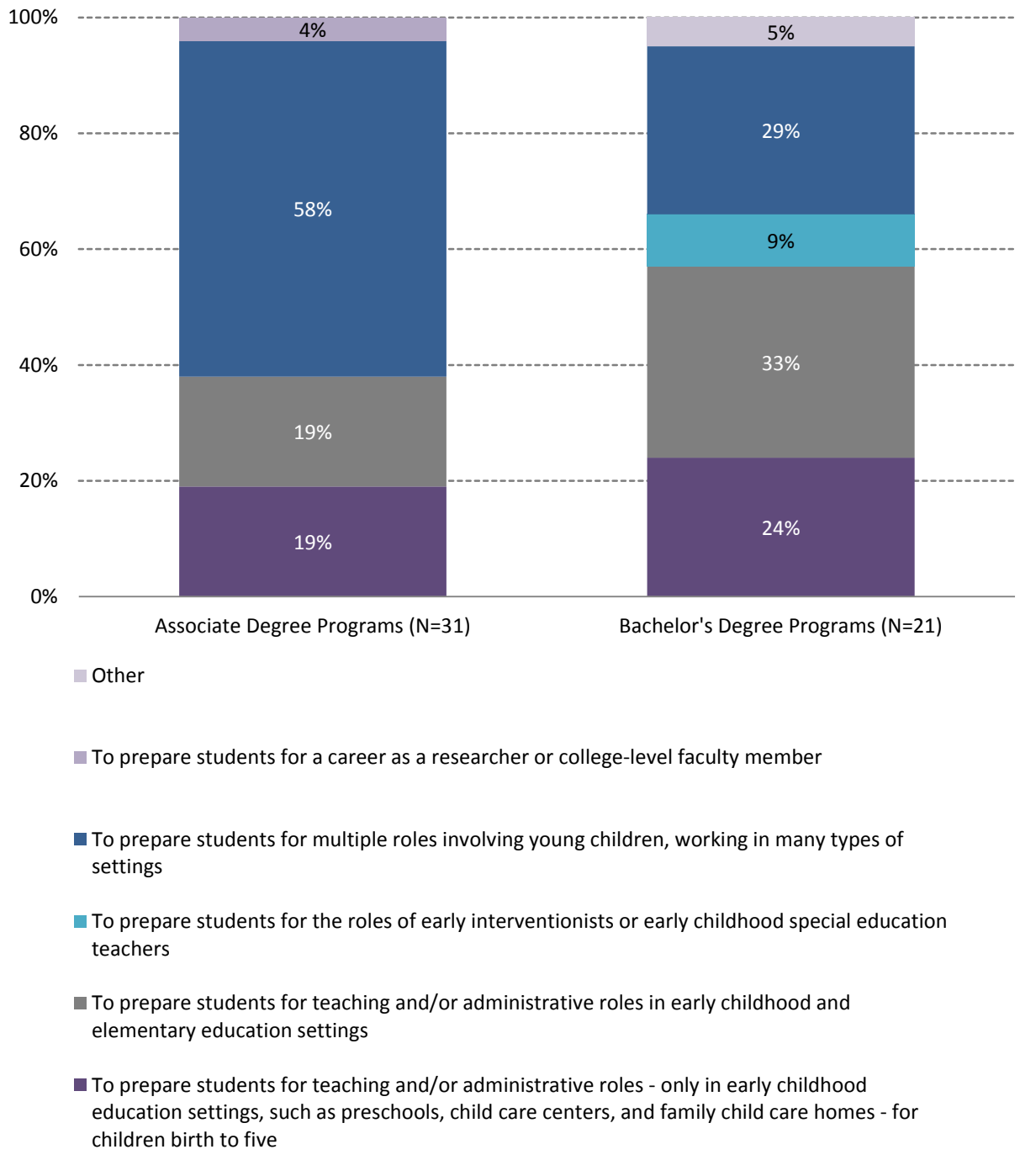
  ⇒ Twenty-nine percent reported "to prepare students to work in multiple roles involving young children, working in many types of settings."

  ⇒ Less than 15 percent reported any other goals.

- Four of six master's degree programs reported that their primary goal was "to prepare students to work in multiple roles involving young children, working in many types of settings."

- Three of four doctoral degree programs reported that their primary goal was "to prepare students for a career as a researcher or college-level faculty."

Figure 2.1: Primary Goal of Indiana's Early Childhood Higher Education Degree Programs, by Program



Students Served in Indiana Early Childhood Degree Programs

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 2013-2014 academic year.

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

- 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);
- Skills support, such as academic tutoring and assistance with technology.

If the service was offered, respondents were asked to indicate whether the service was offered specifically to students in the degree program, and/or to the student body as a whole.

Targeted Student Population (See **Figure 2.2**)

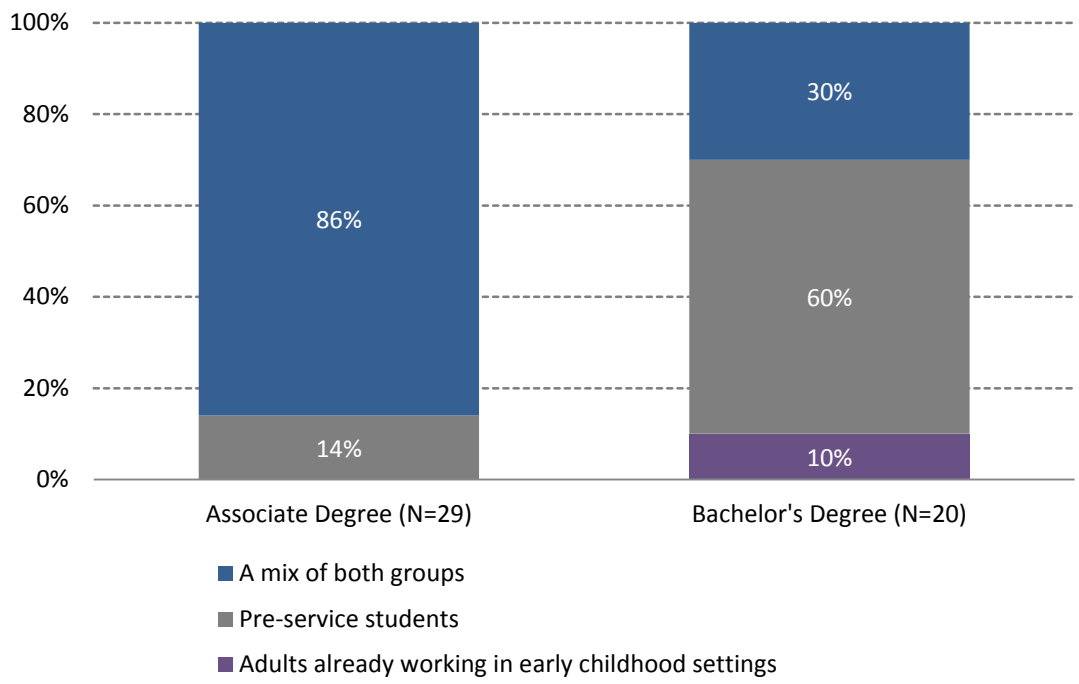
- Associate degree programs were the most likely of degree programs to report targeting both groups of students: pre-service students and those already working in the early childhood field.

  ⇒ The vast majority (86 percent) of associate degree programs, in contrast to approximately one-third of bachelor's degree programs and three of six master's degree programs, reported targeting both groups of students.

- Bachelor's degree programs were the most likely of the degree programs to report exclusively targeting pre-service students. Sixty percent did so, compared to 14 percent of associate degree programs and none of the graduate degree programs.

- Two of the four doctoral degree programs and two of the six master's degree programs reported exclusively targeting students already working in early childhood settings. None of the associate programs and 10 percent of bachelor's degree programs did so.

Figure 2.2: Target Student Population of Indiana Early Childhood Higher Education Degree Programs, by Program



Number of Students and Degrees Conferred (See **Figures 2.3** and **2.4**)

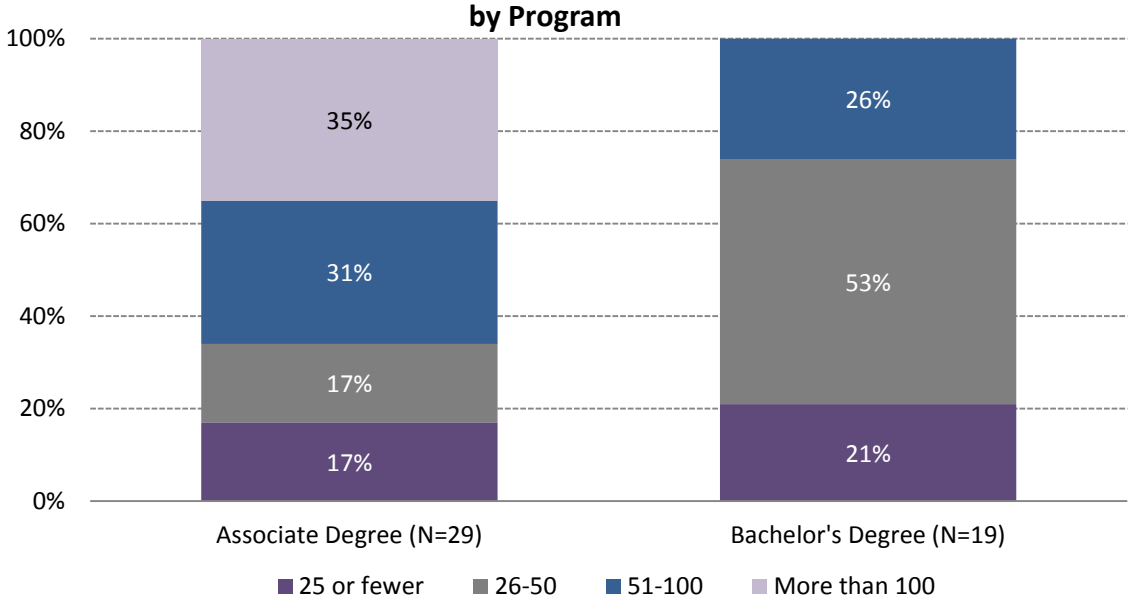
- Degree programs reported a wide range in the numbers of enrolled students (from three to more than 100), and in the number of degrees conferred (from none to more than 50) in the 2013/2014 academic year.

- Associate degree programs, which served a greater number of students, were more likely to report enrolling 50 or more students than were other degree programs.

  ⇒ Approximately two-thirds of associate degree programs reported enrolling 50 or more students, compared to approximately one-quarter of the bachelor's degree programs.

  ⇒ Five of the six master's degree programs and the four doctoral degree programs reported enrolling 25 or fewer students.

Figure 2.3: Number of Students Enrolled in Indiana Early Childhood Higher Education Degree Programs in the 2013-2014 Academic Year, by Program



Student Services (See **Figures 2.4**, **2.5**, and **2.6**)

- At least 85 percent of associate and bachelor's degree programs offered most of the student services listed in the Inventory. These included three general categories of service: 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 skills support, such as academic tutoring and assistance with technology.

- In general, degree programs reported that these student services were offered to all students in the college or university, and were not targeted specifically to students in the early childhood degree program.

- The associate and/or bachelor's degree programs were less likely to report offering the following services:

  ⇒ Cohort models (associate degree programs, 57 percent; bachelor's degree programs, 67 percent)
  ⇒ Alternative class schedules for working adults (bachelor's degree programs, 75 percent)
  ⇒ Classes located off-campus in community locations (associate degree programs, 75 percent; bachelor's degree programs, 58 percent)

- The student services listed in the Inventory were offered by at least five of the six master's degree programs, and by three of the four doctoral degree programs, with one exception. Only one master's degree programs offered cohort models.

- The services specifically targeted to the students in the early childhood degree program by at least one-third of the associate and bachelor's degree programs included:

  ⇒ Academic counseling,
  ⇒ Alternative class schedules for working adults,
  ⇒ Classes located off-campus in community settings,
  ⇒ Cohort models, and
  ⇒ Financial assistance other than federal financial aid.

Figure 2.4: Services Offered to Students in Indiana Early Childhood Higher Education Degree Programs: Counseling Support, by Program

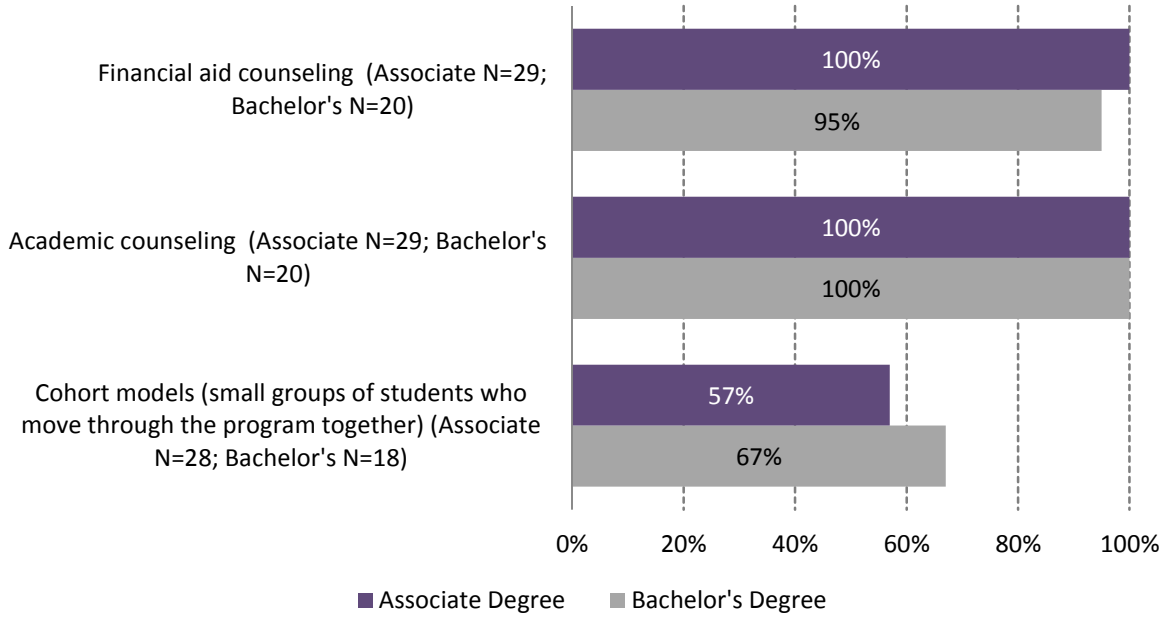


Figure 2.5: Services Offered to Students in Indiana Early Childhood Higher Education Degree Programs: Access Support, by Program

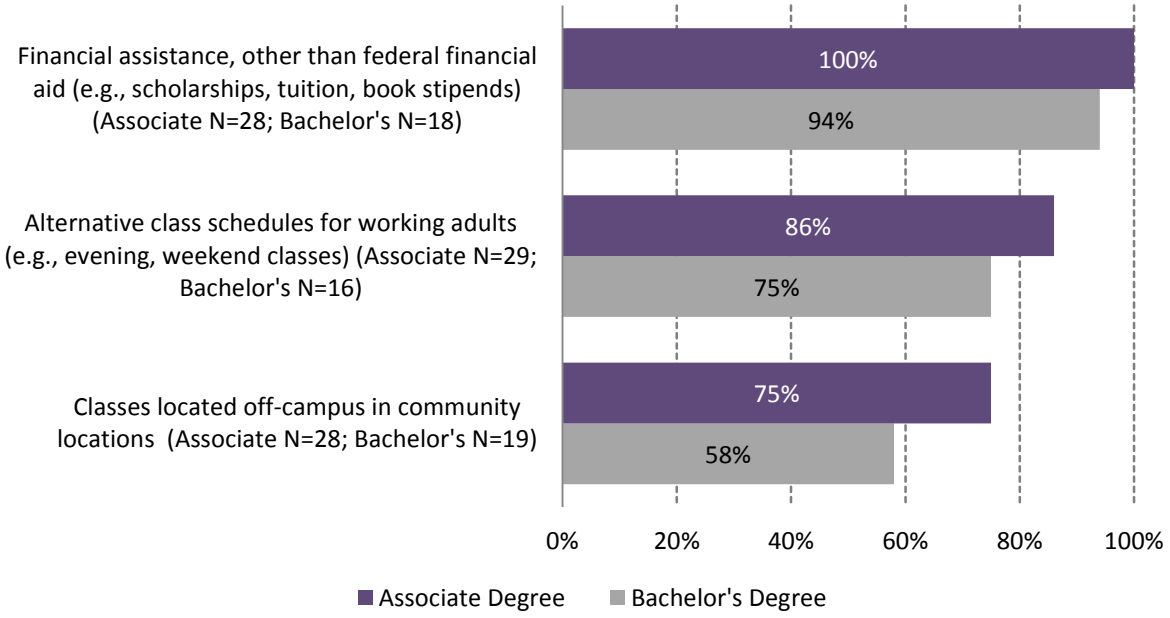
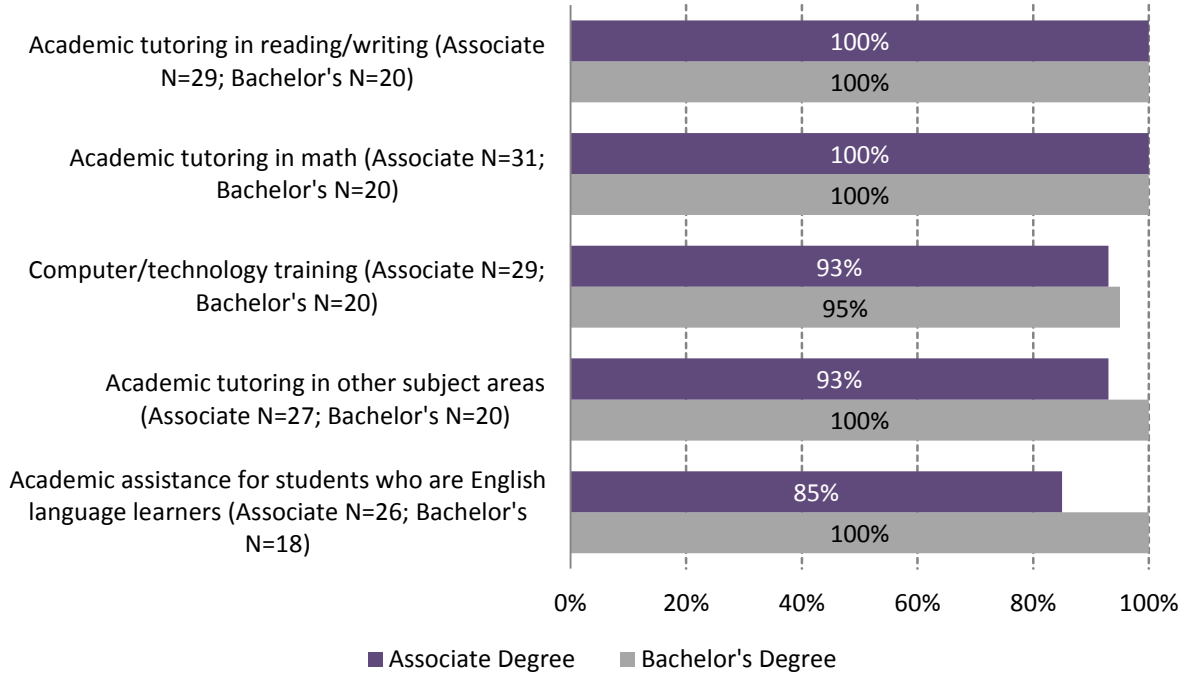


Figure 2.6: Student Services Offered in Indiana Early Childhood Higher Education Degree Programs: Skills Support, by Program



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

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

1. Child Development and Learning
2. Teaching Diverse Child Populations
3. Teaching and Curriculum
4. Teaching Skills in Early Childhood Settings
5. Early Childhood Administration and Leadership (offered, not required)
6. Family Engagement[1]
7. Early Mathematics[1]

- Teaching math skills to young children
- Development of young children's mathematical understanding

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

1. Infants and toddlers (birth to 2 years)
2. Preschool (3 and/or 4 years)
3. Kindergarten through 3rd grade or higher

[1]Findings related to family engagement and early mathematics are reported in Chapter 5.

Child Development and Learning:

- Six of seven "child development and learning" topics listed in the Inventory were required by 95 percent or more of the associate and bachelor's degree programs. The topic required by less than 95 percent of programs was "the development of dual language learners." (See **Figure 2.7** and **Appendix Table A2-1**.)

  ⇒ Seventy-nine percent of associate degree programs reported requiring the topic, "the development of dual language learners."

  ⇒ Eighty-five percent of bachelor's degree programs reported requiring the topic, "the development of dual language learners."

- Six of seven "child development and learning" topics were required by at least four of six master's degree programs.

  ⇒ Three of six master's degree programs reported requiring the topic, "development of children's scientific understanding."

- Six of seven "child development and learning topics" were required by least three of four doctoral degree programs.

  ⇒ Two of four doctoral degree programs reported requiring the topic, "the development of dual language learners."

Teaching Diverse Child Populations:

- Four of five "teaching diverse child populations" topics were required by 90 percent or more of associate and bachelor's degree programs. The topic required by less than 90 percent was "teaching children who are dual language learners." (See **Figure 2.8** and **Appendix Table A2-2**.)

  ⇒ Seventy-seven percent of associate degree programs reported requiring the topic "teaching children who are dual language learners."
  ⇒ Eighty-five percent of bachelor's degree programs reported requiring the topic "teaching children who are dual language learners."

- All five "teaching diverse child population" topics were required by at least three of five master's degree programs. (Only five master's degree programs responded to this question.)

- Four of five "teaching diverse child population topics" were required by at least three of four doctoral degree programs. Two of four programs reported requiring the topic "teaching children who are dual language learners."

***Teaching and Curriculum*:**

- All nine "teaching and curriculum" topics were required by 85 percent or more of associate and bachelor's degree programs. (See **Figure 2.9** and **Appendix Table A2-3**.)

- Five of the nine "teaching and curriculum" topics were required by at least four of six master's degree programs. The four topics required by two of six master's degree programs were:

  ⇒ Teaching science skills to children,
  ⇒ Teaching math skills to children,
  ⇒ Teaching art to children, and
  ⇒ Teaching social studies to children.

- All nine teaching and curriculum topics were required by at least three of four doctoral degree programs.

Teaching Skills in Early Childhood Settings:

- All three "teaching skills in early childhood settings" topics were required by more than 95 percent of associate and bachelor's degree programs. (See **Figure 2.10** and **Appendix Table A2-4**.)

- All three "teaching skills in early childhood settings" topics listed in the Inventory were required by four of six master's degree programs and three of four doctoral degree programs.

Early Childhood Administration and Leadership:

- Overall, a smaller percentage of degree programs at all levels reported offering coursework related to "early childhood administration and leadership" than the content areas described above. (See **Figure 2.11**.)

- Associate degree programs were more likely than bachelor's degree programs to offer these courses. Nine of the 15 topics were offered by at least 80 percent of associate degree programs. None of the topics was offered by more than three-quarters of bachelor's degree programs. Six of the 15 topics were offered by 60 to 75 percent of bachelor's degree programs.

- Eleven of the 15 topics were offered by at least four of the six master's degree programs and all but one topic was offered by at least three of the four doctoral degree programs.

- Only four of fifteen topics were offered by two-thirds or more of all degree programs. These topics were:

  ⇒ Assessment and documentation to inform program quality,
  ⇒ Building relationships with other teachers and/or early childhood professionals,
  ⇒ Assessment and documentation to inform teaching and learning, and
  ⇒ The early childhood system and public policy.

- The topics offered by less than one-half of degree programs included:

  ⇒ Adult supervision (bachelor's and master's degree programs)
  ⇒ Adult learning styles (bachelor's and master's degree programs)
  ⇒ Human resources/personnel (bachelor's degree programs)
  ⇒ Fiscal procedures and management (bachelor's degree programs)
  ⇒ Grant management and proposal writing (bachelor's and master's degree programs)
  ⇒ Organizational development and change (bachelor's degree programs)

Age-Group Focus (See **Appendix Tables A2-1** through **A2-4**)

- While degree programs consistently reported focusing their coursework on preschool-age children, the focus on children in the younger and older age groups varied by topic and by degree program.

- Whereas bachelor's and master's degree programs reported focusing many topics on infants and toddlers, associate degree programs did so more consistently.

*The following figures display the percentages of degree programs requiring various topics for students to attain their degrees. See **Appendix Tables A2-1** through **A2-4** for the age-group focus of each topic.*

Figure 2.7: Coursework on Child Development and Learning Required in Indiana Early Childhood Higher Education Degree Programs, by Program

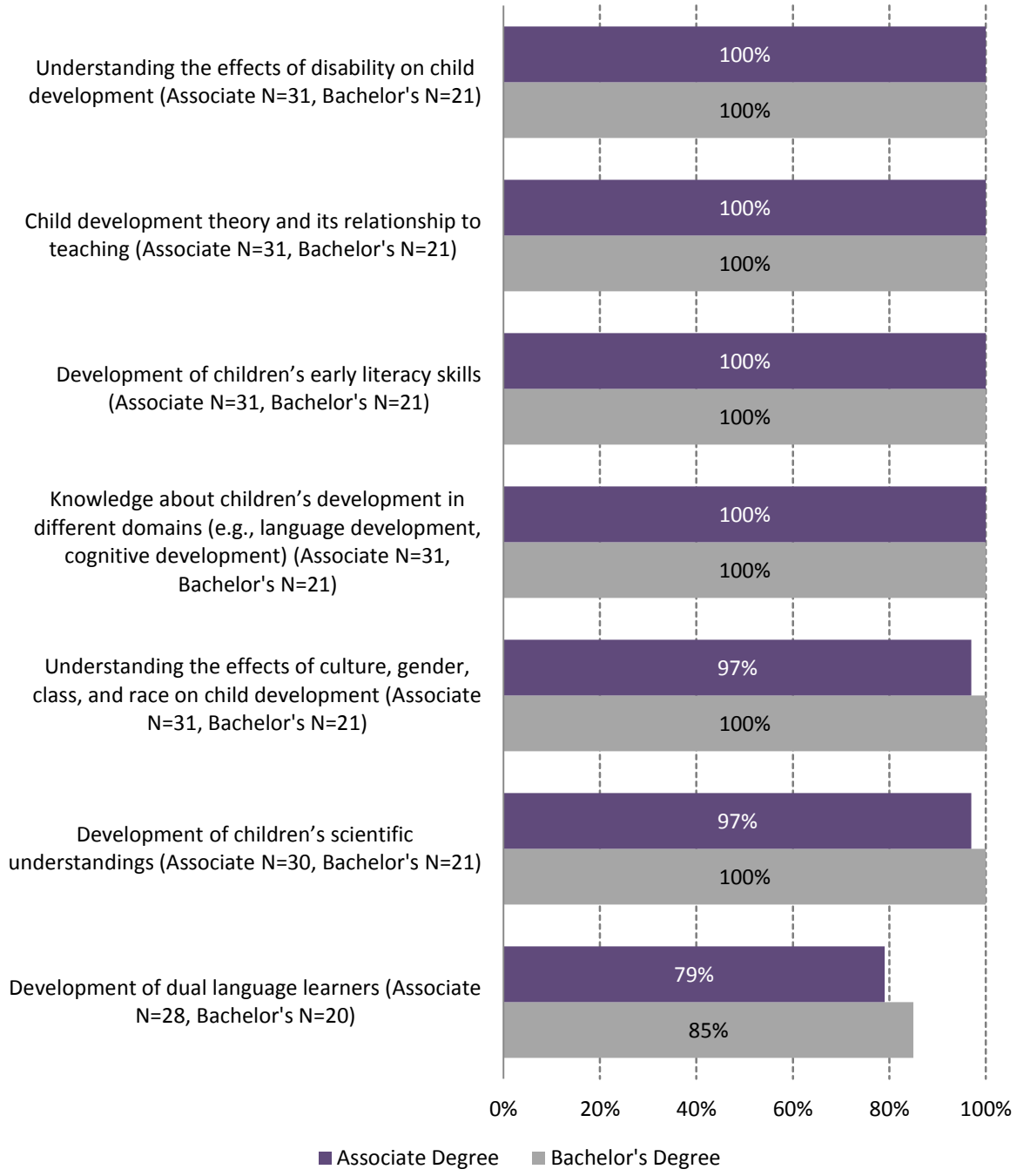


Figure 2.8: Coursework on Teaching Diverse Child Populations Required in Indiana Early Childhood Higher Education Degree Programs, by Program

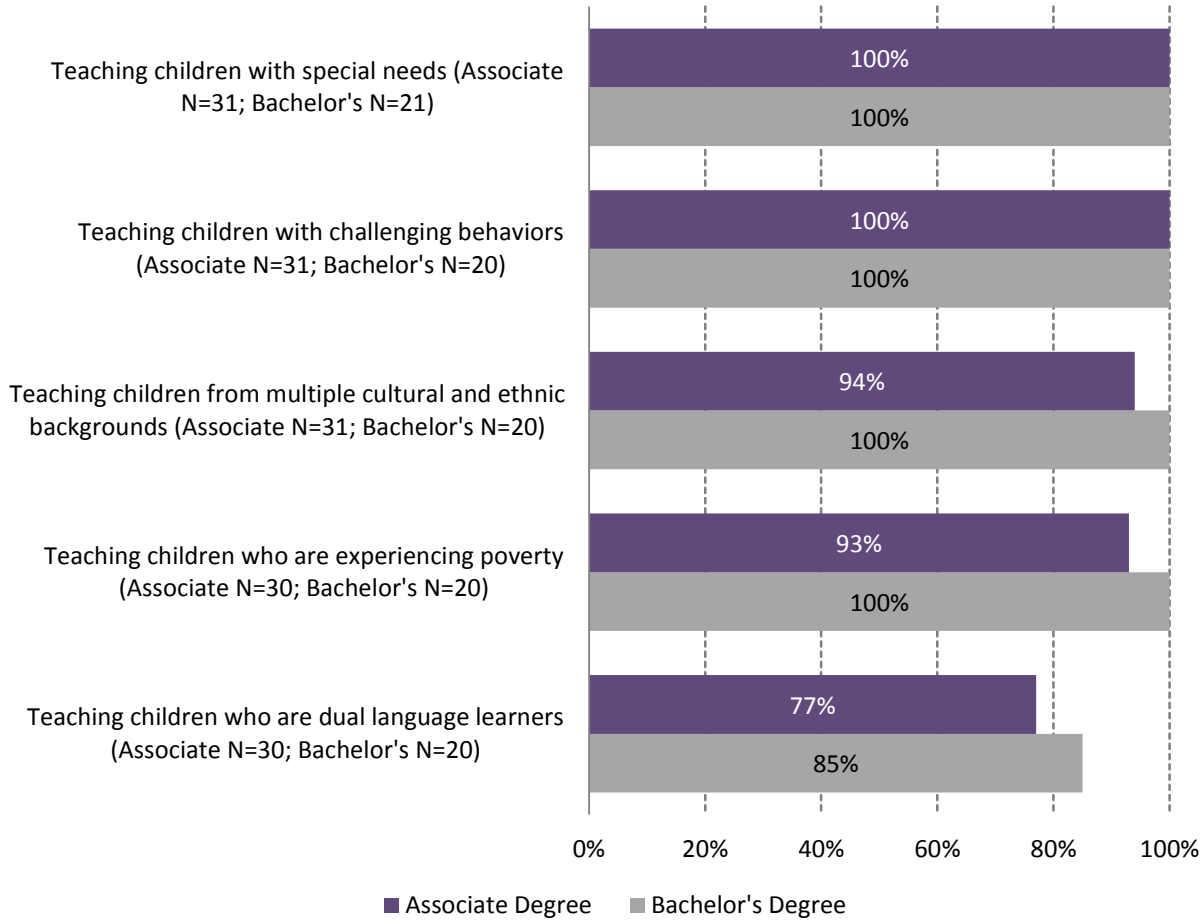


Figure 2.9: Coursework on Teaching and Curriculum Required in Indiana Early Childhood Higher Education Degree Programs, by Program

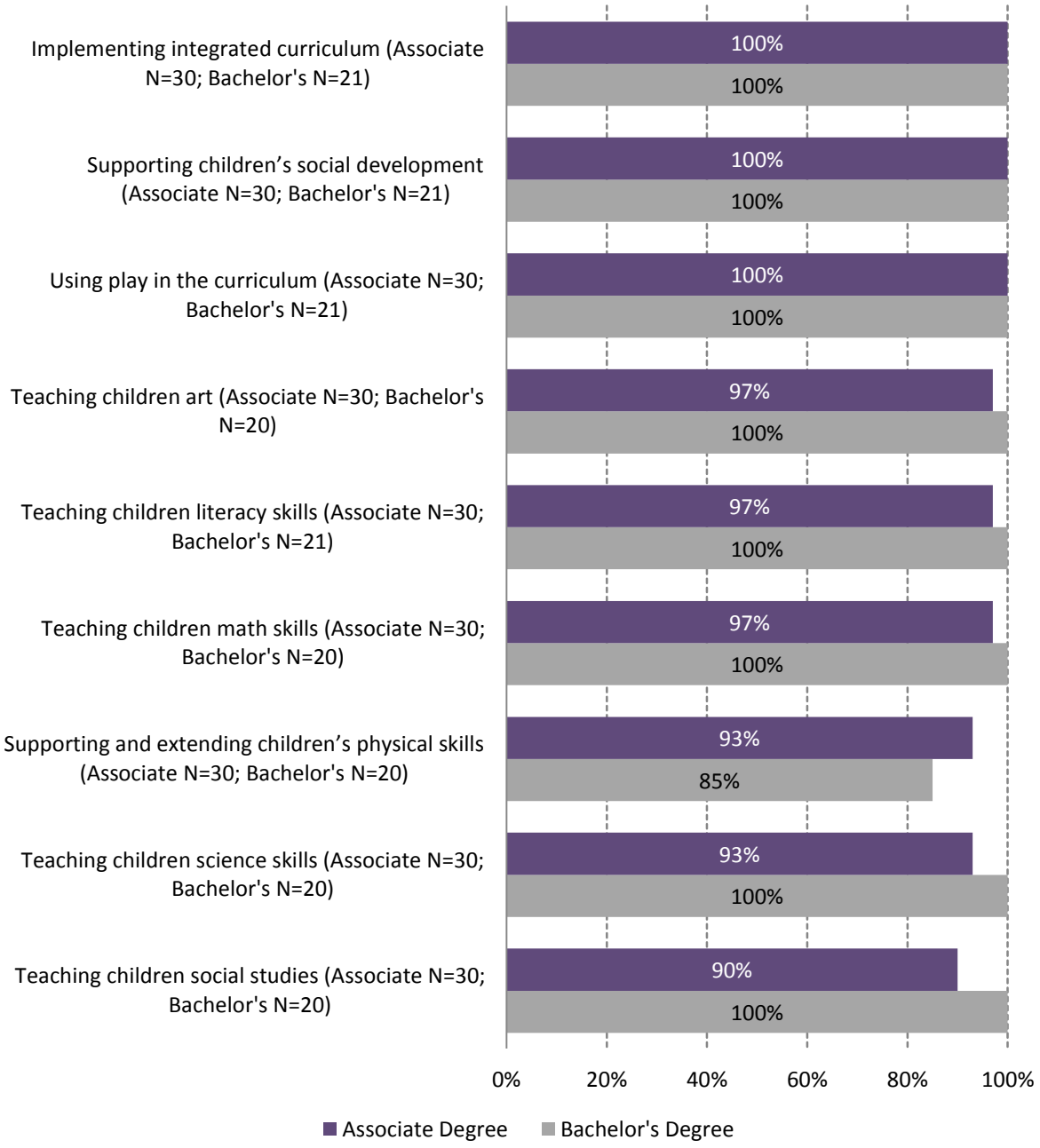


Figure 2.10: Coursework on Teaching Skills in Early Childhood Settings Required in Indiana Early Childhood Higher Education Degree Programs, by Program

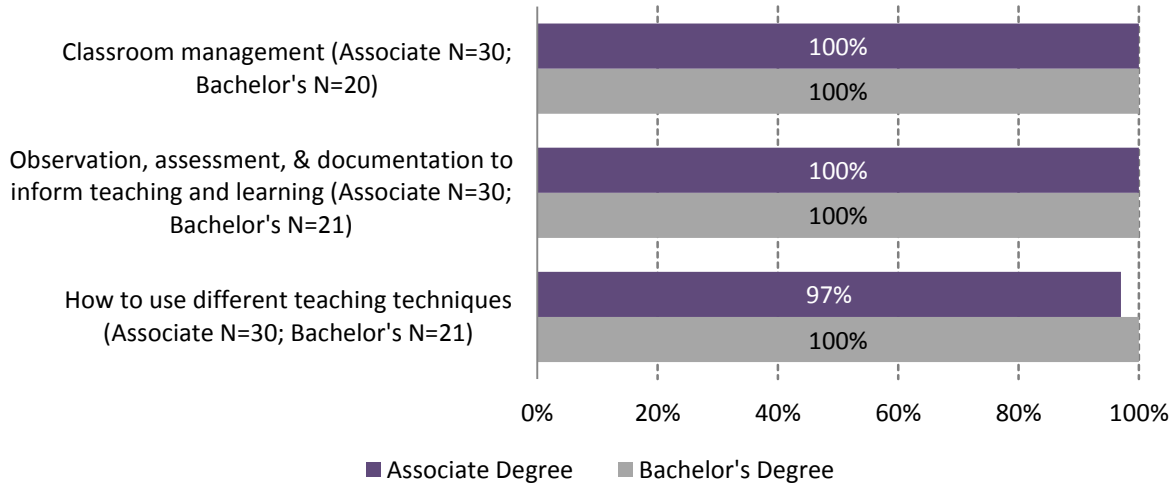


Figure 2.11: Coursework on Administration and Leadership (Supervision and Operations) Offered in Indiana Early Childhood Higher Education Degree Programs, by Program

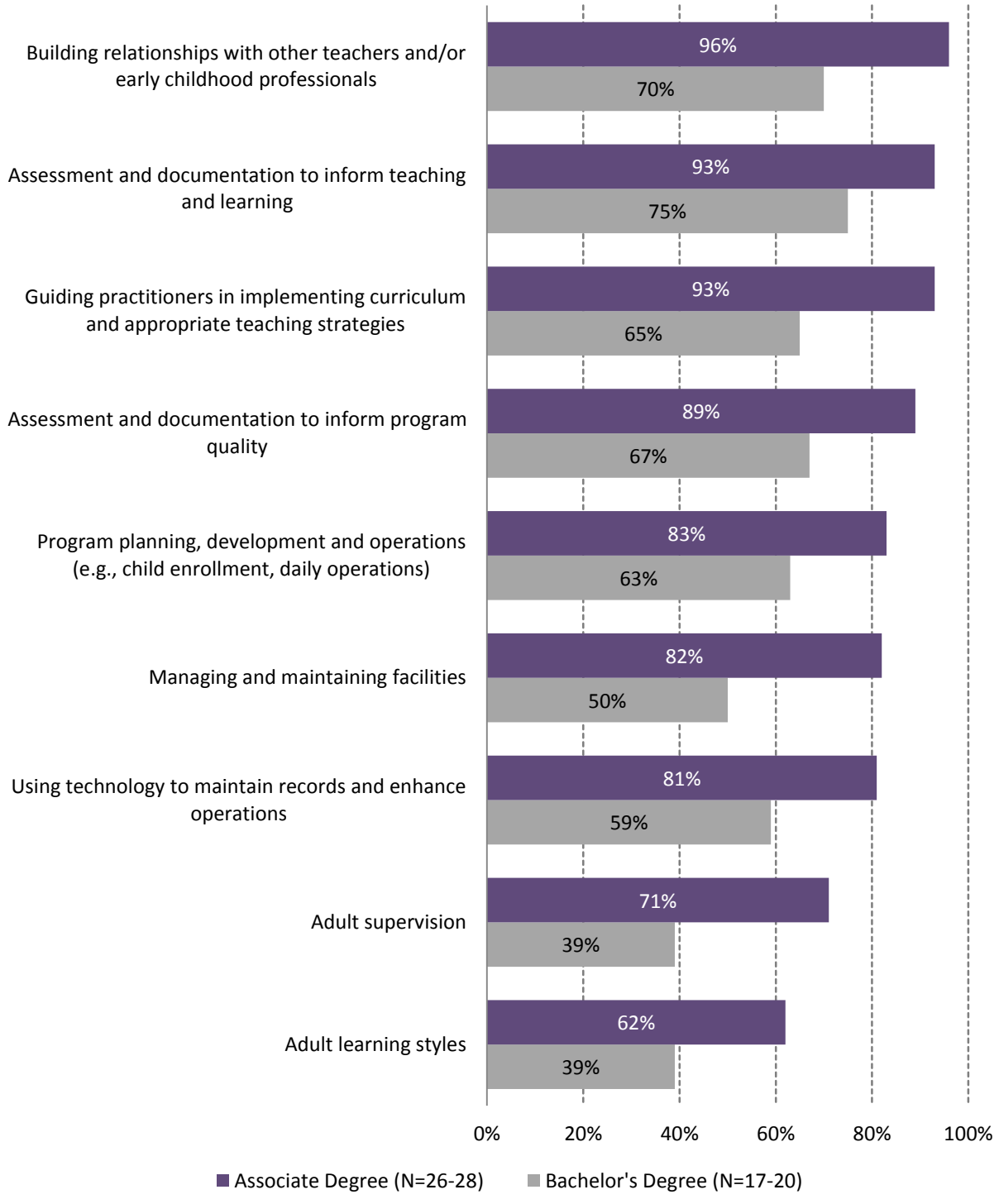
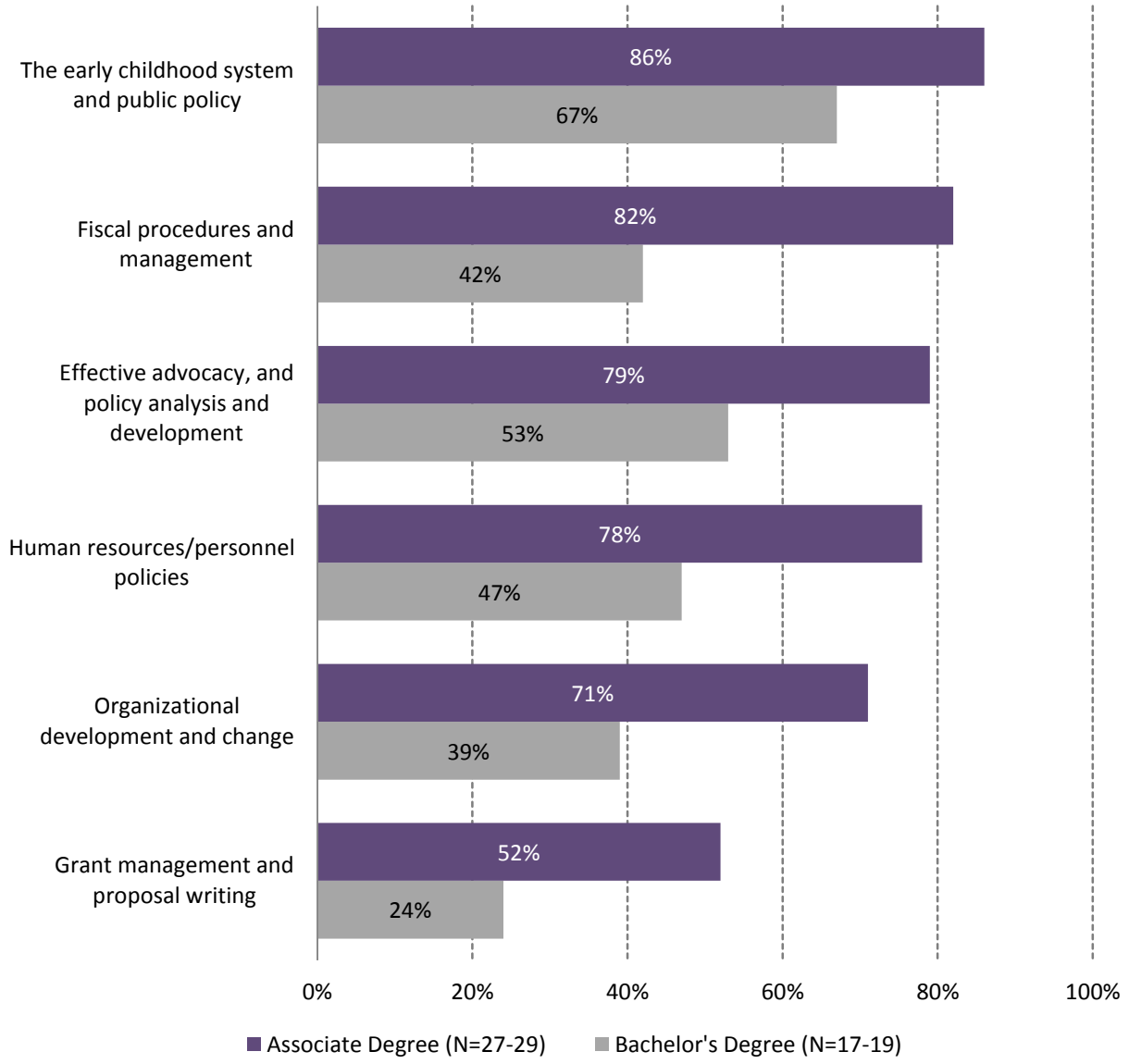


Figure 2.11: Coursework on Administration and Leadership (Organization/Systems) Offered in Indiana Early Childhood Higher Education Degree Programs, by Program (Continued)



Student Field Experiences

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

1. Student teaching: defined as full-time immersion in a classroom, with increasing responsibility for curriculum planning and teaching, and supervision by a cooperating teacher.
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 and/or cooperating teacher and/or mentor.

If the field experience was required for attaining the degree, the Inventory asked about:

1. Timing and duration of the field experience;
2. Age-group focus of the field experience;
3. Faculty status of the faculty supervisor;
4. Criteria for selecting field sites;
5. Criteria for selecting cooperating teachers at the field sites (teachers at the sites who provide supervision and guidance for the students);
6. Resources provided to cooperating teachers; and
7. Differences in field experience structures for pre-service and experienced teachers.

Please note that data related to student teaching is only included for bachelor's degree programs, as very small percentages at other degree levels reported offering student teaching experiences.

- Bachelor's degree programs were the most likely of the degree programs to require a student teaching experience. (See **Figure 2.12**.)

  ⇒ Eighty-four percent of bachelor's degree programs required a student teaching experience, compared to 17 percent of associate degree programs.[4]

[4] One of the six master's degree programs and none of the doctoral degree programs required a student teaching experience. Further investigation is needed to determine whether students in these graduate programs have already completed student teaching experiences.

- Degree programs were more likely to require practicum experiences than student teaching. (See **Figure 2.12**.)

  ⇒ Almost all associate (97 percent) and all bachelor's degree programs reported requiring students to participate in a practicum experience.
  ⇒ Two of the six master's degree programs and two of the four doctoral degree programs reported doing so.

For degree programs that required field experiences:

- The vast majority (88 percent) of bachelor's degree programs required student teaching focused on children in kindergarten through third grade or higher; 38 percent on preschool-age children; and six percent on infants and toddlers. (See **Figure 2.13**.)

- Bachelor's degree programs were more likely to report requiring an age-group focus for practicum experiences than were associate degree programs. They were most likely to report requiring a focus on preschool-age children, followed by a focus on children in the early elementary grades, and then on infants and toddlers. (See **Figure 2.14**.)

  ⇒ 56 percent of bachelor's degree programs required a focus on infants and toddlers.
  ⇒ 85 percent of bachelor's degree programs required a focus on the preschool years.
  ⇒ 61 percent of bachelor's degree programs required a focus on children in the early elementary grades.

- Approximately one-third of associate degree programs required a practicum focus on preschool-age children. Less than 15 percent did so either for infants and toddlers or for children in the early elementary grades.

Figure 2.12: Field Experiences Required in Indiana Early Childhood Higher Education Degree Programs, by Program

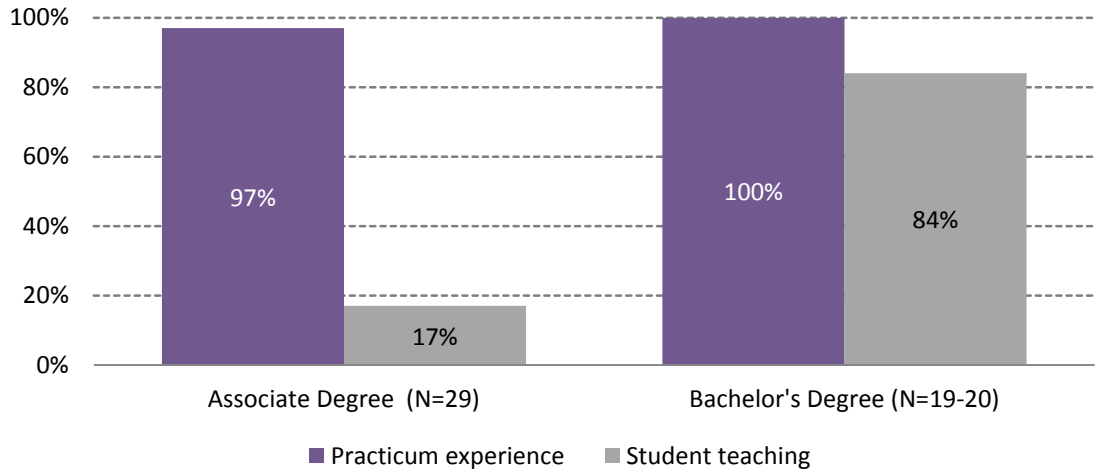


Figure 2.13: Age-Group Focus of Student Teaching in Indiana Early Childhood Bachelor's Degree Programs

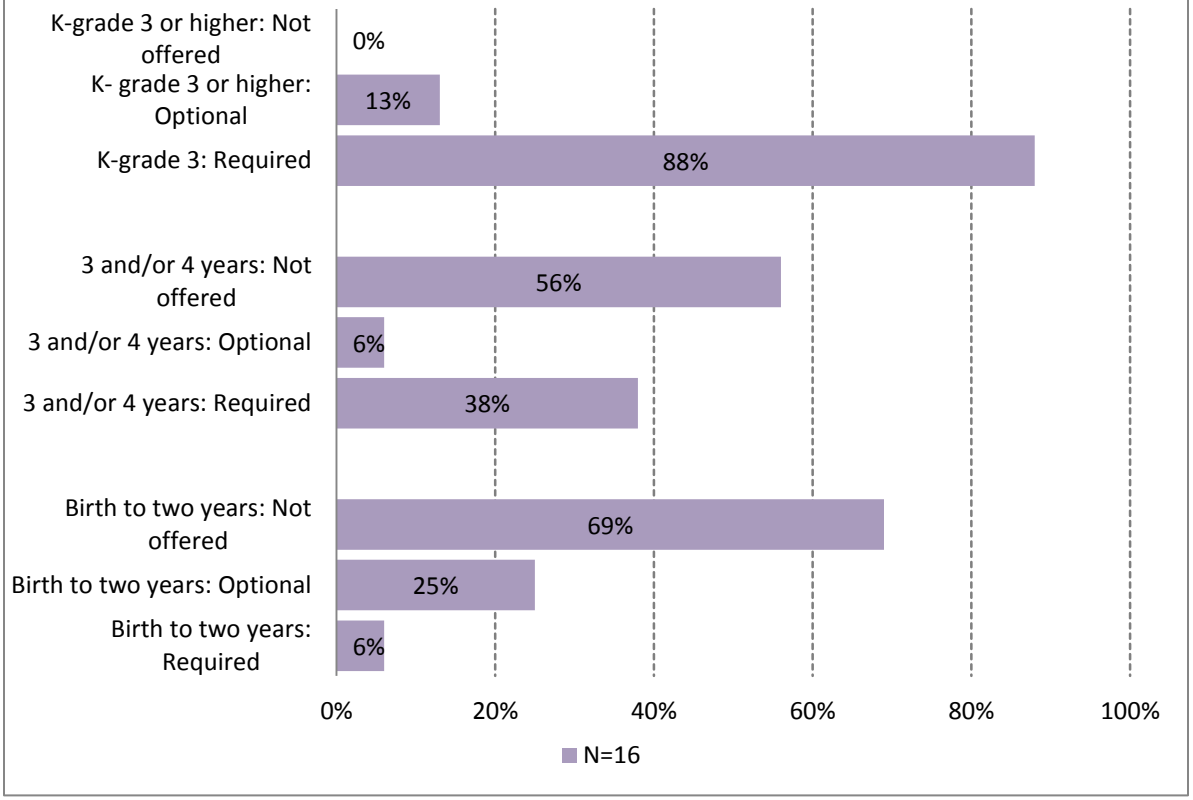
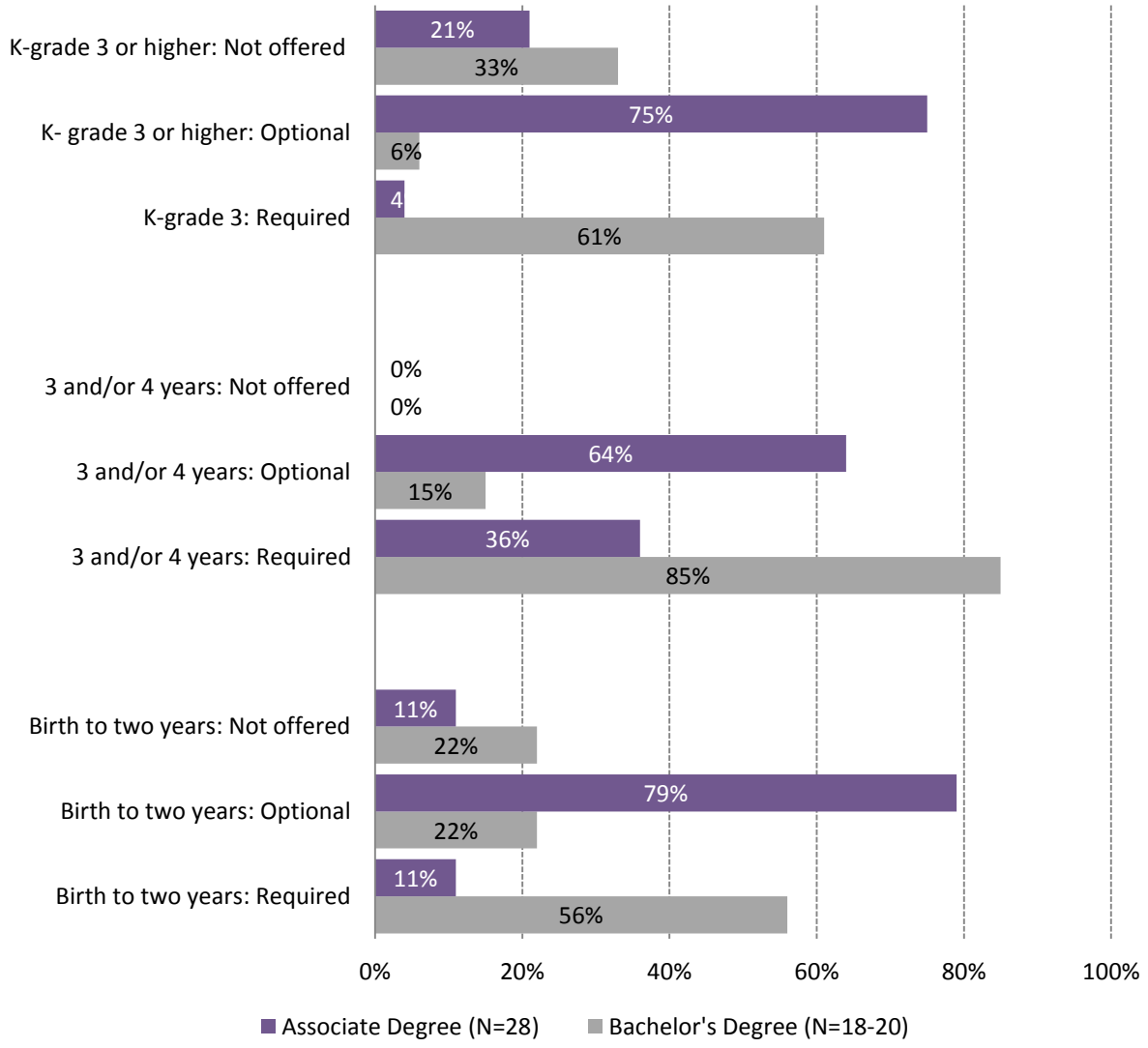


Figure 2.14: Age-Group Focus of Practicum Experiences in Indiana Early Childhood Higher Education Degree Programs, by Program



- Almost all associate and bachelor's degree programs reported having criteria for selecting field sites for students.

  ⇒ Almost all (93 percent) of bachelor's degree programs reported having criteria for selecting student teaching field sites.
  ⇒ All associate degree and bachelor's degree programs reported having criteria for selecting practicum field sites.

- Associate and bachelor's degree programs varied widely in the criteria used to select sites for field experiences. (See **Figures 2.15** through **2.18**.)

  ⇒ The criteria for practicum sites reported by at least three-quarters of associate degree programs were:
    * Site is a nationally accredited early childhood program,
    * Observed quality rating of the site, and
    * Teacher qualifications/characteristics (asked about in more detail in another question).
  ⇒ The criteria for practicum sites reported by at least 60 percent of bachelor's degree programs were:
    * Location of the site, and
    * Age of children served at the site.
  ⇒ The criteria for student teaching sites reported by at least 60 percent of bachelor's degree programs were:
    * Site is a public school,
    * Location of the site,
    * Age of children served at the site, and
    * Teacher qualifications/characteristics (asked about in more detail in another question, student teaching).

- Almost all (94 percent) of bachelor's degree programs reported using cooperating teachers to supervise student teaching. Similarly, all associate and almost all (95 percent) bachelor's degree programs used cooperating teachers to supervise practicum experiences.

- The vast majority (85 percent) of bachelor's degree programs reported criteria for selecting cooperating teachers at student teaching sites. The most frequently reported criterion was "cooperating teacher holds a particular state credential or equivalent." (See **Figures 2.19** and **2.20**.)

- The vast majority of associate (85 percent) and bachelor's (81 percent) degree programs reported criteria for selecting cooperating teachers at practicum sites. (See **Figures 2.19** and **2.20**.)

  ⇒ The criterion most frequently reported by associate degree programs was "cooperating teacher has experience working with practicum students."
  ⇒ The criterion most frequently reported by bachelor's degree programs was "cooperating teacher is selected by the school district or school administrator(s)."

- Student teaching experiences primarily occurred at the end of the course of study in bachelor's degree programs.

- Practicum experiences occurred at different times during the course of study at different degree levels.

  ⇒ Approximately one-fifth of associate and one-third of bachelor's degree programs reported that the practicum experience occurred during the first year of study.
  ⇒ Thirty-nine percent of associate and one-half of bachelor's degree programs reported that it occurred during the middle of the course of study.
  ⇒ Thirty-nine percent of associate and one-fifth of bachelor's degree programs reported that it occurred at end of the course study.

- Overall, degree programs reported that they did not structure their field experiences differently for novice and experienced teachers. Approximately one-fifth of associate and one-quarter of bachelor's degree programs reported doing so for the practicum. Less than one-fifth of bachelor's degree programs reported doing so for student teaching.

Figure 2.15: Criteria for Selecting Student Teaching Sites in Indiana Early Childhood Bachelor's Degree Programs: Child Characteristics

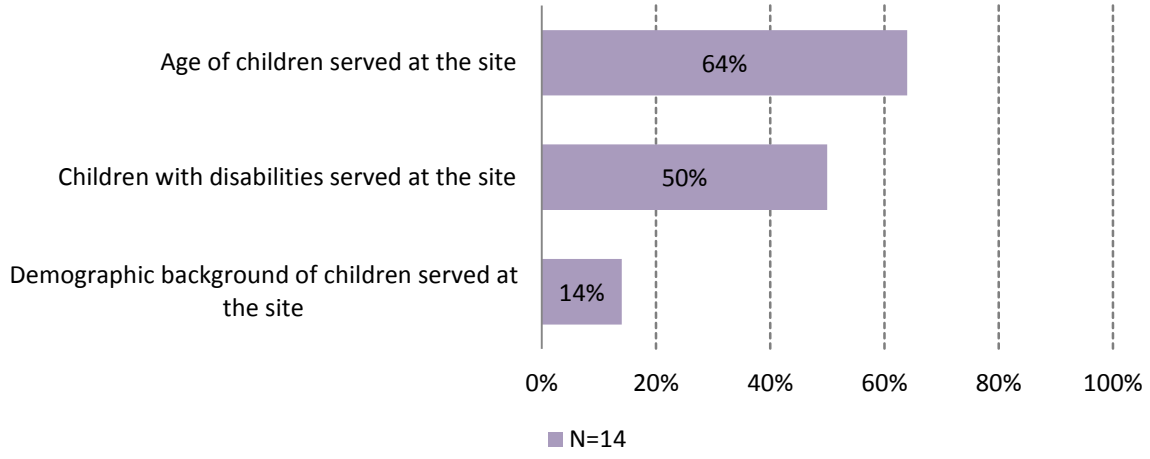


Figure 2.16: Criteria for Selecting Student Teaching Sites in Indiana Early Childhood Bachelor's Degree Programs: Site Characteristics

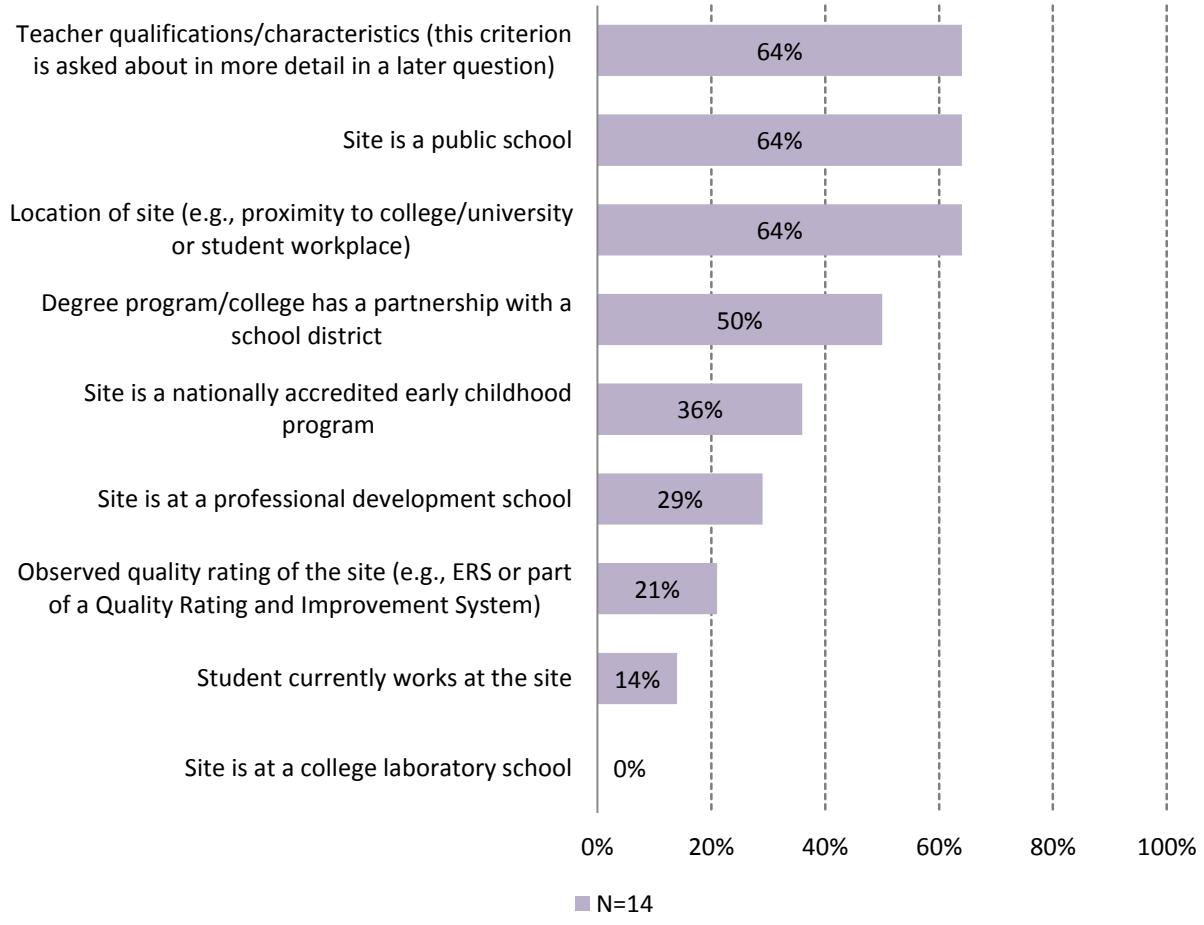


Figure 2.17: Criteria for Selecting Practicum Sites in Indiana Early Childhood Higher Education Degree Programs: Child Characteristics, by Program

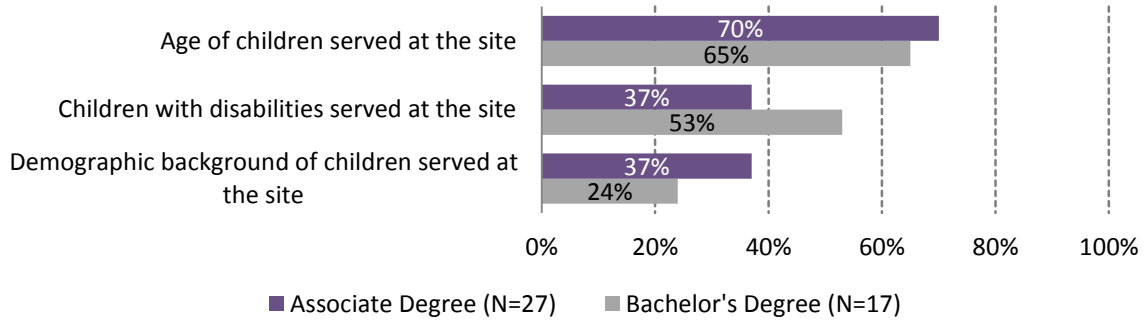


Figure 2.18: Criteria for Selecting Practicum Sites in Indiana Early Childhood Higher Education Degree Programs: Site Characteristics, by Program

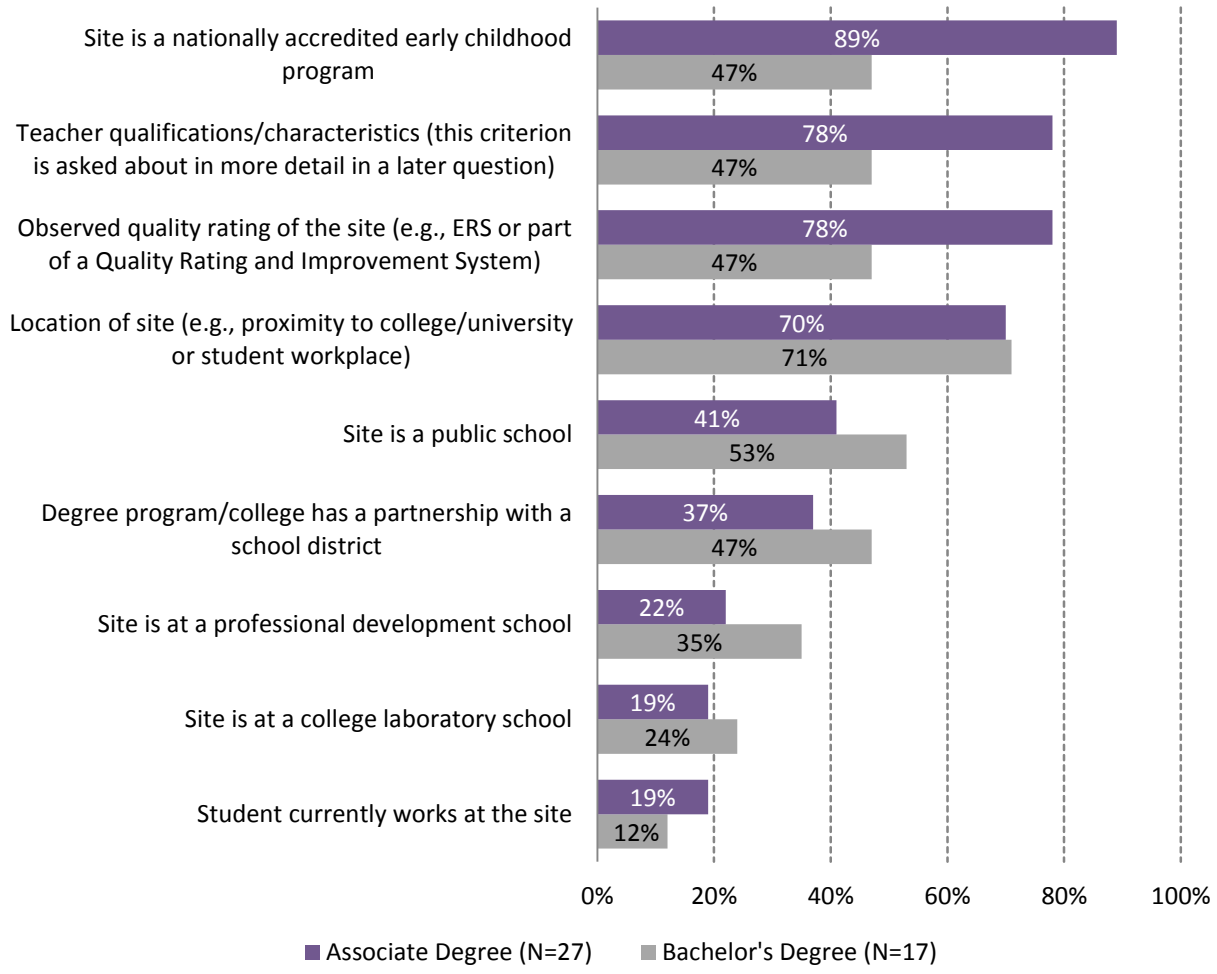


Figure 2.19: Criteria for Selecting Cooperating Teachers for Student Teaching Sites in Indiana Early Childhood Bachelor's Degree Programs

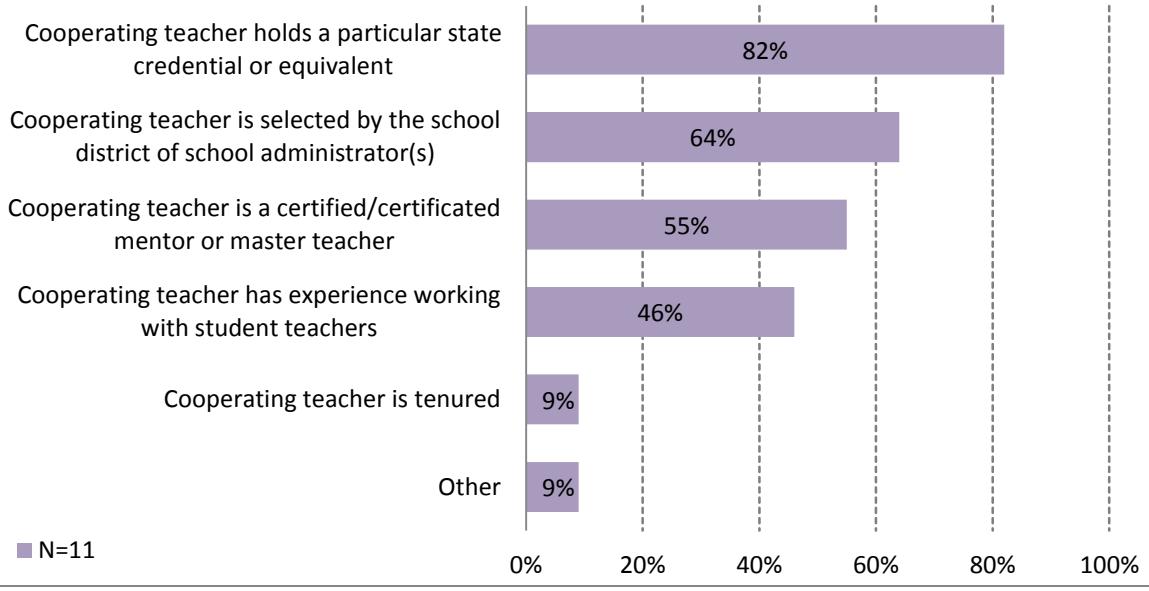
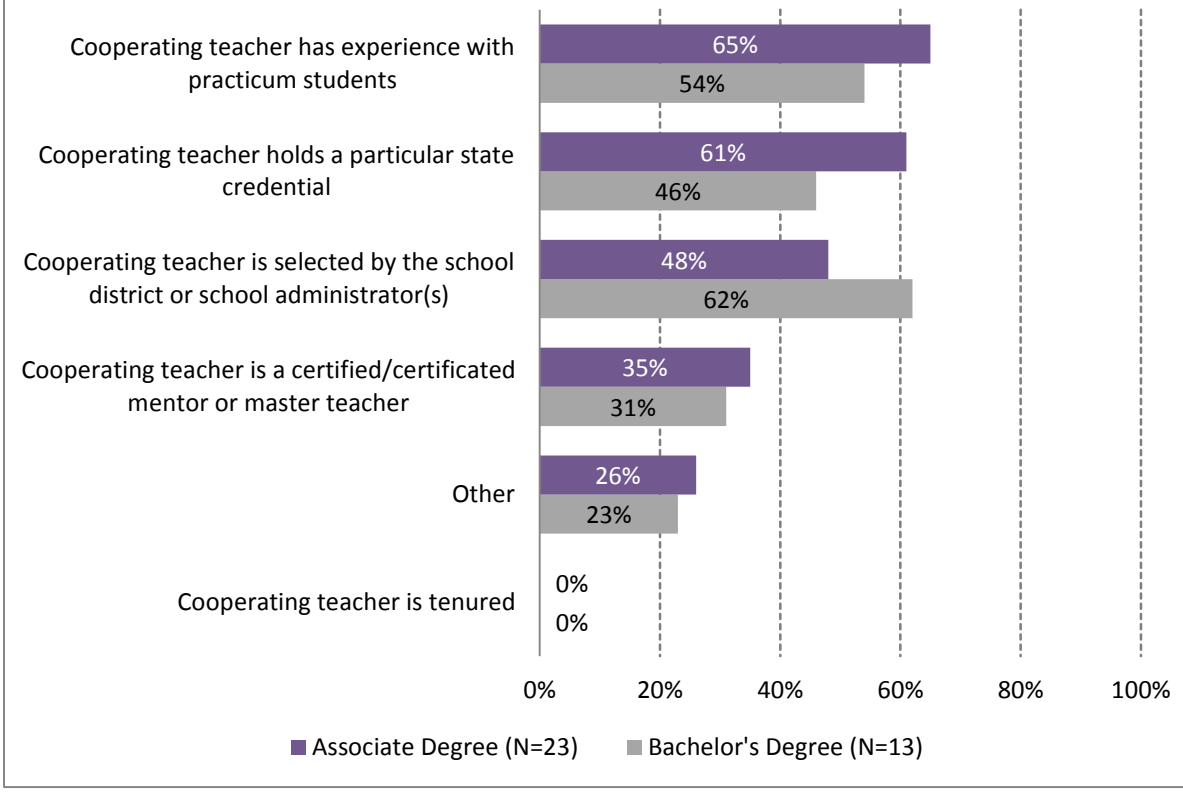


Figure 2.20: Criteria for Selecting Cooperating Teachers for Practicum Sites in Indiana Early Childhood Higher Education Degree Programs, by Program



Articulation and Alignment with the Indiana Professional Development System

The Inventory asked program leads about articulation agreements with other degree programs and about the alignment of coursework with the state's professional development system and standards:

1. Whether the degree program offers coursework that could be applied to the Indiana Early Childhood Program Administrator Credential.

2. Whether credits for required coursework for the Administrator Credential could be applied to the degree.

3. Whether the degree program offers coursework for the Child Development Associate (CDA).

4. Whether credits/hours for required coursework for the CDA could be applied to the degree.

5. Whether CDA credits or hours taken outside the degree program could be applied to the degree.

6. Whether course content aligns with state early childhood education standards. [1]

[1] Alignment with family engagement and early math standards is discussed in Chapter 5.

- Approximately three-quarters (71 percent) of associate degree programs reported articulation agreements with early childhood bachelor's degree programs. Accordingly, three-quarters of bachelor's degree programs reported articulation agreements with associate degree programs.

- In almost all cases, the associate degree articulated into a teacher education bachelor's degree.

  ⇒ All associate degree programs and 93 percent of bachelor's degree programs reported that the associate degree articulated into a teacher education bachelor's degree.

  * Eighty percent of these associate degree programs and 75 percent of these bachelor's degree programs reported that 60 credits articulated into the teacher education bachelor's degree.

⇒ Sixty percent of associate degree programs and 27 percent of bachelor's degree programs reported that the associate degree articulated into a family and consumer studies bachelor's degree.

⇒ Forty percent of associate degree programs and seven percent of bachelor's degree programs reported the associate degree articulated into a human development bachelor's degree.

- Associate degree programs were more likely than bachelor's degree programs to offer coursework that could be applied to the Indiana Early Childhood Program Administrator Credential and to the degree. (See **Figure 2.21**.)

  ⇒ Almost three-quarters of associate degree reported offering coursework that could be applied to the Indiana Early Childhood Program Administrator Credential. The coursework could also be applied to the associate degree.

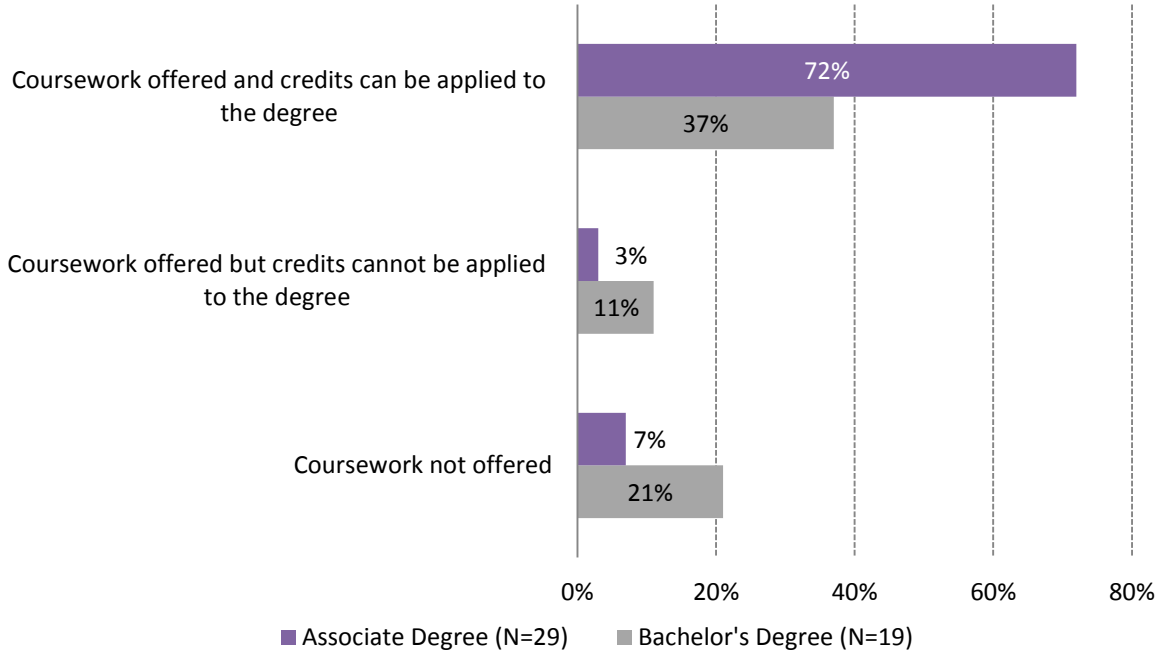
  ⇒ Approximately one-third of bachelor's degree programs reported offering coursework that could be applied to the Indiana Early Childhood Program Administrator Credential. The coursework could also be applied to the bachelor's degree.

  ⇒ Eleven percent of bachelor's degree programs reported offering coursework that could be applied to the Indiana Early Childhood Program Administrator Credential, but not applied to the bachelor's degree.

  ⇒ It is important to note that 17 percent of associate and approximately one-third (32 percent) of bachelor's degree programs responded that they did not know whether coursework could be applied to the Administrator Credential.

- Five of six masters and two of four doctoral degree programs also reported offering coursework that could be applied to the Administrator Credential.

Figure 2.21: Coursework Alignment with the Indiana Early Childhood Program Administrator Credential in Indiana Early Childhood Higher Education Degree Programs, by Program



- Associate degree programs were the most likely of the degree programs to offer coursework that could be applied to the Child Development Associate (CDA). The vast majority (86 percent) of associate degree programs offered CDA coursework, compared to 16 percent of bachelor's degree programs.

- Almost all (96 percent) of associate degree programs that reported offering CDA coursework allowed CDA credits to be applied to the associate degree.

- Almost all associate degree programs (93 percent) and 60 percent of bachelor's degree programs reported that credits attained for a CDA received outside the department could potentially articulate into credit towards the degree.

Please note that data related to the alignment of family engagement and early math coursework with state and national standards are discussed in Chapter 5.

- Almost all associate (96 percent) and bachelor's (94 percent) degree programs reported aligning their coursework with various state early care and education standards.

- Five of six master's degree programs and all three doctoral degree programs that responded also reported aligning coursework with these state standards.

  ⇒ The degree programs that reported alignment were most likely to report course alignment with the *Foundations to the Indiana Academic Standards for Young Children from Birth to Age 5,* followed by the *Indiana Core Knowledge and Core Competencies for Professionals serving infants, toddlers, preschoolers, children, youth and their families.* (See **Figure 2.22**.)

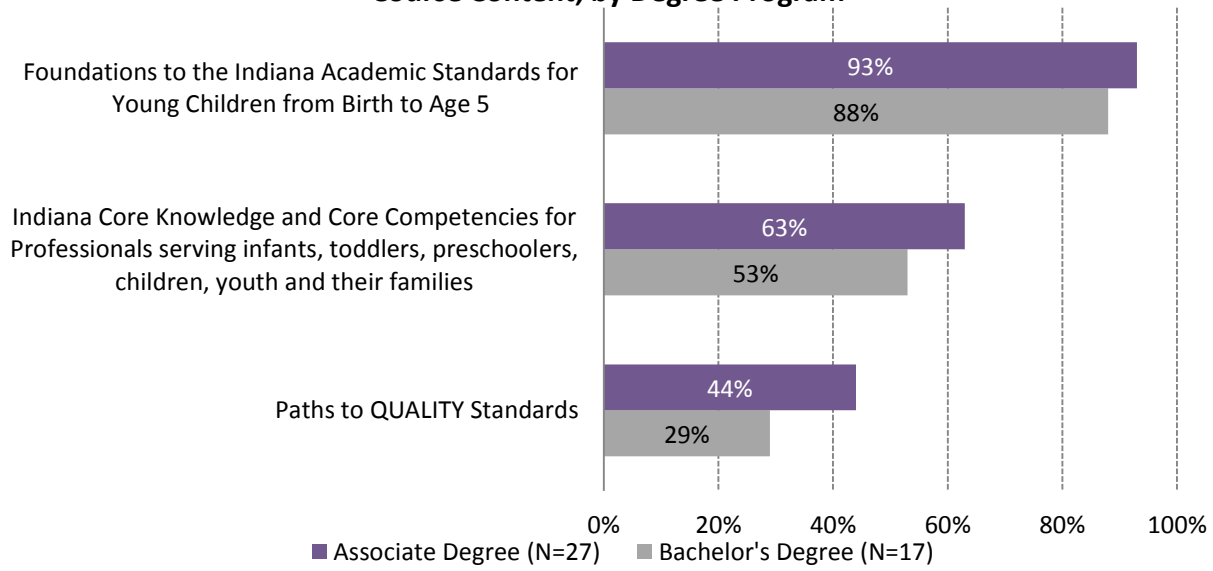
  ⇒ Almost all associate (93 percent) and the vast majority of bachelor's (88 percent) degree programs reported aligning course content with the *Foundations to the Indiana Academic Standards for Young Children from Birth to Age 5*. Two of five master's degree programs and the three doctoral programs also reported doing so.

  ⇒ Almost two-thirds of associate (63 percent) and about one-half of bachelor's (53 percent) degree programs reported aligning course content with the *Indiana Core Knowledge and Core Competencies for Professionals serving infants, toddlers, preschoolers, children, youth and their families.*

  ⇒ Forty-four percent of associate and 29 percent of bachelor's degree programs reported aligning course content with *Paths to QUALITY Standards.* Two of five master's degree programs also reported doing so.

  ⇒

Figure 2.22: State Early Care and Education Standards Incorporated into Course Content, by Degree Program*



*This figure does not include standards specifically related to early math and family

To further understand the alignment of early childhood higher education with state standards and measures of quality**,** the Inventory asked faculty members whether they had integrated early childhood standards and measures into their coursework in the past two years. If they responded yes, they were asked about the method used to incorporate the standards and measures.

The standards and measures included:

* The Indiana Core Knowledge and Core Competencies for Professionals serving infants, toddlers, preschoolers, children, youth and their families,
* Environment Rating Scales (ERS), and
* The Classroom Assessment Scoring System (CLASS).

The methods included:

* Integrating into content of coursework,
* Integrating into student field experiences,
* Integrating into student assessment process,
* Required text for students, and
* Resource text for students.

Please note that because of the small sample size, the data for doctoral degree faculty members are not reported for this section.

- Almost three-quarters (71 percent) of associate and the vast majority of bachelor's (84 percent) and master's (83 percent) degree faculty members reported incorporating at least one of three standards and measures into their course content in the past two years. These included the Indiana Core Knowledge and Core Competencies (CK&C), the Environment Rating Systems (ERS), and the Classroom Assessment Scoring System (CLASS).

- Using a variety of methods, the associate, bachelor's and master's degree faculty members were more likely to integrate the CK&C into their course content during the past two years, than to incorporate the ERS or the CLASS.

  ⇒ Overall, bachelor's degree faculty members were more likely to report integrating the CK&C into coursework than were associate and master's degree faculty, and less likely to report integrating the ERS and the CLASS. For example, using the method "Integrating into content of coursework": (See **Appendix Table A2-5**.)

⇒ Almost all bachelor's degree faculty members (92 percent) reported integrating the CK&C into the content of their coursework, compared to 69 percent of associate and 79 percent of master's degree faculty members.

⇒ Approximately 40 percent of associate and master's degree faculty members, compared to one-quarter of bachelor's degree faculty, reported incorporating the ERS into the content of their coursework.

⇒ Approximately 30 percent of associate and master's degree faculty members, compared to eight percent of bachelor's degree faculty, incorporated the CLASS into the content of their coursework.

⇒ The other methods used to integrate the standards and measures into coursework followed a similar pattern across degree levels.

CHAPTER 3: EARLY CHILDHOOD HIGHER EDUCATION FACULTY

Please note that data for doctoral degree faculty members are not included in the figures because of the small sample size. The data are included in the narrative as appropriate.

Demographics of Faculty Members Participating in the Inventory

- Almost all faculty members who participated in the Inventory were women (99 percent of associate degree faculty, 97 percent of bachelor's degree faculty, and 100 percent of master's degree faculty).

- The average age of associate and bachelor's degree faculty members was 55 years. The average age of master's degree faculty members was 50 years. (See **Figure 3.1**.)

  ⇒ Forty-two percent of associate, approximately one-half of bachelor's, and approximately one-third of master's degree faculty members reported being age 60 or older, potentially close to retirement.
  ⇒ Forty-five percent of associate, 35 percent of bachelor's, and 42 percent of master's degree faculty members reported being 40 to 59 years old.
  ⇒ Approximately 12 percent of associate and 16 percent of bachelor's degree faculty members reported being younger than age 40, compared to approximately one-quarter of master's degree faculty members.

- The vast majority of faculty members at all degree levels identified as White/Caucasian (95 percent of associate degree faculty, 87 percent of bachelor's degree faculty, and 95 percent of master's degree faculty). (See **Figure 3.2**.)

- All faculty members at all degree levels reported fluency in English. Less than 10 percent of faculty members at all levels reported fluency in any other language. (See **Figure 3.3**.)

- About one-half (48 percent) of associate and one-third of bachelor's (37 percent) and master's (33 percent) degree faculty reported that it would be helpful to know another language, primarily Spanish, in order to improve communication with their students.

- Due to the small sample size, detailed demographic data on doctoral degree faculty members are not reported. In general, doctoral degree faculty members primarily reported

being female, English-speaking, and White/Caucasian. The average age of doctoral degree faculty members was 58 years.

Figure 3.1: Age of Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program

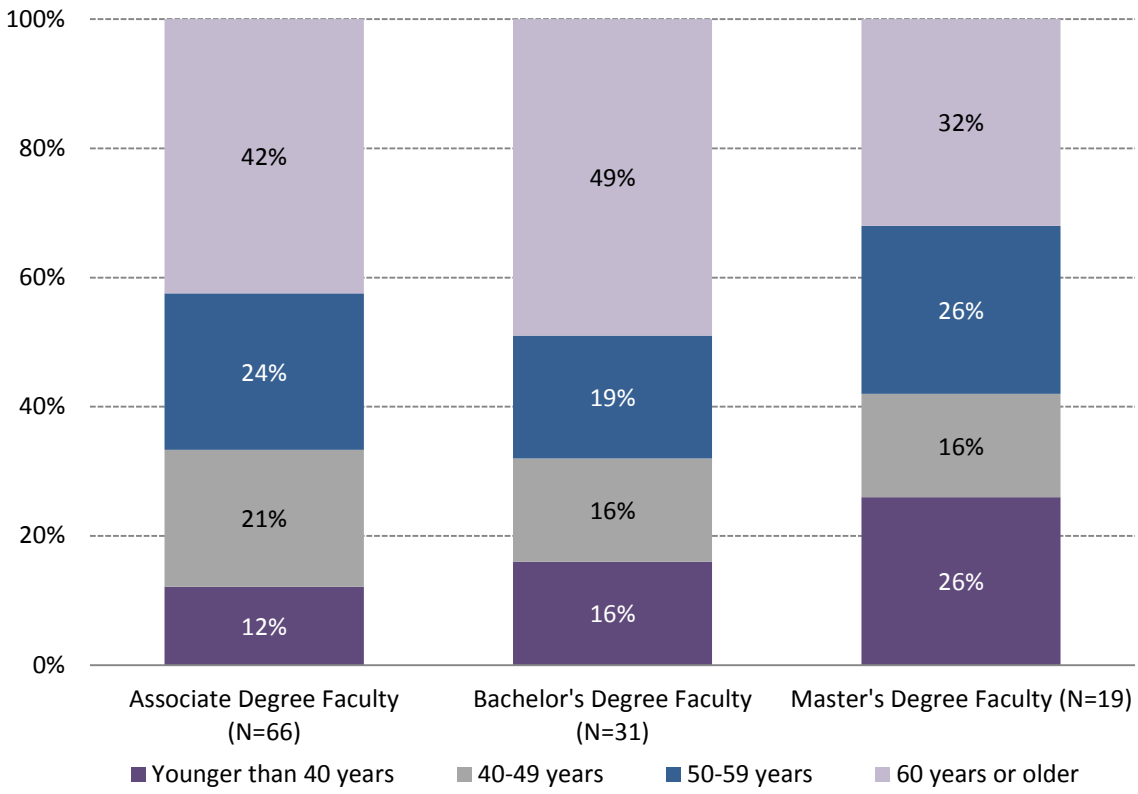


Figure 3.2: Race/Ethnicity of Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program

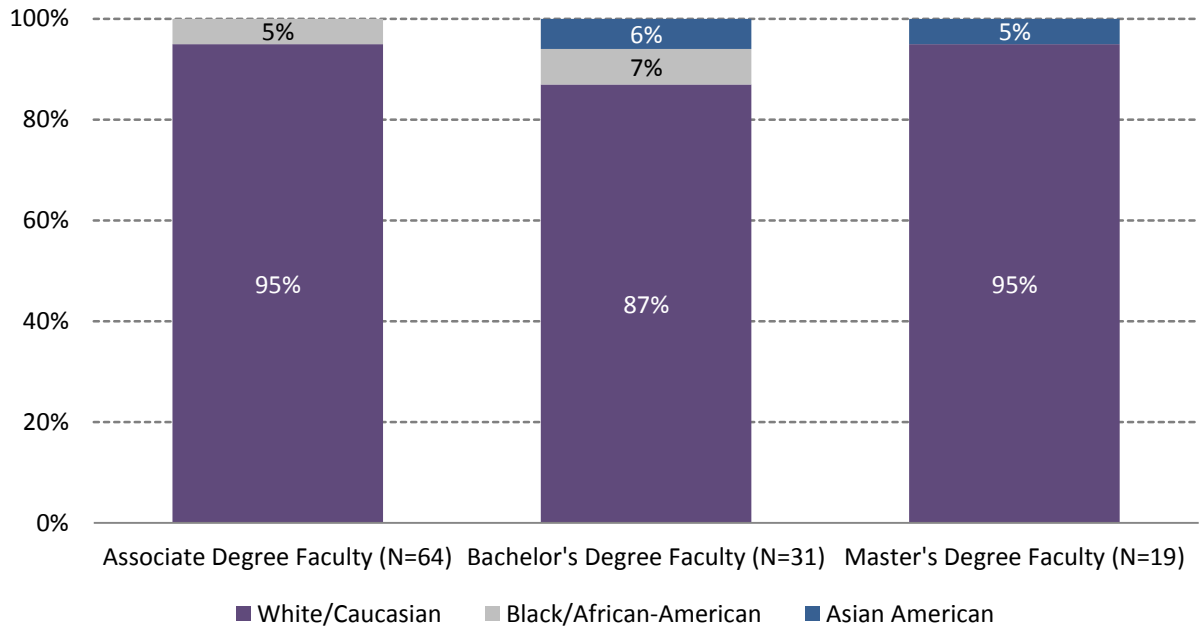
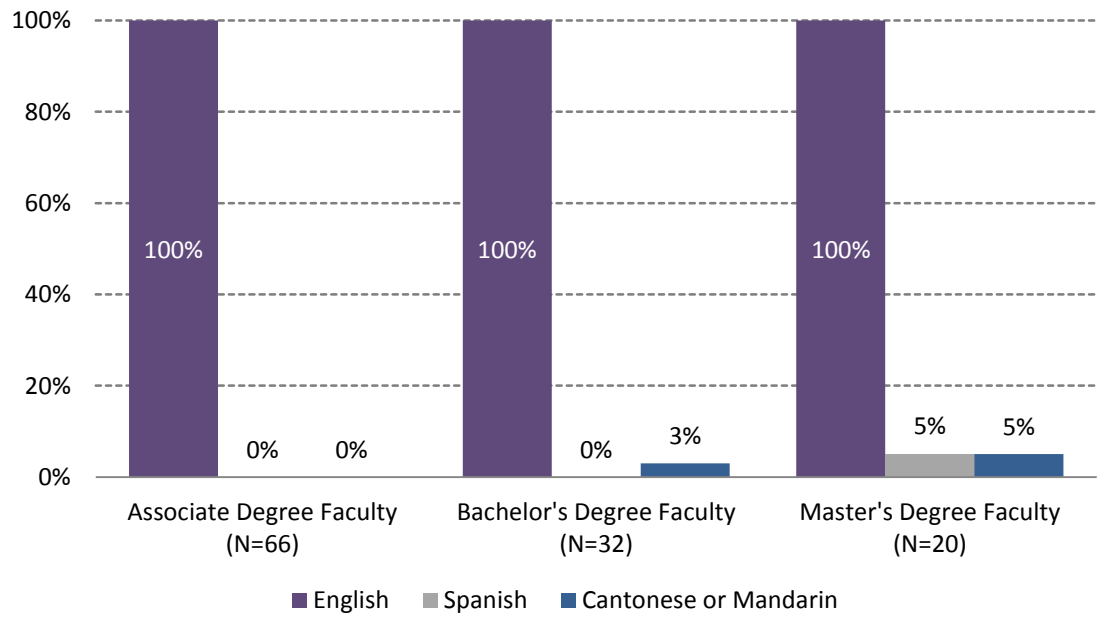


Figure 3.3: Languages Spoken Fluently by Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program



Education Levels of Faculty Members Participating in the Inventory

- The vast majority of associate degree faculty members (88 percent) reported having attained a master's degree as their highest level of education. (See **Figure 3.4**.)
- Approximately one-half of bachelor's and one-third of master's degree faculty members reported having attained a doctoral degree. (See **Figure 3.4**.)
- Approximately three-quarters of associate and bachelor's and two-third of master's degree faculty members reported having attained an early childhood education or child development (ECE/CD) degree at either the bachelor's or graduate level. (See **Figure 3.5**.)
- In general, the doctoral degree faculty members reported having attained a doctoral degree and an ECE/CD degree at either the bachelor's or graduate level.

Figure 3.4: Highest Level of Education of Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program

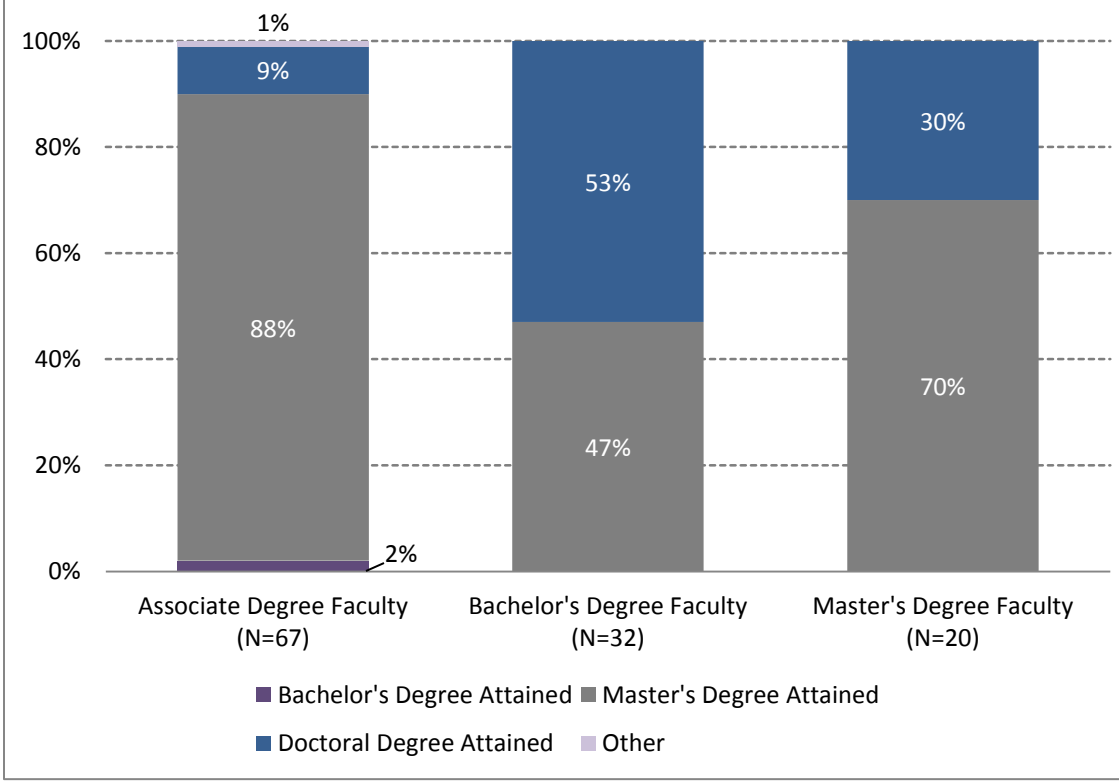
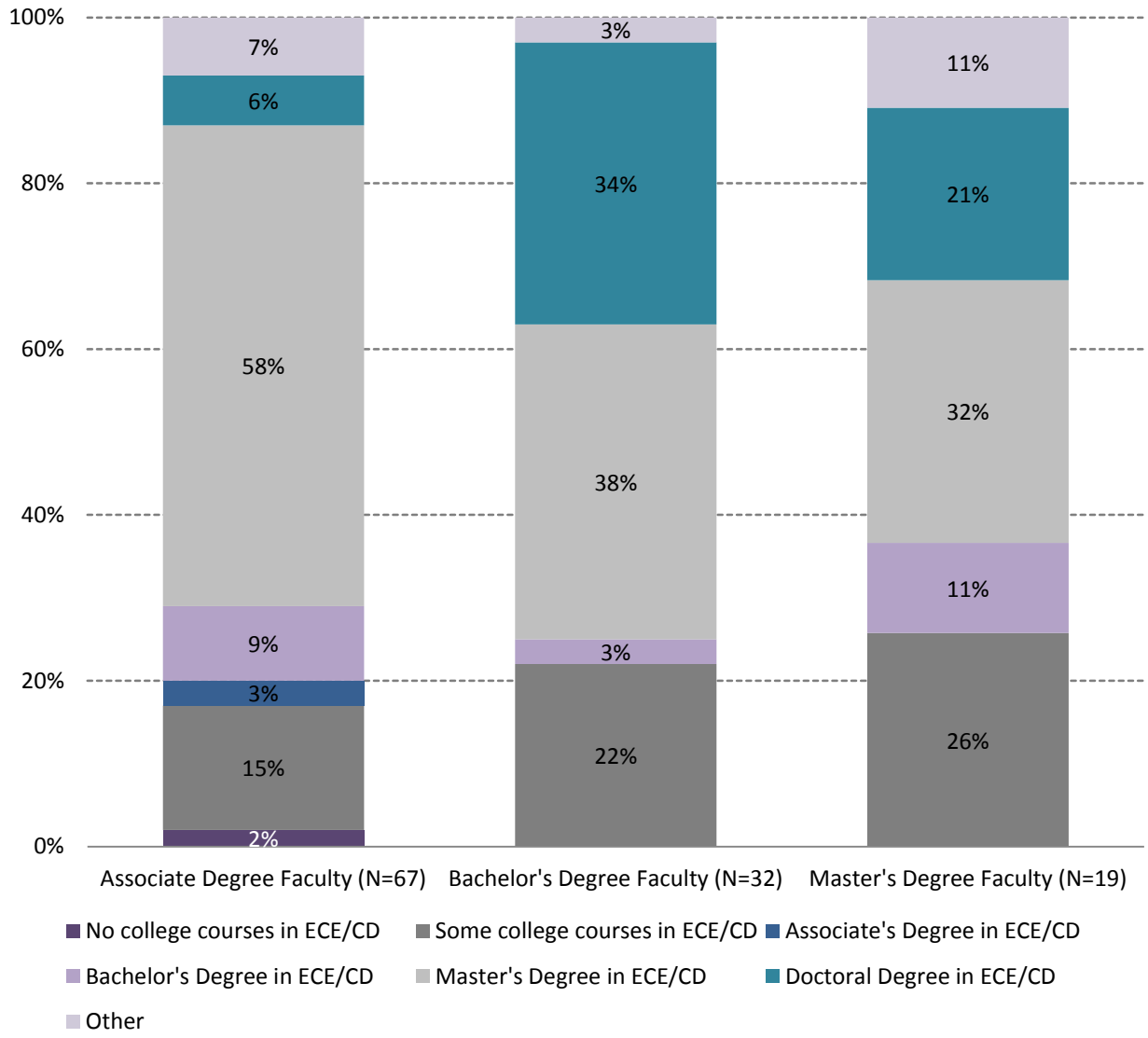


Figure 3.5: ECE/CD Degree Attainment by Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program



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

Professional Experience

- On average, associate degree faculty members reported having taught at the college or university level for 10 years, bachelor's degree faculty members for 14 years, and master's degree faculty members for 15 years. The average for the nine doctoral degree faculty members was 21 years.

  ⇒ Approximately one-third of associate degree, the majority of bachelor's degree (58 percent) and master's degree (62 percent), and eight of nine doctoral degree faculty members reported having taught at the college level for more than 10 years. (See **Figure 3.6**.)

- On average, associate degree faculty members reported having taught at their current college or university for eight years, bachelor's degree faculty members for 10 years, and master's degree faculty members for 12 years. The average for nine doctoral degree faculty members was 16 years.

  ⇒ Approximately one-third of associate, 39 percent of bachelor's, one-half of master's, and eight of the nine doctoral degree faculty members reported having taught at their college or university for more than 10 years. (See **Figure 3.7**.)

Figure 3.6: Number of Years Teaching at the College or University Level for Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program

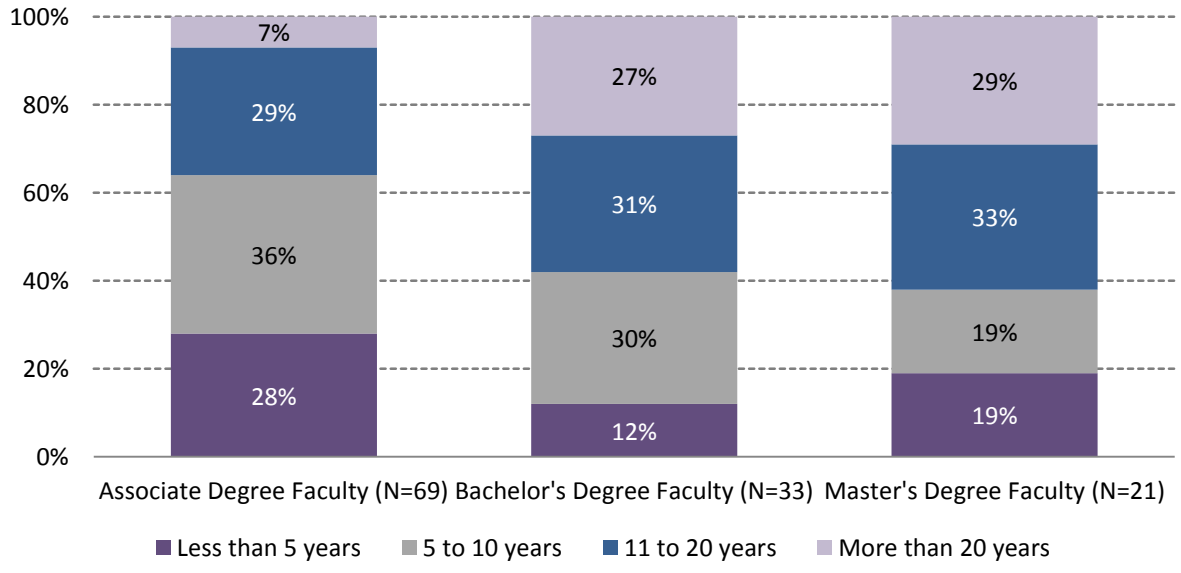
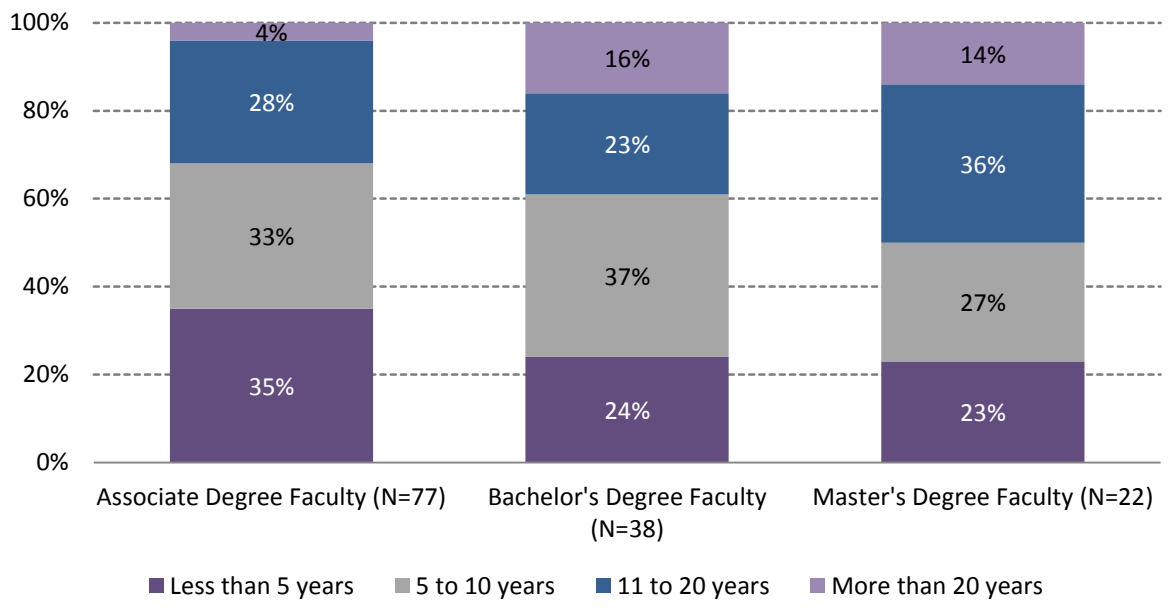


Figure 3.7: Number of Years Teaching at Current College or University for Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program



Other Employment

- Approximately two-thirds of associate, 38 percent of bachelor's, and 58 percent of master's degree faculty reported having worked in roles other than college-level teaching or administration in the past 10 years. (See **Figure 3.8**.)

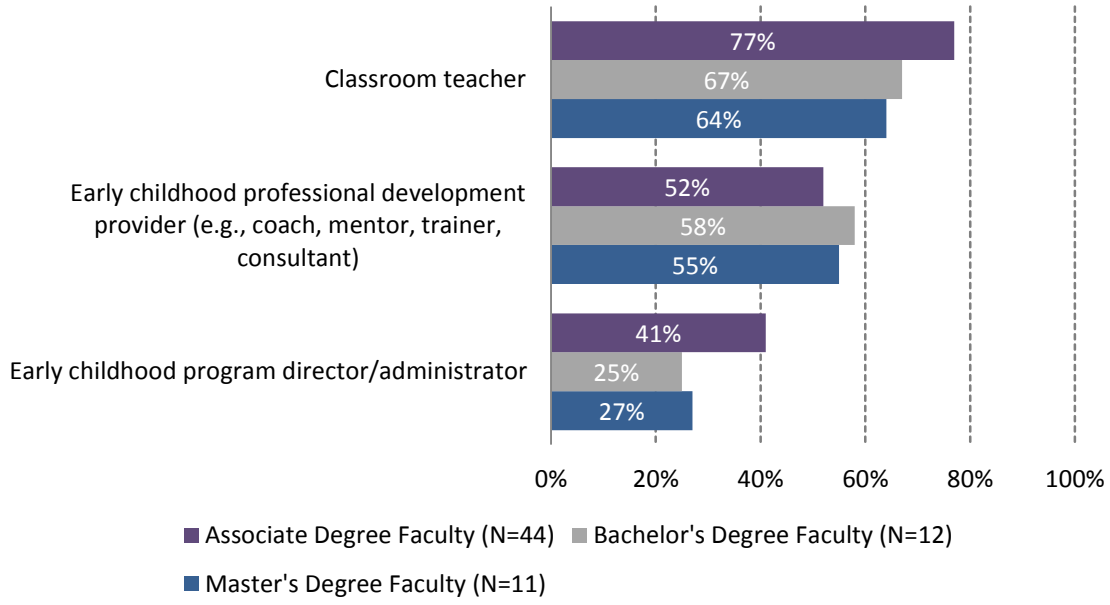
  ⇒ The most frequently reported role, reported by approximately three-fourths of associate degree and two-thirds of bachelor's and master's degree faculty members, was "classroom teacher."

  ⇒ Approximately one-half of faculty members at the associate, bachelor's, and master's degree levels reported the role of "early childhood professional development provider."

  ⇒ The roles reported by 20 percent or fewer of faculty members at the three degree levels included:
  - Teacher assistant/aide,
  - Special education teacher, and
  - Early invention specialist.

Approximately two-thirds of associate, one-third of bachelor's, and one-half of master's degree faculty reported having worked in roles other than college-level teaching or administration in the past 10 years. Figure 3.8 displays the most frequently mentioned job roles for these faculty members.

Figure 3.8: Most Frequently Reported Job Roles in the Last 10 Years of Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program



Current Employment Status

- Sixty-nine percent of associate, 45 percent of bachelor's, and 54 percent of master's degree faculty members identified themselves as adjunct faculty or part-time lecturers. (See **Figure 3.9**.)

- Approximately one-half of associate, 16 percent of bachelor's, and one-third of master's degree faculty members reported that their "only area of responsibility is teaching." (See **Figure 3.10**.) Two of the nine doctoral degree faculty members also reported this.

- Forty percent of associate, two-thirds of bachelor's, and one-half of master's degree faculty members reported other responsibilities in addition to teaching. Seven of the nine doctoral degree faculty members also reported other responsibilities. (See **Figure 3.10 and Figure 3.11**.)

  ⇒ The two most commonly reported responsibilities, reported by at least two-thirds of faculty members at the associate, bachelor's and master's degree levels, were "program administration/ coordination/program chair" and "supervising student teaching and or practicum."

  ⇒ Seventy percent of the master's degree faculty members and the seven doctoral degree faculty members who reported other responsibilities reported "research" as a responsibility in addition to teaching.

- On average, associate and bachelor's degree faculty members reported teaching five courses in a typical academic year, and master's degree faculty members reported teaching four courses. The average for the nine doctoral degree faculty members was also four courses.

  ⇒ Approximately one-third of associate (32 percent) and master's (32 percent) degree faculty members, and 45 percent of bachelor's degree faculty members, reported teaching six or more courses in a typical academic year. (See **Figure 3.12**.)

- More than 60 percent of associate (62 percent), bachelor's (63 percent), and master's (68 percent) degree faculty members reported that they did not advise any students in a typical year. Seven of the nine doctoral degree faculty members also reported that they did not advise any students in a typical year. (See **Figure 3.13**.)

- For those faculty members who reporting advising students, on average, associate degree faculty members reported advising 66 students, and bachelor's degree faculty members reported advising 40 students. The average of the seven master's degree faculty who reported advising any students was 28 students.

  ⇒ About one-half of associate degree faculty members (48 percent) who advised students reported a student advising load of between 51 and 100 students, compared to approximately one-quarter (28 percent) of the bachelor's degree programs.
  ⇒ Bachelor's degree faculty (43 percent) were more likely than associate degree faculty (21 percent) to report a student advising load of between 21 and 50 students.

Figure 3.9: Employment Status of Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program

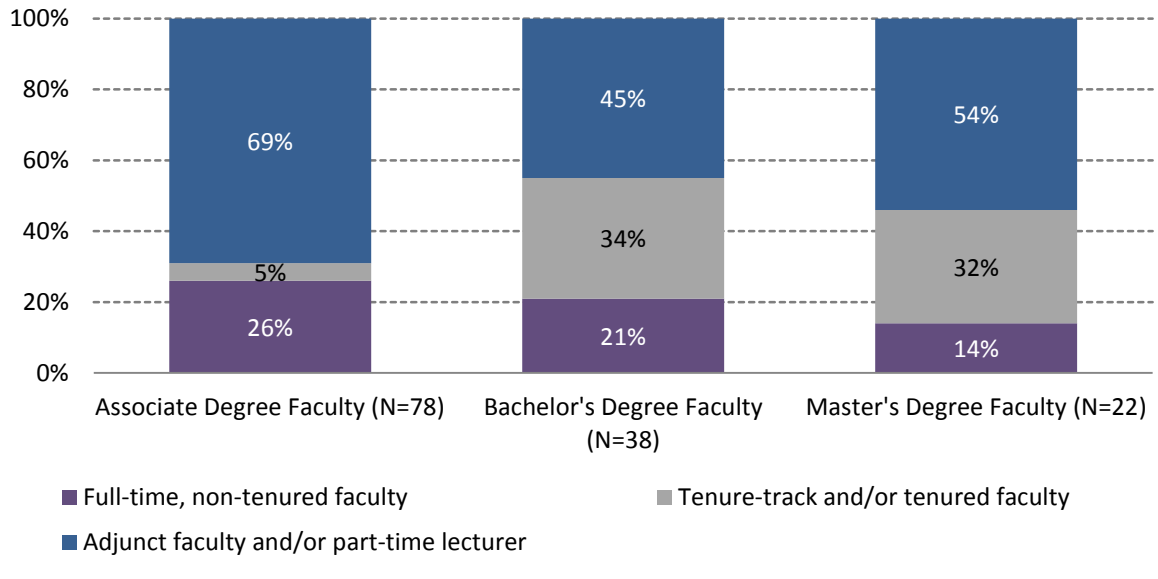


Figure 3.10: Primary Responsibility of Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program

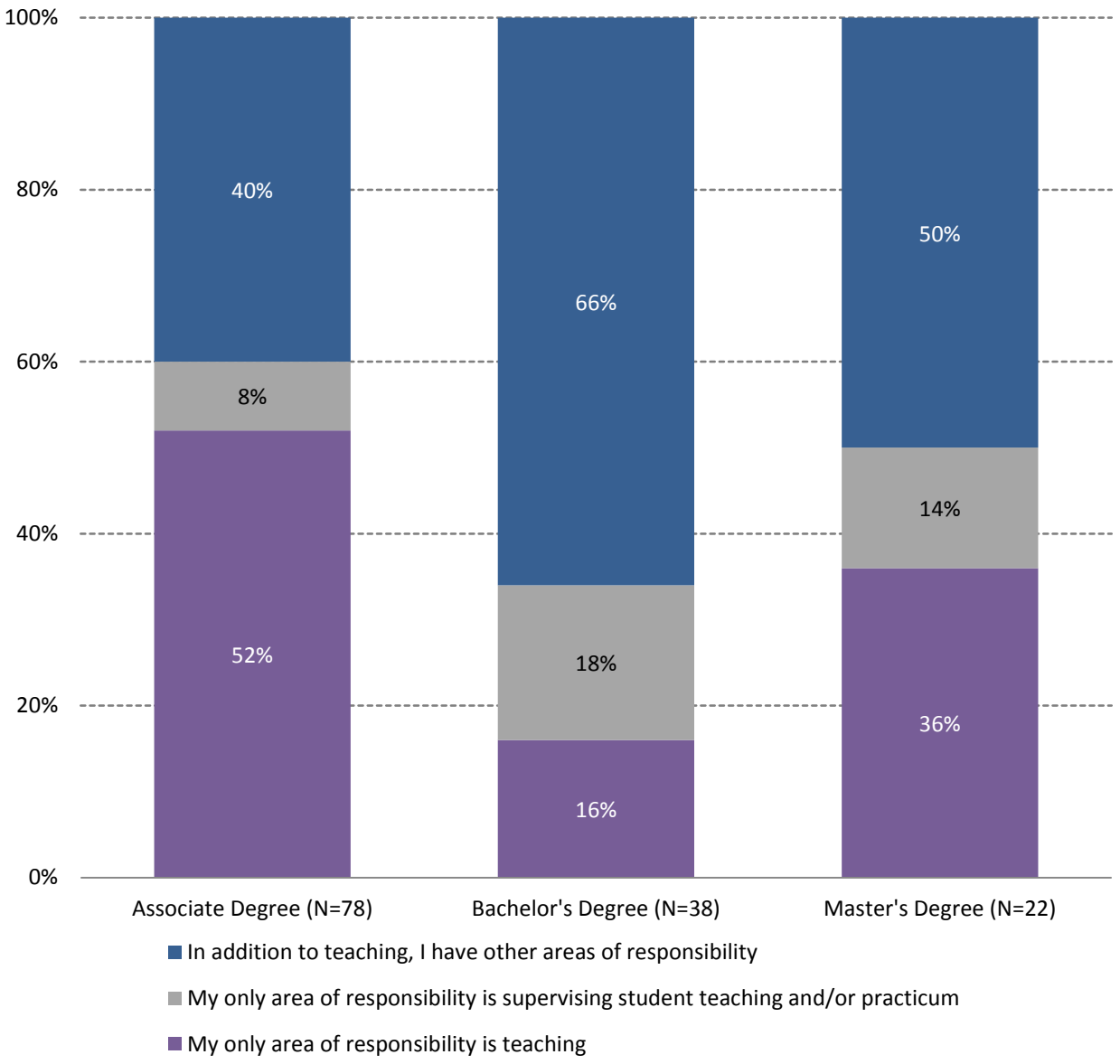


Figure 3.11: Responsibility of Faculty Participating in the Indiana Early Childhood Higher Education Inventory, in Addition to Teaching, by Degree Program

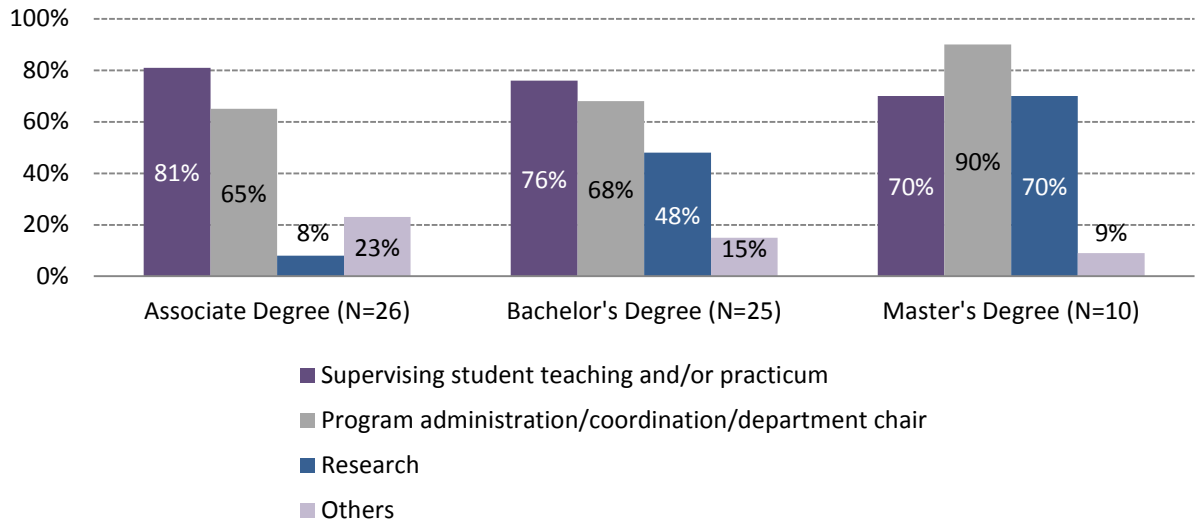


Figure 3.12: Number of Courses Taught in a Typical Academic Year by Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program

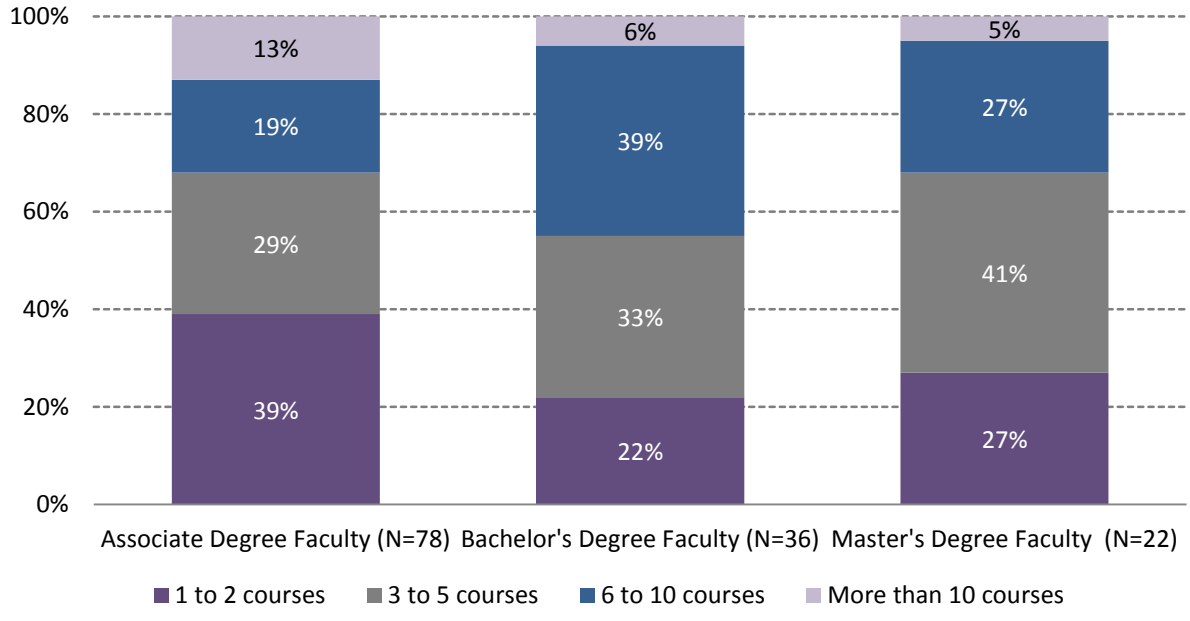
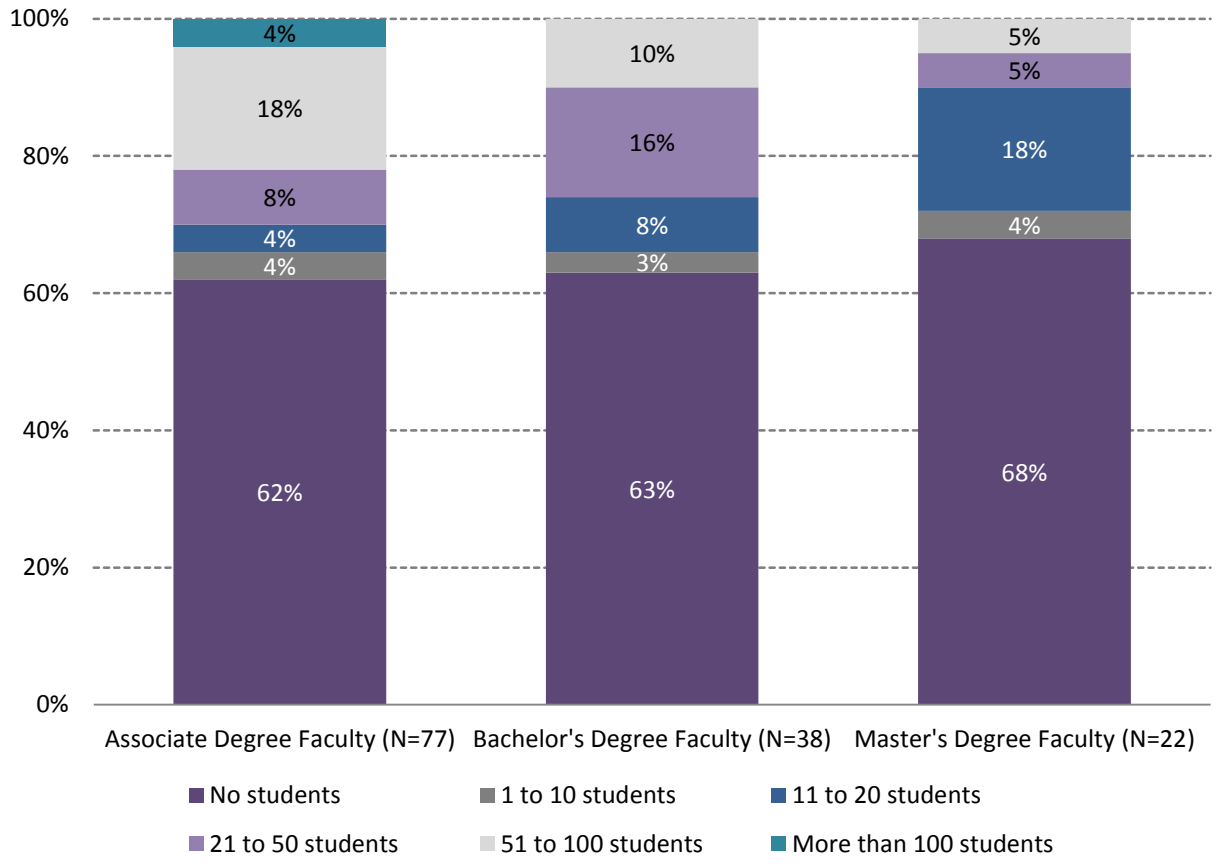


Figure 3.13: Number of Students Advised in a Typical Academic Year by Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program



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

The Inventory asked faculty members to indicate their primary teaching focus as "child development and learning," "curriculum and teaching methods," or "both equally." They were also asked to indicate their expertise related to various age groups of children, from birth through the early elementary grades.

- At least 85 percent of faculty members at the associate, bachelor's, and master's degree levels reported focusing on "curriculum and teaching methods," either exclusively or equally with "child development and learning." Eight of the nine doctoral degree faculty members also reported focusing on "curriculum and teaching methods," either exclusively or equally with "child development and learning." (See **Figure 3.14**.)

- Master's degree faculty members were more likely than associate or bachelor's degree faculty members to report focusing exclusively on "curriculum and teaching methods." (See **Figure 3.14**.)

  ⇒ Forty-three percent of master's, compared to less than one-fifth of associate and approximately one-third of bachelor's degree faculty members, reported focusing exclusively on "curriculum and teaching methods."
  ⇒ Six of nine doctoral degree faculty members also reported focusing exclusively on "curriculum and teaching methods."

- Associate degree faculty members were more likely than bachelor's or master's degree faculty members to report focusing on "child development and learning."

  ⇒ Eighty-three percent of associate degree faculty members reported focusing on "child development and learning," either exclusively or equally with "curriculum and teaching methods," compared to 68 percent of bachelor's and 57 percent of master's degree faculty.

- Less than 15 percent of faculty members at all degree levels reported focusing exclusively on "child development and learning." (See **Figure 3.14**.)

- Faculty members at all degree levels were more likely to report expertise related to preschool-age children, either exclusively or in addition to older and younger children, than expertise related to other age groups.

  ⇒ The vast majority of associate (86 percent) and approximately three-quarters of bachelor's and master's degree faculty members reported expertise related to

preschool-age children (either exclusively or in addition to other groups). Seven of the nine doctoral degree faculty did so as well. (See **Figure 3.15**.)

⇒ Approximately one-half of associate and master's, and two-thirds of bachelor's degree faculty members, reported expertise related to infants and toddlers (either exclusively or in addition to older age groups). Six of the nine doctoral degree faculty did so as well. (See **Figure 3.15**.)

⇒ Master's degree faculty members (86 percent) were more likely to report expertise related to children in the early elementary grades (either exclusively or in addition to younger age groups) than were associate (59 percent) or bachelor's degree (63 percent) faculty members. Five of the nine doctoral degree faculty members reported expertise related to children in the early elementary grades. (See **Figure 3.15**.)

Figure 3.14: Primary Teaching Focus of Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program

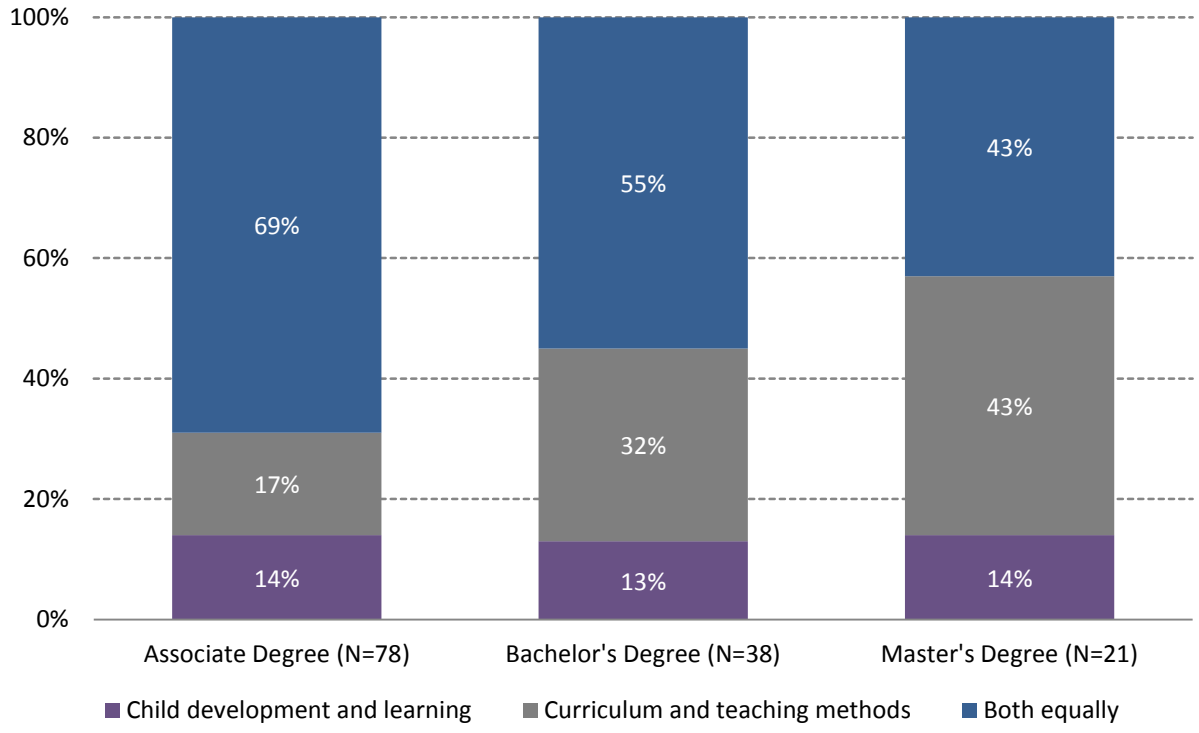
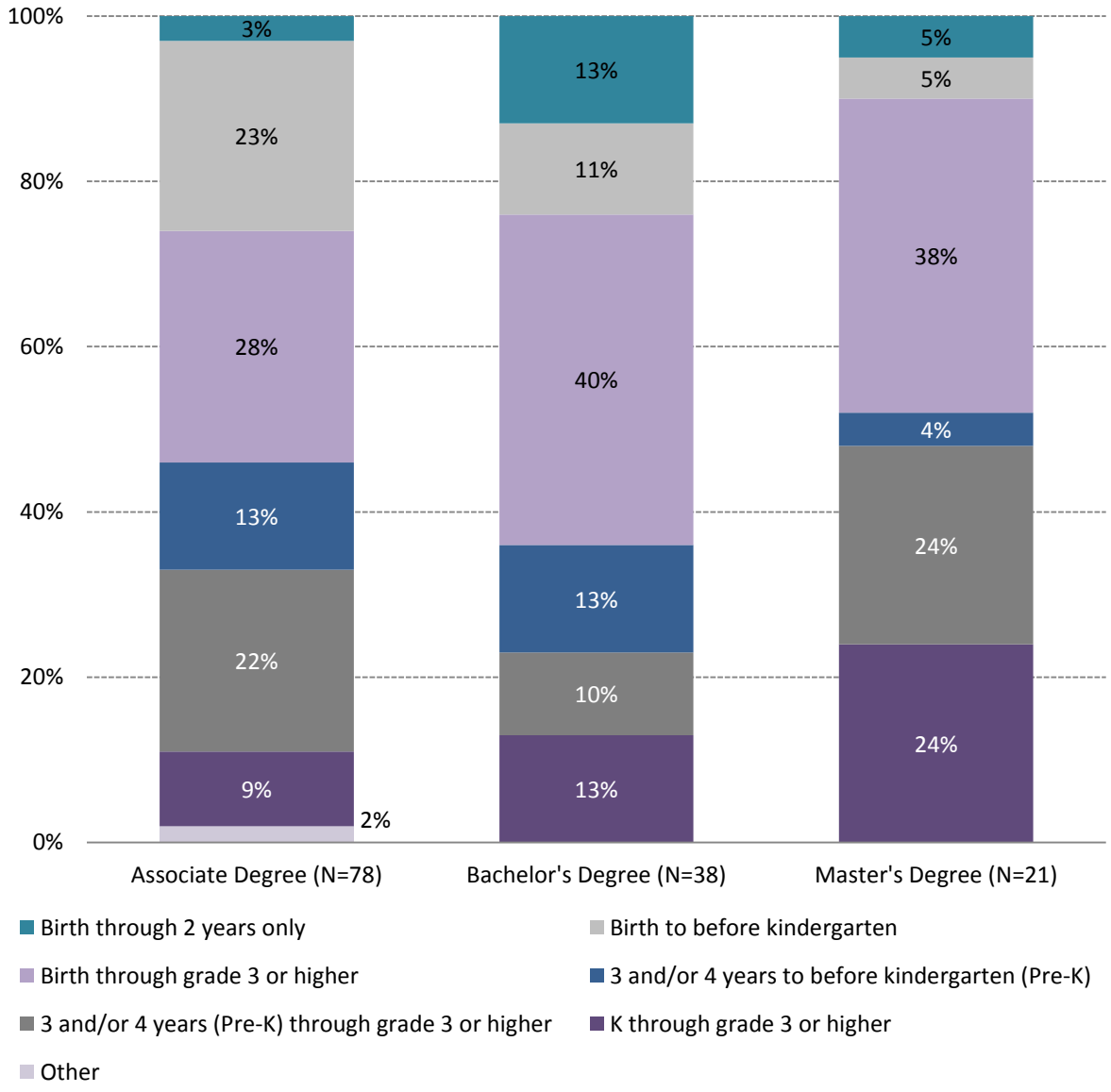


Figure 3.15: Primary Age-Group Expertise of Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program



Content and Age-Group Focus of Coursework Taught by Faculty Members Participating in the Inventory

The Inventory asked faculty members to identify the topics covered in the courses they had taught in the past two years. The topics were categorized into broad content areas:

1. Child Development and Learning,
2. Teaching Diverse Child Populations,
3. Teaching and Curriculum,
4. Teaching Skills in Early Childhood Settings,
5. Early Childhood Administration and Leadership, and
6. Early Mathematics.[1]

See **Figures 3.16** through **3.20** for lists of topics.

Faculty members were then asked to specify the age-group focus of the topics covered in their coursework. The three age groups were:

1. Infants and toddlers (birth to 2 years),
2. Preschool (3 and/or 4 years), and
3. Kindergarten through 3rd grade or higher.

See **Appendix Tables A3-1** through **A3-4**.

[1]The Early Mathematics content areas is explored in greater depth. These findings are reported in Chapter 5.

Please note that data for doctoral degree faculty members are not reported due to small sample sizes.

- All topics in the "child development and learning" content area were taught by three-quarters or more of faculty members at the associate, bachelor's, and master's degree levels, with one exception. (See **Figure 3.16** for list of topics).

  ⇒ "Development of dual language learners" was reported by 54 percent of associate, 40 percent of bachelor's, and 67 percent of master's degree faculty members.

- All topics within the "teaching diverse child populations" content area were taught by two-thirds or more of faculty members at the associate, bachelor's, and master's degree levels, with one exception. (See **Figure 3.17** for list of topics).

  ⇒ "Teaching children who are dual language learners" was reported by 56 percent of associate and 55 percent of bachelor's degree faculty members.

- All topics in the "teaching and curriculum" content area were taught by at least 60 percent of faculty members at the associate, bachelor's, and master's degree levels, with the following exception. (See **Figure 3.18** for list of topics.)

  ⇒ "Teaching science skills to children", "teaching art to children", and "implementing research-based curriculum" were taught by approximately one-half of the bachelor's degree faculty members.

- All topics in the "teaching skills in early childhood settings" content area were taught by at least 80 percent of faculty members at the associate, bachelor's, and master's degree levels. (See **Figure 3.19** for list of topics).

- Faculty members at the associate, bachelor's, and master's degree levels were less likely to report teaching all topics within the "early childhood administration and leadership" content area than all topics within the other content areas described above. (See **Figure 3.20** for list of topics.)

  ⇒ Five of the 15 topics listed in the Inventory were taught by at least one-half of associate and bachelor's degree faculty members.
  ⇒ Seven of the 15 topics were taught by at least one-half of master's degree faculty members.

- The following "early childhood administration and leadership" topics were taught by at least 70 percent of faculty members at the associate, bachelor's, and master's degree levels:

  ⇒ Guiding practitioners in implementing curriculum and appropriate teaching strategies,
  ⇒ Building relationships with other teachers and/or early childhood professionals, and
  ⇒ Assessment and documentation to inform teaching and learning.

- Master's degree faculty members (71 percent) were more likely to report teaching the "early childhood system and public policy" topic than were associate (46 percent) or bachelor's degree (40 percent) faculty members.

- The topics mentioned by less than 45 percent of faculty members at the associate, bachelor's, and master's degree level were:

  ⇒ Organizational development and change,
  ⇒ Fiscal procedures and management,
  ⇒ Grant management and proposal writing,
  ⇒ Human resources/personnel policies, and
  ⇒ Using technology to maintain records and enhance operations.

- Overall, faculty members at the associate, bachelor's, and master's degree levels were more likely to report focusing content on working with preschoolers than with children in other age groups. For most topics, at least 85 percent of faculty members at all degree levels reported focusing content on preschoolers. (See **Appendix Tables A3-1** through **A3-4**.)

- The focus on infants and toddlers and on children in the early elementary grades varied by individual topic and degree level. For most topics, at least two-thirds of faculty members at all levels reported focusing the content on these age groups. (See **Appendix Tables A3-1** through **A3-4.**)

*The following figures display the percentages of faculty members at each degree level who reported teaching various topics within the past two years. See **Appendix Tables A3-1** through **A3-4** for the age-group focus of the content taught.*

Figure 3.16: Coursework on Child Development and Learning Taught by Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program

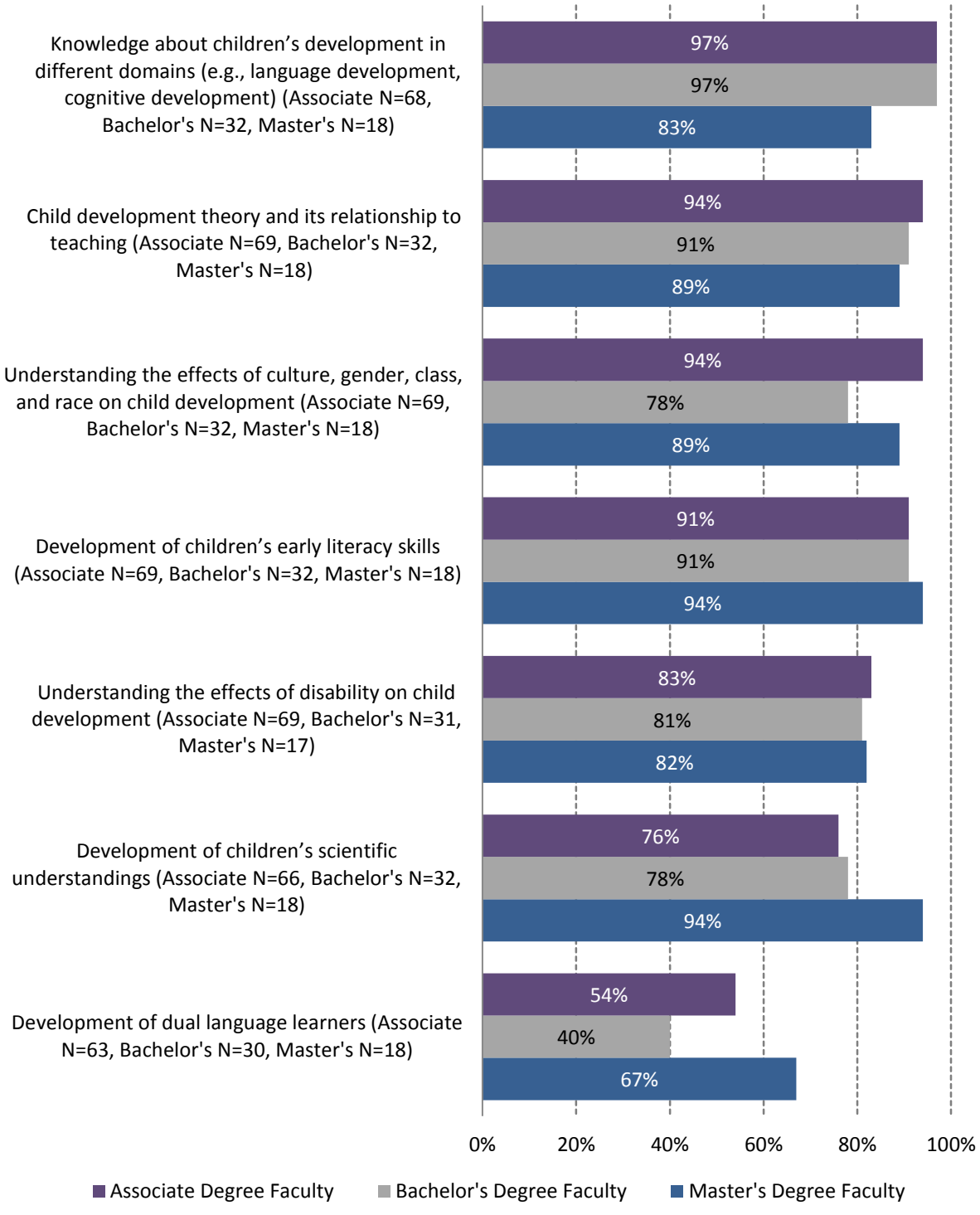


Figure 3.17: Coursework on Teaching Diverse Child Populations Taught by Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program

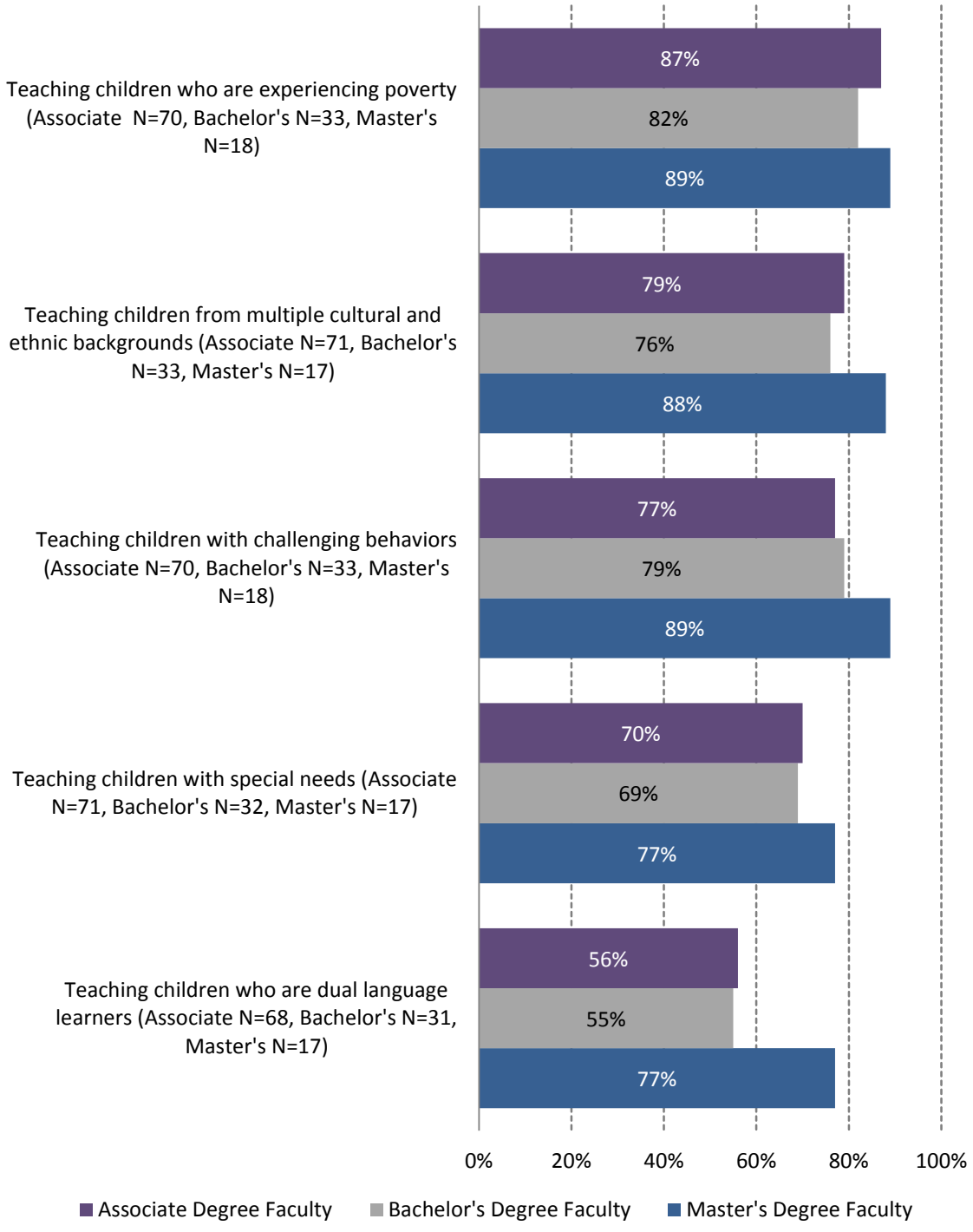


Figure 3.18: Coursework on Teaching and Curriculum Taught by Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program

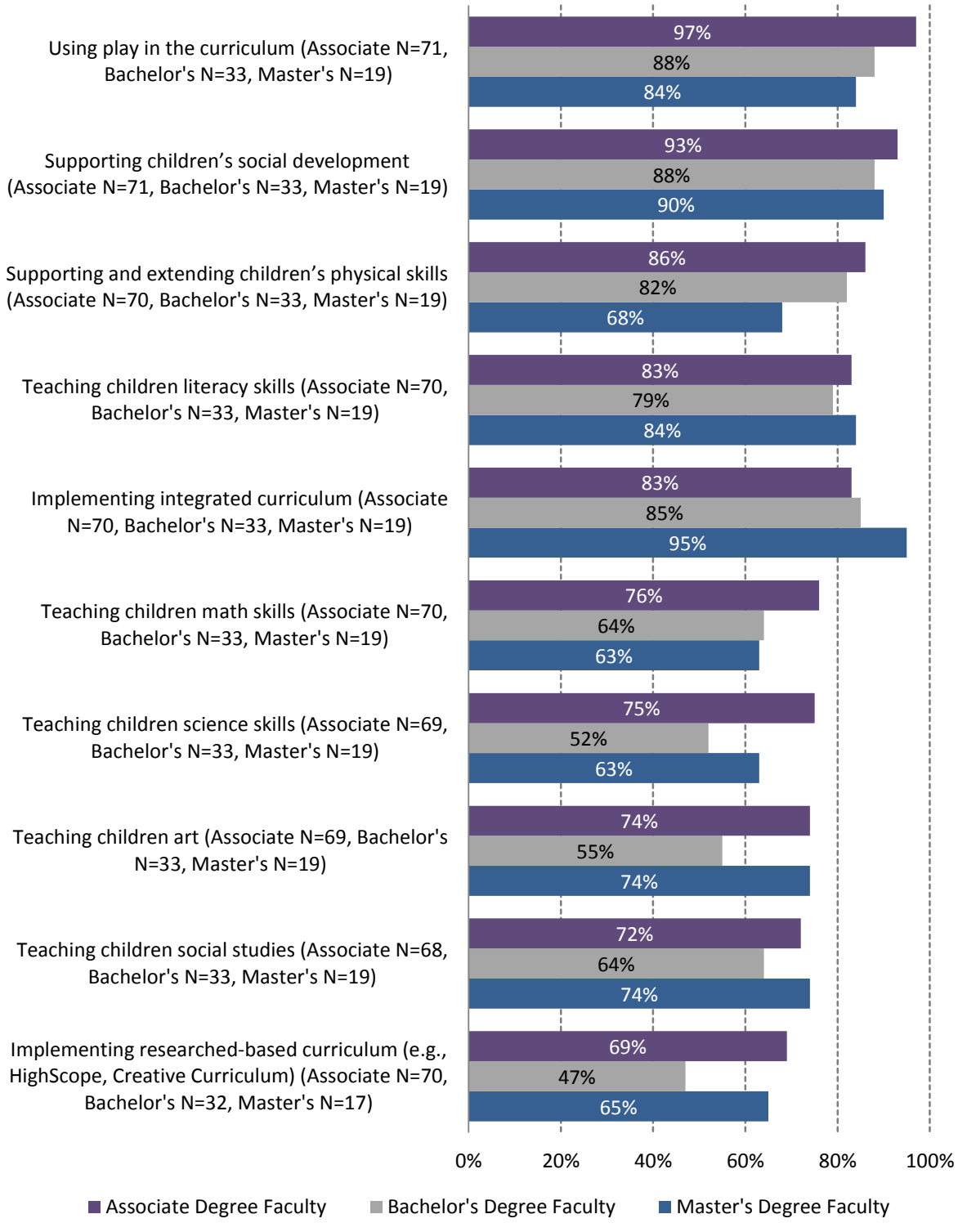


Figure 3.19: Coursework on Teaching Skills in Early Childhood Settings Taught by Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program

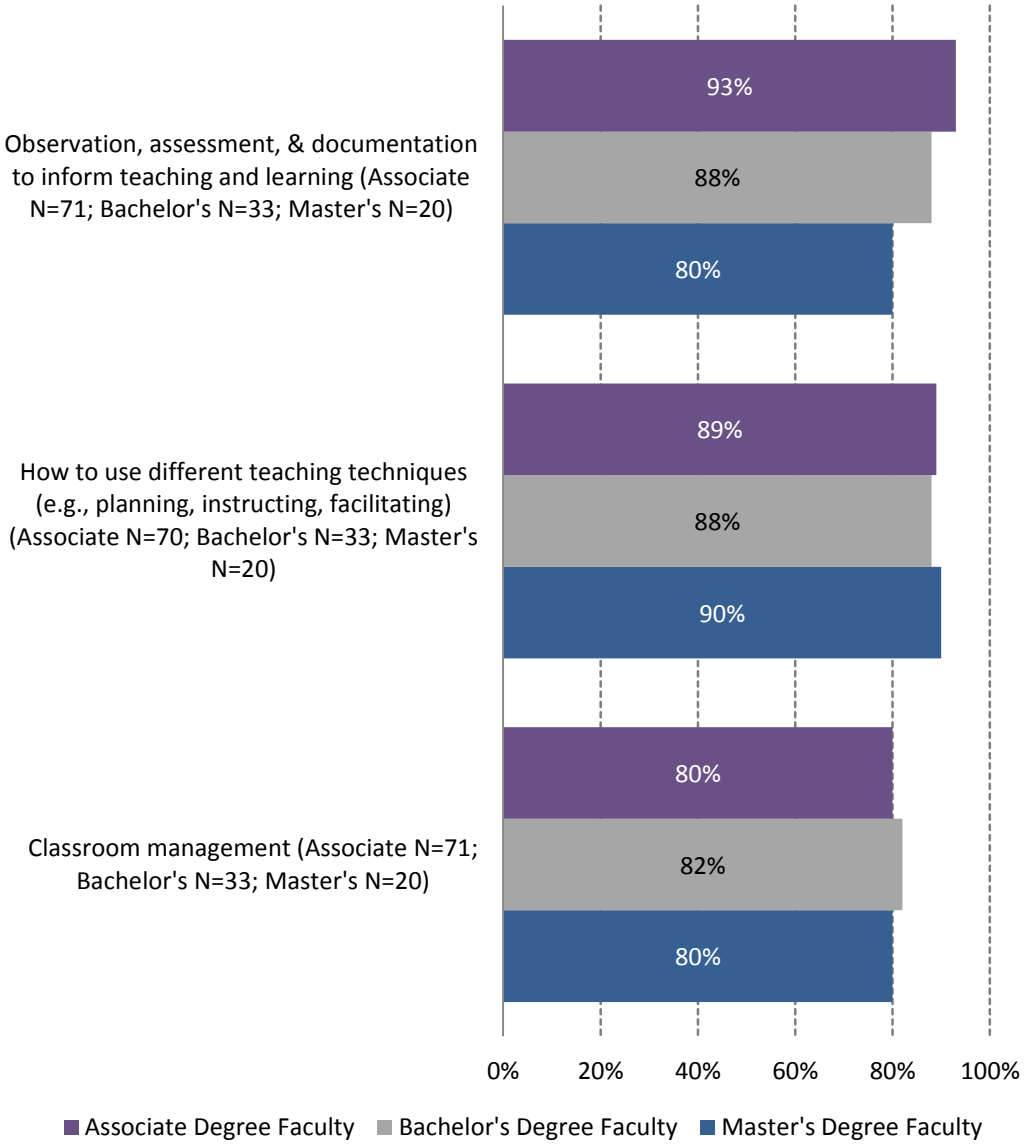


Figure 3.20: Coursework on Administration and Leadership (Supervision/Operations) Taught by Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program

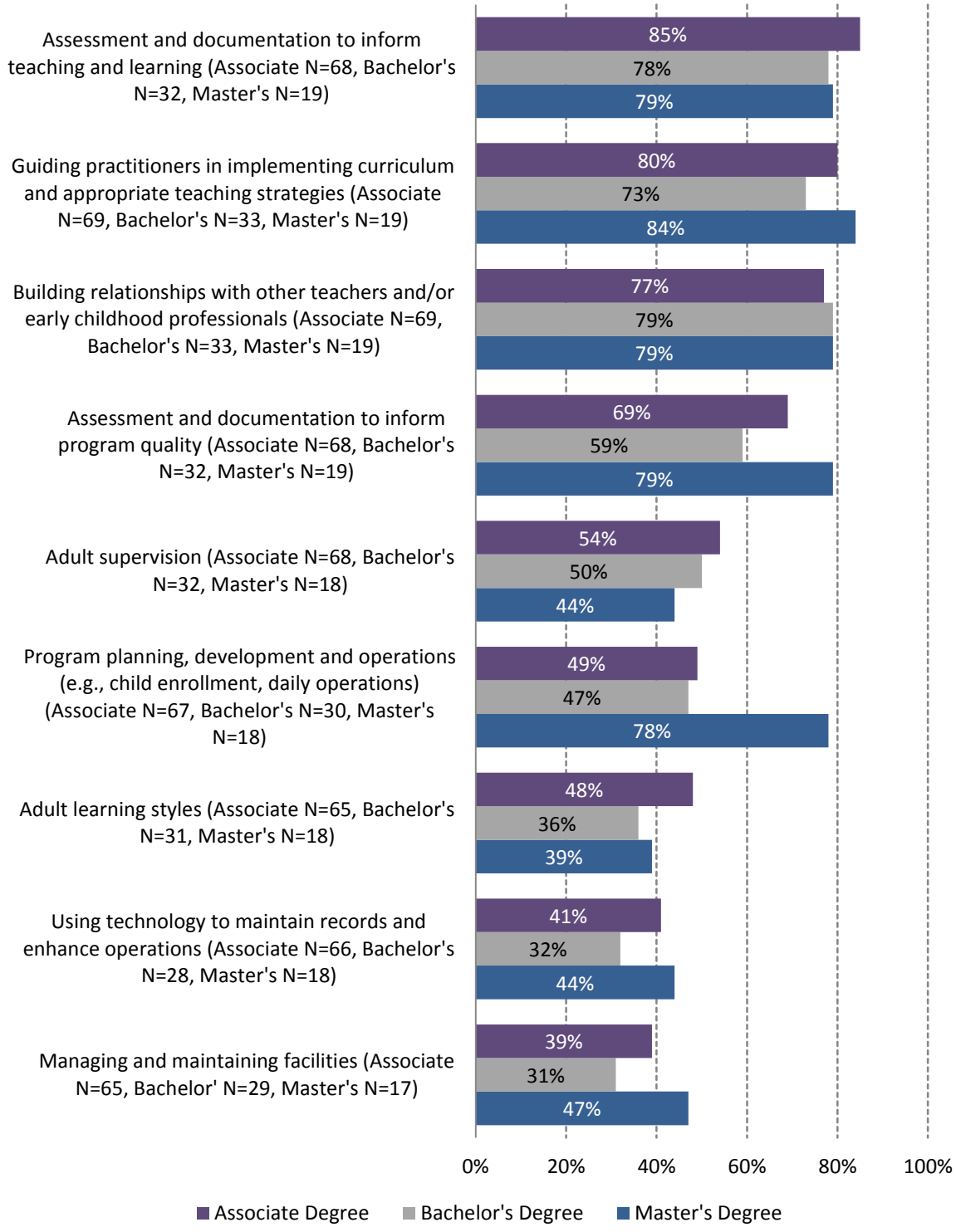
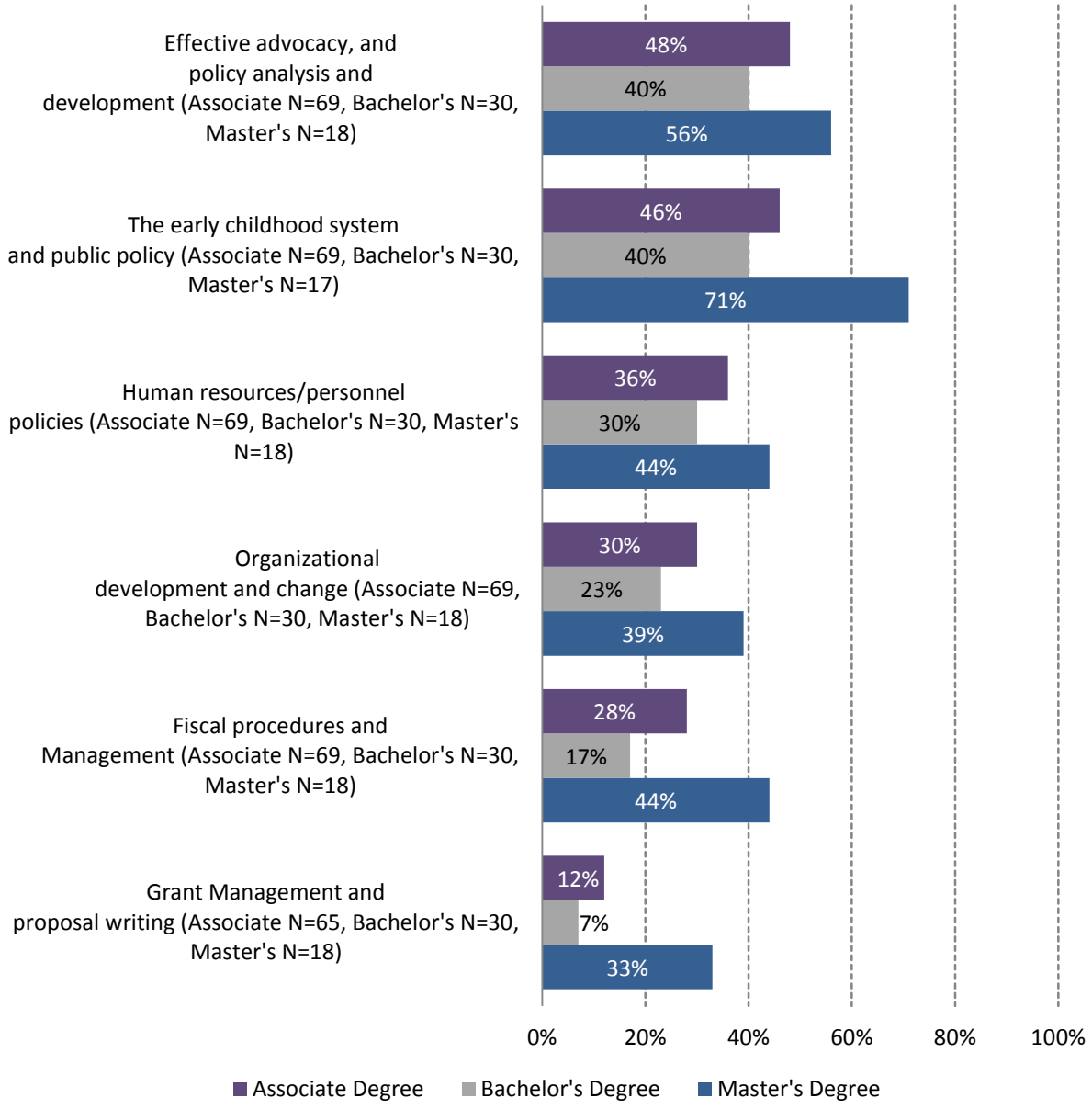


Figure 3.20: Coursework on Administration and Leadership (Organization/Systems) Taught by Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program (Continued)



Professional Development Opportunities and Needs of Faculty Members Participating in the Inventory

The Inventory asked faculty members whether they had participated in professional development opportunities in the past three years. The Inventory then listed 27 topics, and asked faculty members who responded "yes" 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, and
- Early childhood administration and leadership.

See **Figure 3.21**, and **Appendix Tables A3-5** through **A3-8**, for lists of topics.

The list also included topics related to the two areas of special interest:[1]

- Family engagement, and
- Early mathematics.

See **Appendix Tables A3-9** and **A3-10**, for list of topics.

The next series of questions asked faculty members to indicate areas in which it would be helpful to gain additional knowledge or training. Faculty members were provided with a list of 22 topics, and were asked to indicate whether it would be helpful to have additional knowledge or training on these topics. The list included multiple topics related to:

- Diverse child populations,
- Adult learners,
- Teaching skills and assessment, and
- Early childhood administration and leadership.

The list also included one general topic related to early mathematics, and one general topic related to family engagement.[1]

See **Figure 3.22**, and **Appendix Tables A3-11** through **A3-14**, for lists of topics.

[1] In separate questions, the Inventory asked more specifically about faculty members' interest in professional development related to early mathematics and family engagement. These findings are reported in Chapter 5.

Professional Development Opportunities

- Almost all faculty members at all degree levels reported having participated in professional development during the last three years (90 percent of associate degree faculty, 91 percent of bachelor's degree faculty, and 90 percent of master's degree faculty).

- Four topics were reported by at least one-third of faculty members at the associate, bachelor's, and master's degree levels. (See **Figure 3.21**, and **Appendix Tables A3-5** through **A3-8**, for lists of topics.) These topics were:

  ⇒ Teaching practitioners to work with children from diverse cultural backgrounds,
  ⇒ Teaching practitioners to work with children with special needs,
  ⇒ Strategies and techniques for mentoring/coaching of adult students, and
  ⇒ Child assessment.

- The professional development opportunities participated in by less than 15 percent of faculty members at the associate, bachelor's and master's degree level were: (See **Figure 3.21**, and **Appendix Tables A3-5** through **A3-8**, for lists of topics.)

  ⇒ Teaching adult students who are English language learners, and
  ⇒ Strategies to help practitioners who struggle with mathematics to build confidence in their ability to faculty children's mathematical understanding and skill.

Professional Development that Faculty Members Indicate Would Be Helpful

- Faculty members at the associate, bachelor's, and master's degree levels indicated a number of areas in which it would be helpful to gain additional knowledge or training. The topics mentioned by at least 40 percent of faculty at the three degree levels included a focus on working with diverse groups of children. (See **Figure 3.22**, and **Appendix Tables A3-11** through **A3-14**, for lists of topics.) These included:

  ⇒ Teaching practitioners to work with specific groups of children (diverse cultural backgrounds, dual language learners, and/or children with special needs),
  ⇒ Teaching practitioners to use technology with children, and
  ⇒ Early childhood teacher assessment (e.g., CLASS).

Figure 3.21 *displays the professional development experiences reported most frequently (by at least 40 percent of faculty members at each degree level) and least frequently (by less than 30 percent of faculty members at each degree level).* ***Appendix Tables A3-5*** *through* ***A3-8*** *display the full list of professional development experiences.*

Figure 3.22 *displays the professional development topics mentioned most frequently as helpful (by at least 40 percent of faculty members at each degree level) and least frequently (by 30 or less of faculty members at each degree level).* ***Appendix Tables A3-11*** *through* ***A3-14*** *display the full list of professional development topics.*

Figure 3.21: Professional Development Experiences in Last Three Years of Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program: Most and Least Frequently Reported Topics

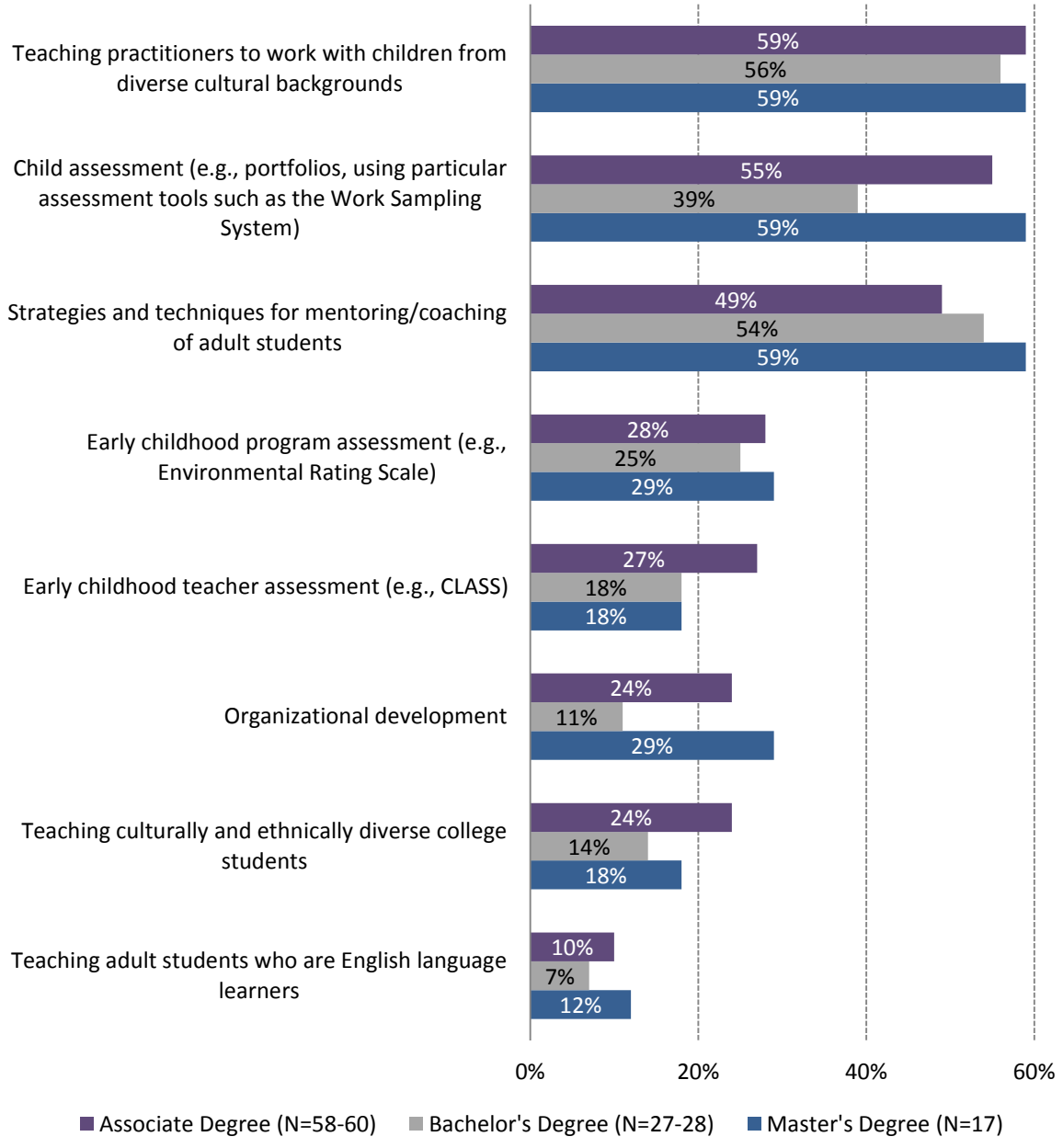
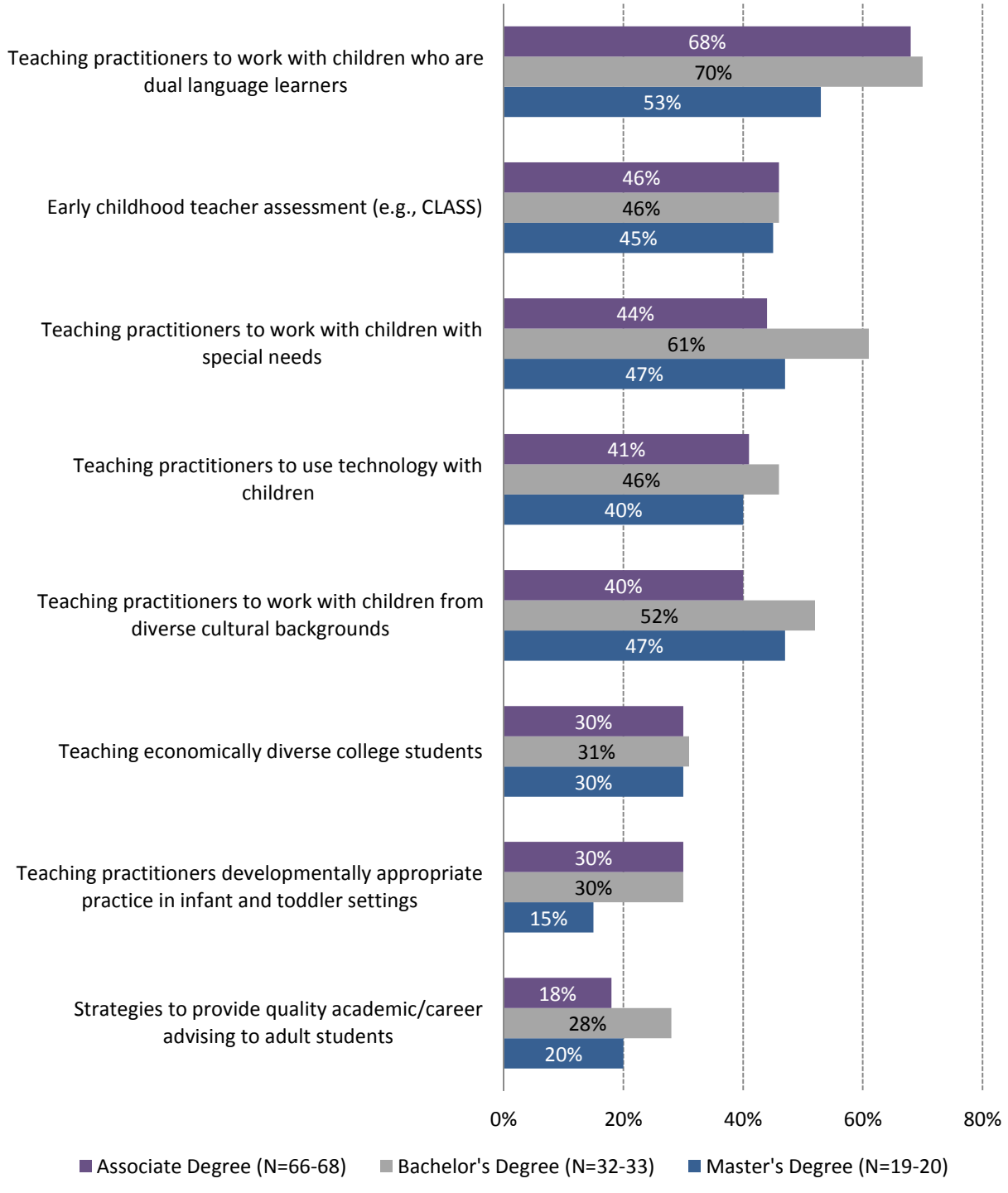


Figure 3.22: Professional Development Topics that Would be Helpful to Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program: Most and Least Frequently Reported Topics



CHAPTER 4: CHALLENGES FACING EARLY CHILDHOOD DEGREE PROGRAMS, AND ADDITIONAL RESOURCES NEEDED

Challenges Facing Early Childhood Degree Programs

The Inventory asked program leads whether their degree programs were facing any challenges. Program leads who responded "yes" were then asked to identify challenges from a list of 23 possible responses. (See **Figure 4.1** and **4.2**, and **Appendix Tables A4-1** and **A4-2**, for the list of challenges.)

Please note that data for the master's and doctoral degree programs are not included in the figures because of small sample sizes. The data are reported in the narrative when appropriate.

- The vast majority of associate (86 percent) and bachelor's (90 percent) degree programs reported facing at least one challenge. The five master's degree programs that responded to this question also reported facing at least one challenge.

Degree programs reporting at least one challenge:

- The two challenges most frequently reported by degree programs at the associate and bachelor's degree levels were:

  ⇒ Faculty administrative responsibilities that interfere with time with students (e.g., lack of time for teaching), and
  ⇒ Need for additional faculty expertise in teaching young children who are dual language learners.

- Some of the challenges varied by levels of degree program. For example:

  ⇒ Associate degree programs were at least twice as likely as bachelor's degree programs to mention:
    * Need for additional faculty expertise in teaching infants and toddlers,
    * Insufficient academic support for students for whom English is a second language, and
    * Lack of articulation between two-year- and four-year-college early childhood degree programs.

⇒ Bachelor's degree programs were at least twice as likely as associate degree programs to mention:

- Insufficient access to quality clinical experience sites,
- Insufficient ability to support students to complete the program (e.g., basic skills supports, tutoring),
- Need for additional faculty expertise in teaching preschool-age children,
- Need for additional faculty expertise in teaching young children with special needs, and
- Need for additional faculty expertise in working with and engaging diverse populations of families.

Figure 4.1: Challenges Related to Lack of Resources and Support Facing Indiana Early Childhood Higher Education Degree Programs, By Program

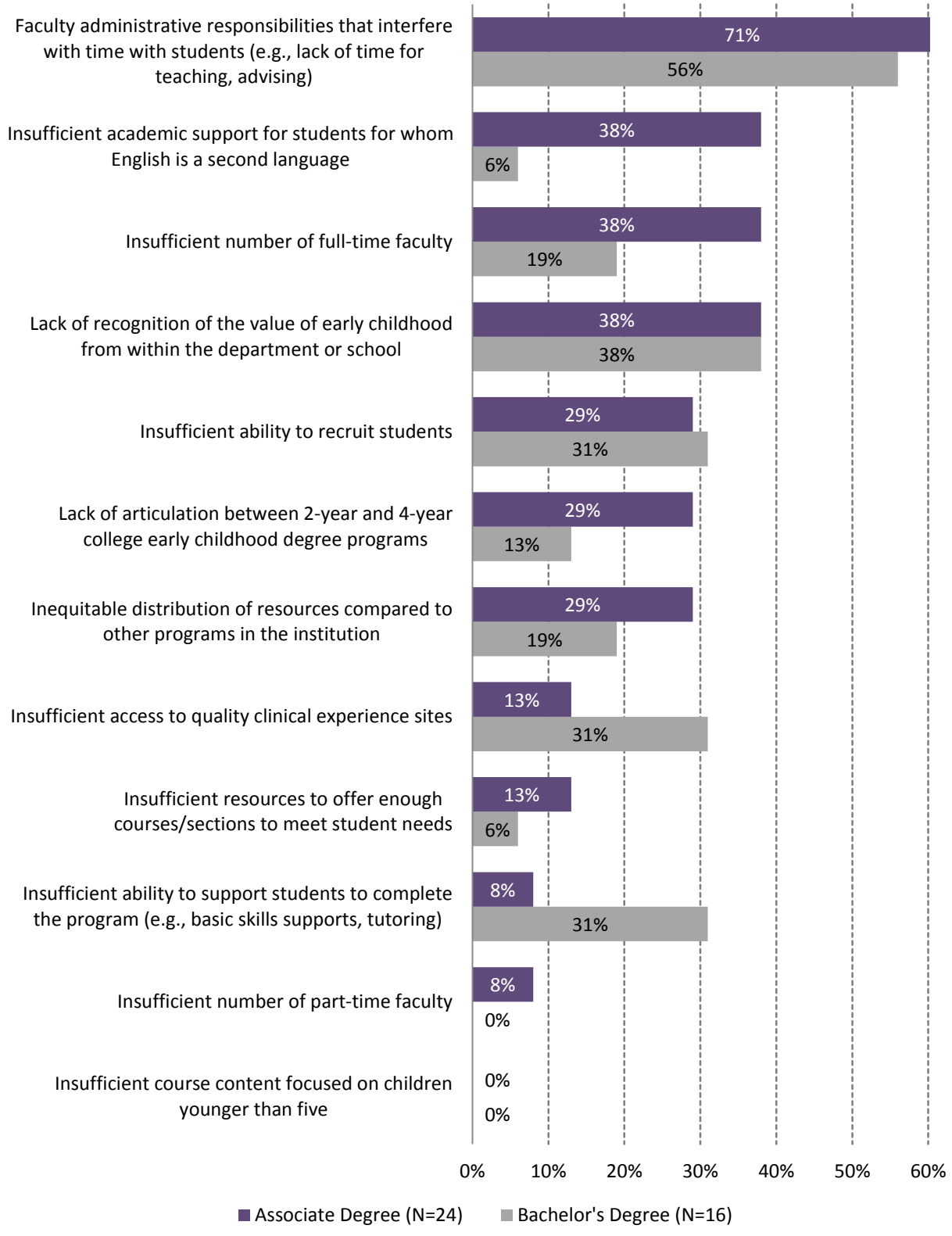
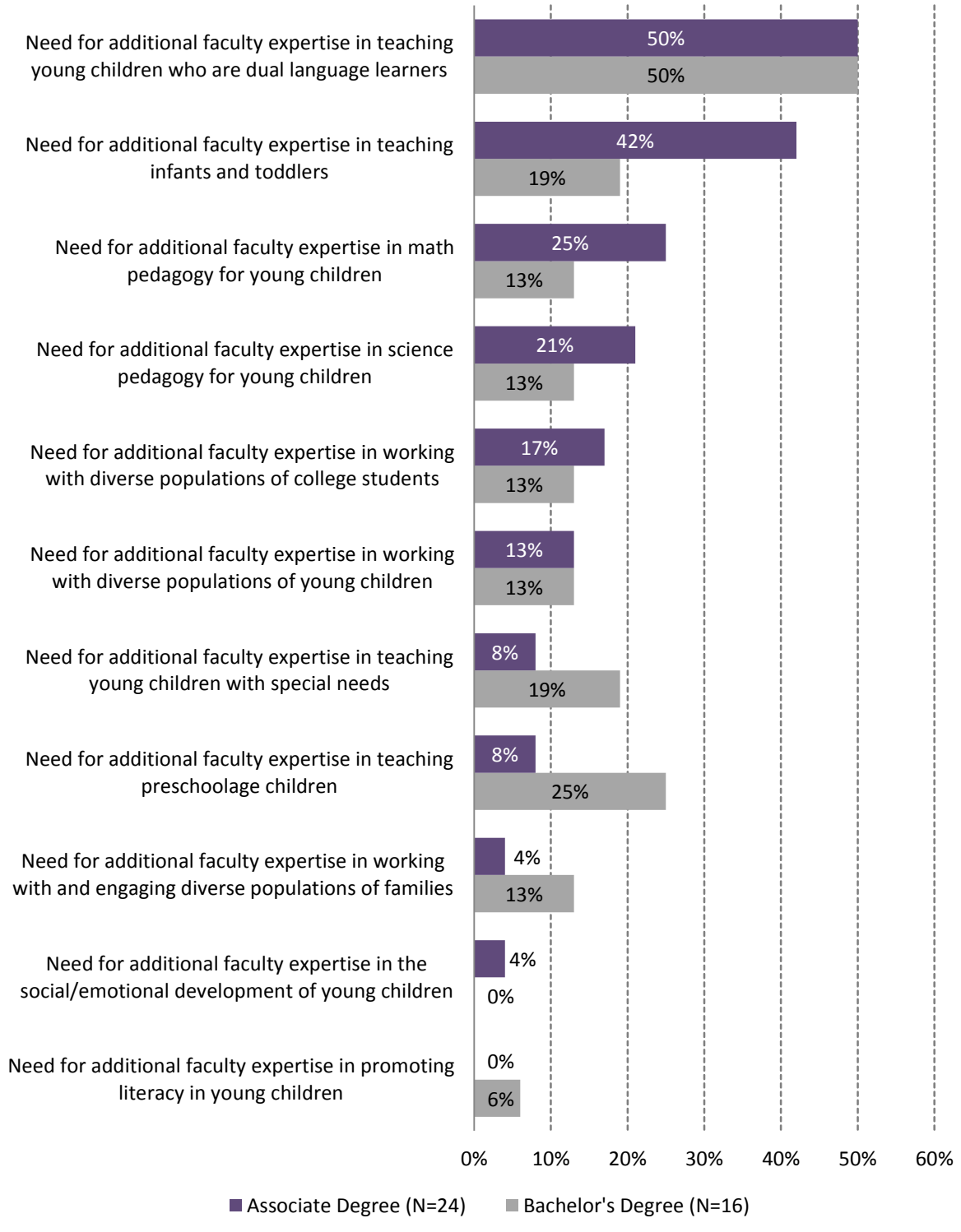


Figure 4.2: Challenges Related to Need for Additional Faculty Expertise Facing Indiana Early Childhood Higher Education Degree Programs, By Program



Additional Resources Needed for Improving Early Childhood Degree Programs

The Inventory asked faculty members whether resources were needed to improve the early childhood degree program(s) at their college or university. Faculty members who responded "yes" were then asked to identify needed resources from a list of 16 possible responses. (See **Figures 4.3** and **4.4** for the list of resources.)

Please note that the data for the doctoral degree faculty members are not reported here because of small sample sizes.

- About one-half of associate (52 percent) and master's (53 percent) and 60 percent of bachelor's degree faculty members reported that additional resources were needed to improve the early childhood degree program(s) at their college or university.

Among faculty members who reported needing at least one additional resource:

- The most frequently cited resource by associate (63 percent) and bachelor's (72 percent) degree faculty members was "resources for faculty professional development".

- Other resources cited by at least 40 percent of associate and bachelor's degree faculty members were:

  ⇒ Increased academic support for students,
  ⇒ Increased financial resources for students,
  ⇒ Funding for travel, and

- The two resources mentioned most frequently by master's degree faculty members were:

  ⇒ Increased academic support for students (50 percent), and
  ⇒ Resources for program planning and improvement (63 percent).

- Although the majority of faculty members identified as White/Caucasian and English-speaking only, less than one-third of faculty members at all degree levels mentioned the need for resources to increase the racial/ethnic or linguistic diversity among faculty.

- Some of the resources mentioned by faculty members varied by program degree levels. For example:

  ⇒ Associate degree faculty members (56 percent) were more likely to mention "additional full-time faculty" than were bachelor's (28 percent) or master's (33 percent) degree faculty members.
  ⇒ Bachelor's degree faculty members (56 percent) were more likely to mention "effective mentoring of faculty" than were associate (41 percent) or master's (11 percent) degree faculty members.
  ⇒ Master's degree faculty members (38 percent) were more likely to mention "more rigorous evaluation of the program to develop program improvements" than were associate (16 percent) or bachelor's (22 percent) degree faculty members.

Figure 4.3: Additional Program-Related Resources Needed for Improving Early Childhood Degree Programs, as Reported by Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Program

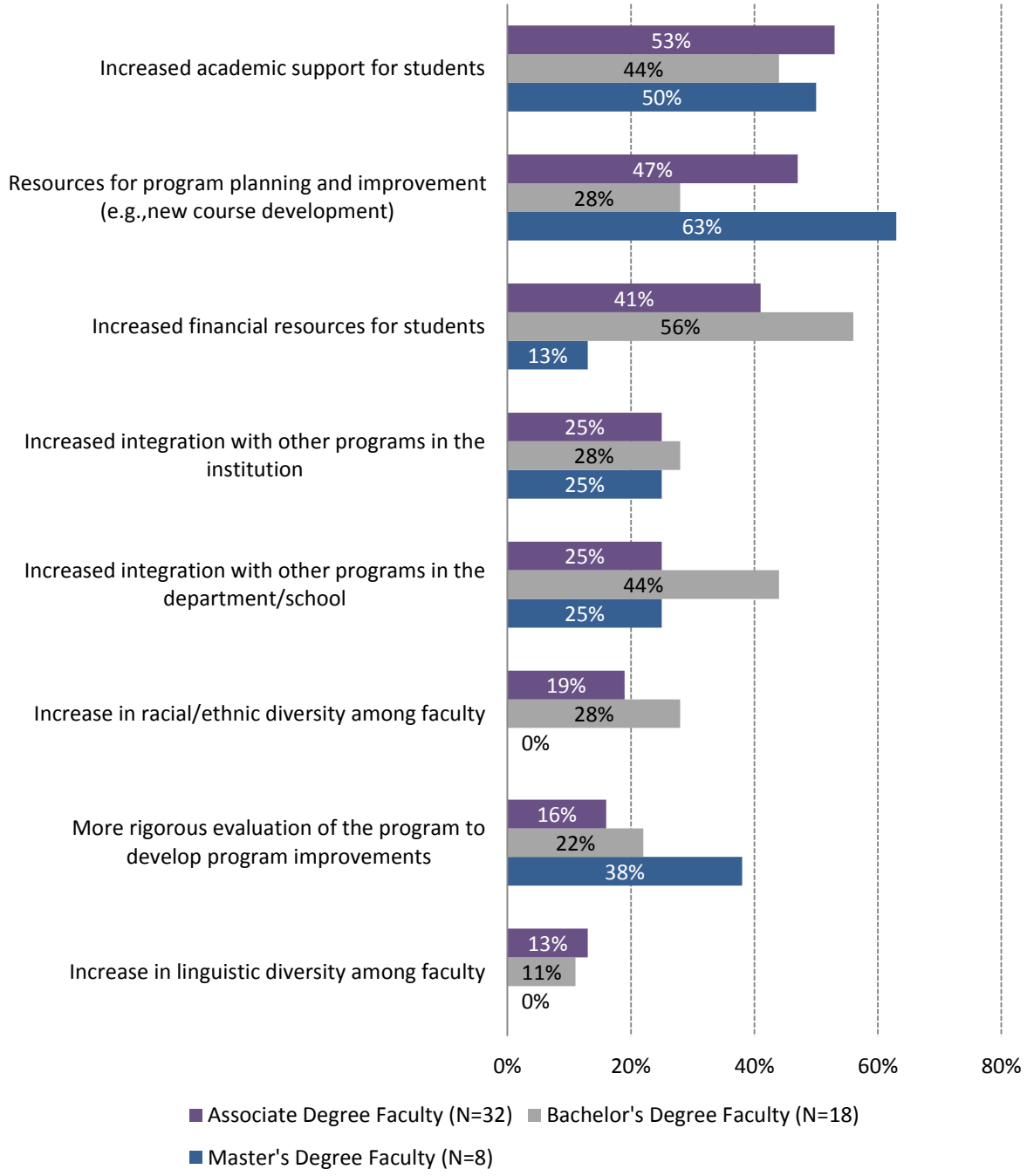
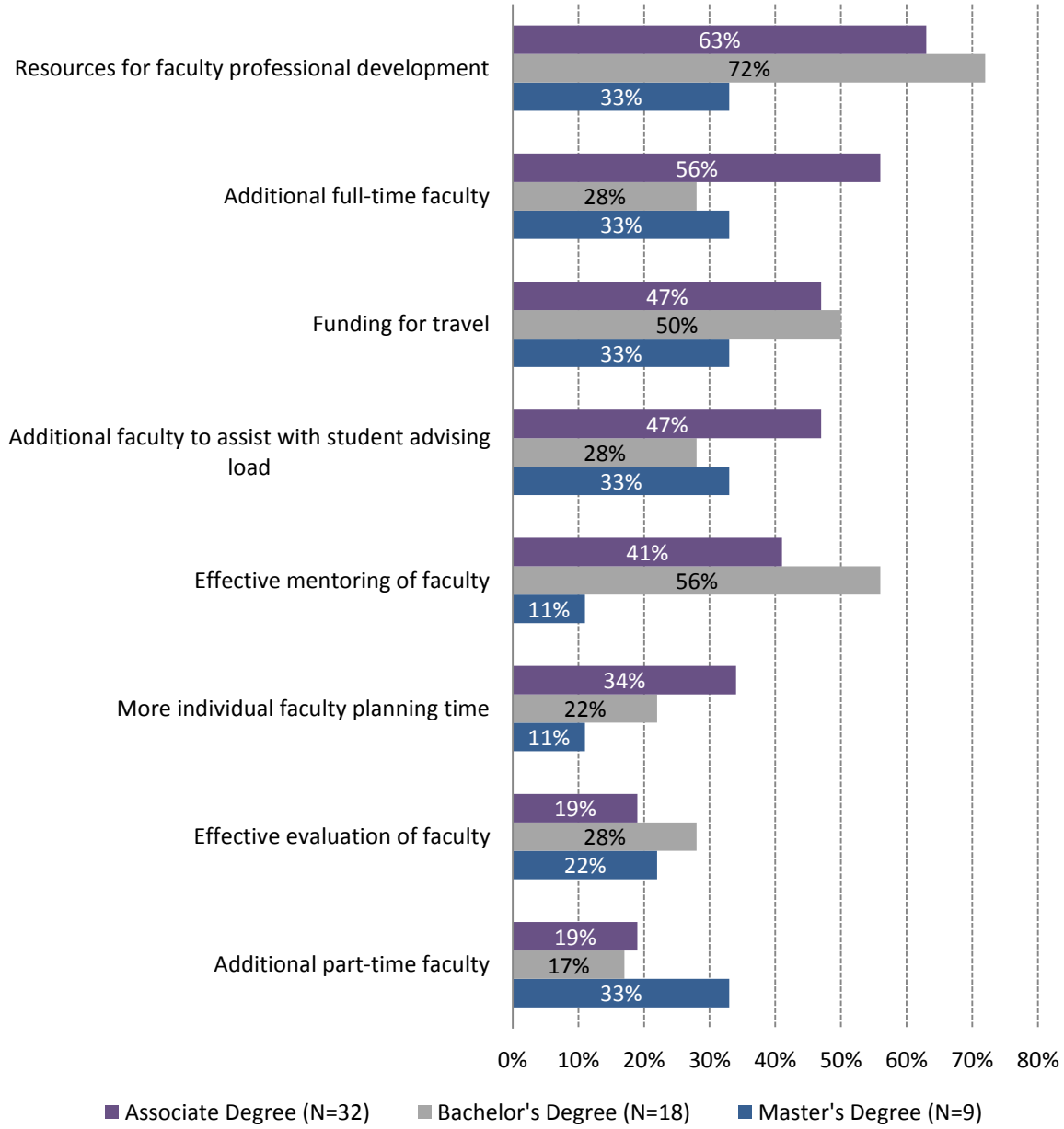


Figure 4.4: Additional Faculty-Related Resources Needed for Improving Early Childhood Degree Programs, as Reported by Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Program



CHAPTER 5: FAMILY ENGAGEMENT AND EARLY MATHEMATICS

Importance of the Inclusion of Various Domains in Teacher Preparation Programs

The Inventory explored how faculty members view the importance of including the domains of family engagement and early mathematics, relative to other domains, in higher education 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 how important they considered it for various domains to be included in these degree programs.

The domains included:

- **Early mathematics**: Understanding the domains and sequence of mathematical knowledge in young children, and how to promote their mathematical understanding and ability to solve problems.
- **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.
- **Literacy**: Understanding the components and sequence of literacy development in young children, and how to promote their skills related to oral and written language.
- **Social-emotional development**: Understanding socio-emotional development and its relationship to learning, and how to support children's socio-emotional skills.
- **Motor development**: Understanding normal and atypical motor development in young children and its relationship to learning, and how to foster children's motor skill development.

See **Figure 5.1** and **Appendix Table A5-1**.

Please note that data on doctoral degree faculty members are not reported here because of the small sample size.

- Faculty members at the associate, bachelor's and master's degree levels were less likely to consider it "very important" to include the early mathematics domain than they were for other domains, including family engagement, in teacher preparation programs for practitioners working with infants and toddlers.

- ⇒ Approximately one-third of associate, one-quarter of bachelor's, and 15 percent of master's degree faculty members considered it "very important" to include the math domain for teachers of infants and toddlers.
- ⇒ Seventy percent of associate, 64 percent of bachelor's, and 60 percent of master's degree faculty members considered it "very important" to include the literacy domain for teachers of infants and toddlers.
- ⇒ At least 80 percent of faculty members at each degree level considered it "very important" to include the domains of family engagement, social-emotional development, and motor development for teachers of infants and toddlers.

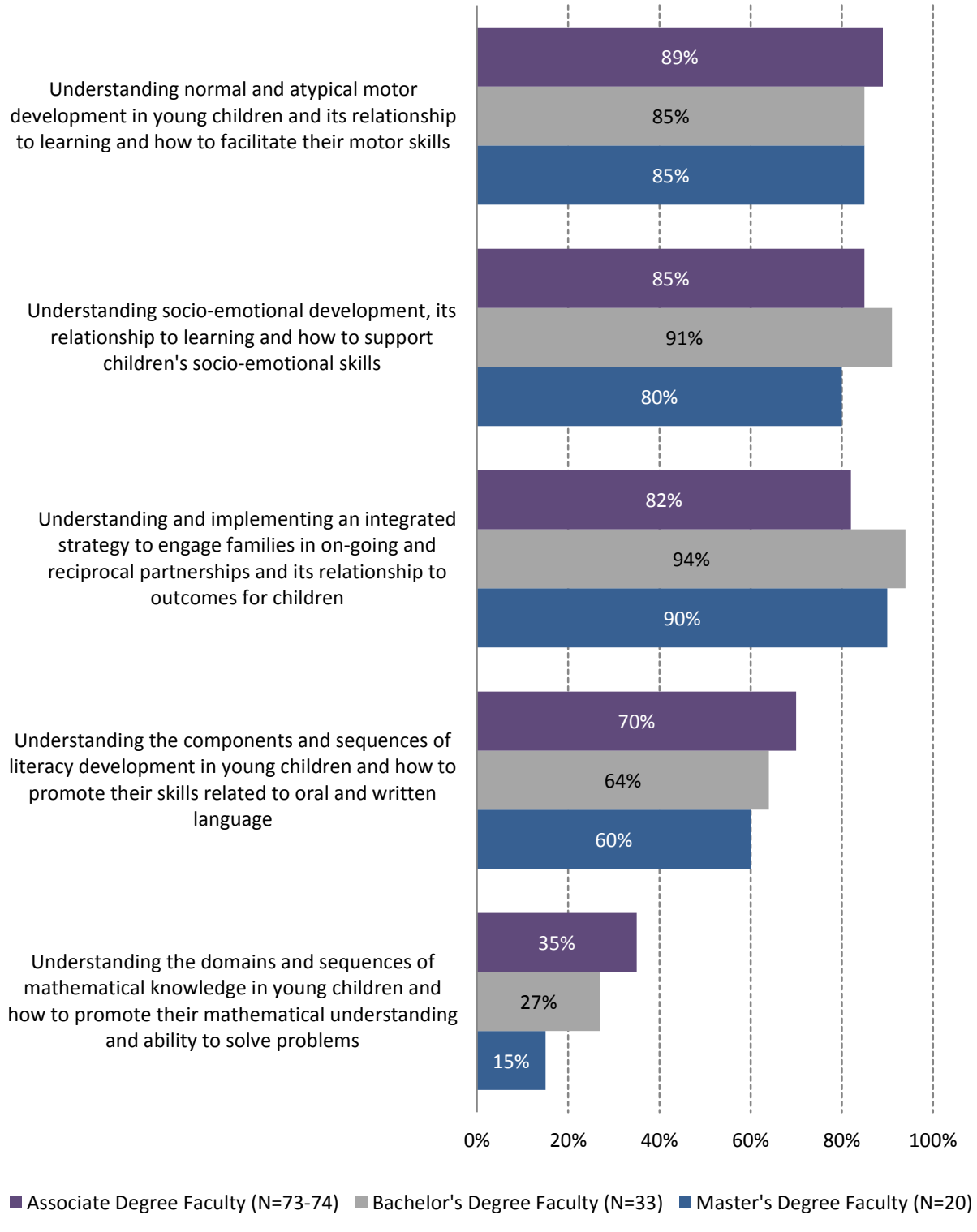
- A greater percentage of faculty members at all degree levels considered it "very important" to include early mathematics in teacher preparation programs for practitioners working with preschoolers, than for those working with infants and toddlers. Differences by domain, however, followed the pattern described above.

  - ⇒ Approximately 70 percent of associate and bachelor's and 80 percent of master's degree faculty members considered it "very important" to include the early mathematics domain for preschoolers.
  - ⇒ At least 80 percent of faculty members at each degree level considered the other domains, including family engagement, "very important" to include for preschoolers.

- More than 85 percent of faculty members at the three degree levels considered it "very important" to include the early mathematics domain for teachers working with children in the early elementary grades.

Figure 5.1 *displays the proportion of faculty members who responded that it was "very important" to include a given domain in teacher preparation programs focused on infant and toddlers.* ***Appendix Table A5-1*** *displays the data for all age groups of children.*

Figure 5.1: Importance of Inclusion of Domains in Teacher Preparation Programs: Percentage of Faculty Reporting 'Very Important' for Infants and Toddlers, by Degree Program



Faculty Capacity to Prepare Teachers to Work with Young Children in Various Domains

The Inventory asked faculty members to assess their capacity to prepare practitioners to promote young children's development in various content domains. The domains included:

1. Scaffolding children's mathematical development and promoting their ability to solve problems
2. Scaffolding children's literacy development and promoting their oral and written skills
3. Supporting children's socio-emotional development and skills
4. Facilitating the developmental course of motor development in young children
5. Integrating families in partnerships to support children's learning

For each of the domains topics (see **Figure 5.2** and **Appendix Table A5-2**), faculty members were asked to identify whether they:

1. Had limited familiarity
2. Were knowledgeable but not prepared to teach others
3. Were capable of preparing teachers working with children:

* Birth through 2 years
* 3 and/or 4 years (Pre-K)
* Grade 3 or higher

- Between two-thirds and three-quarters of associate degree faculty members reported the capacity to prepare teachers working with children birth through age two around the five domains listed in the Inventory, including the early mathematics and family engagement domains. (See **Figure 5.2.**)

- Bachelor's and master's degree faculty members were less likely to report the capacity to prepare teachers working with children birth through age two around the early mathematics domain than the other domains, including family engagement.

  ⇒ Slightly less than one-half of bachelor's (46 percent) and master's degree (47 percent) faculty members reported the capacity to prepare teachers working with children birth through age two around the early mathematics domain.

  ⇒ Between 55 and 58 percent of bachelor's and master's degree faculty members reported the capacity to prepare teachers working with children birth through age two around the literacy and motor development domains.

⇒ Between 63 percent and 72 percent of bachelor's and master's degree faculty reported the capacity to prepare teachers working with children birth through age two around the socio-emotional development domain.

⇒ Approximately three-quarters of bachelor's and master's degree faculty reported the capacity to prepare teachers working with children birth through age two around the family engagement domain.

- Faculty members at all degree levels were more likely to report the capacity to prepare teachers working with children three to four years old around all the domains than for those working with infants and toddlers. (See **Appendix Table A5-2.**)

⇒ Approximately 80 percent of associate degree faculty members reported the capacity to prepare teachers around all domains.

⇒ Between 70 and 84 percent of bachelor's degree faculty members reported the capacity to prepare teachers around all domains.

⇒ Between 68 and 79 percent of master's degree faculty members reported the capacity to prepare teachers around all domains.

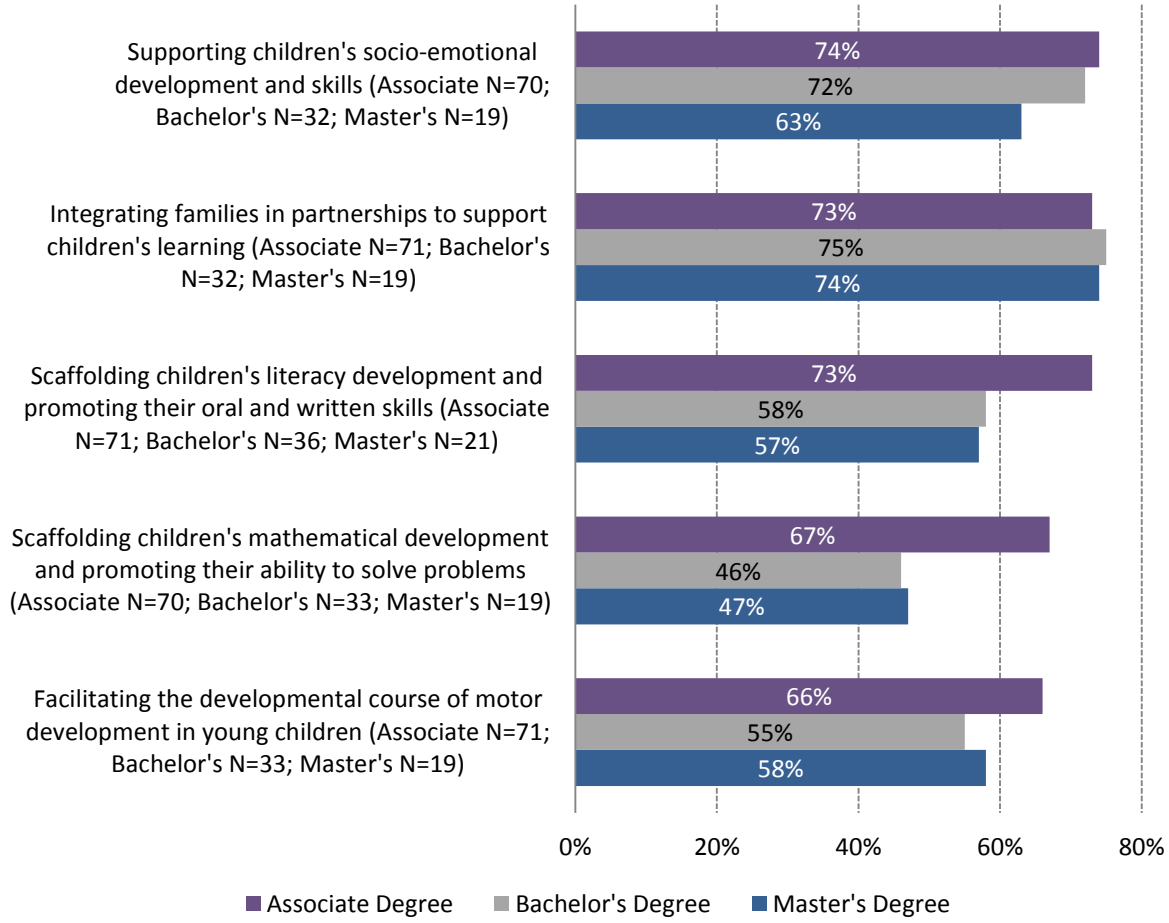
- Faculty members' capacity to prepare teachers working with children in the early elementary years across the domains varied by degree level. (See **Appendix Table A5-2**.)

➢ Two-thirds of associate degree faculty members reported the capacity to prepare teachers around the early mathematics domain; approximately three-quarters around the literacy development and motor development domains; and the vast majority around the socio-emotional development (87 percent) and family engagement domains (85 percent).

➢ Slightly more than one-half of bachelor's degree faculty members reported the capacity to prepare teachers around the early mathematics, literacy development, and motor development domains; approximately three-quarters around the socio-emotional development domain; and the vast majority (84 percent) around the family engagement domain.

➢ Sixty-eight percent of master's degree faculty members reported the capacity to prepare teachers around the early mathematics domain; 71 percent around the literacy development domain; approximately three-quarters around the socio-emotional and motor development domains; and the vast majority (84 percent) around the family engagement domain.

Figure 5.2: Capability of Faculty to Prepare Teachers to Work with Infants and Toddlers: Young Children's Development - Reported by Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program



Teaching Family Engagement

The Inventory explored the content area of family engagement in depth.

The Inventory asked program leads of degree programs about: 1) the family engagement topics required for the degree; and 2) the age-group focus of required coursework. (See **Figure 5.3** and **Appendix Table A5-3**.)

The Inventory also asked program leads about the alignment of family engagement coursework with state and national early math standards. (See **Figure 5.4**.)

Required Family Engagement Course Content and Age-Group Focus (See **Figure 5.3** and **Appendix Table A5-3**)

- All the "family engagement" topics listed in the Inventory were required by at least 89 percent of the associate and bachelor's degree programs.

- All the "family engagement" topics were required by at least four of six master's degree programs and three of four doctoral degree programs.

- The age-group focus of the family engagement content area varied by topic and degree level. However, overall:

  ⇒ Degree programs were more likely to focus the topics on preschool-age children than on children in other age groups.
  ⇒ Although bachelor's degree programs focused many of these topics on infants and toddlers, associate degree programs consistently did so.
  ⇒ Overall, associate degree programs were more likely to focus topics on children in the early elementary grades than were bachelor's degree programs.

Figure 5.3 *displays the percentage of degree programs that require the content area of family engagement. See* ***Appendix Table A5-3*** *for the age-group focus of the required content.*

- Approximately one-half of associate and two-thirds of bachelor's degree programs reported incorporating state or national family engagement standards into family engagement coursework. Four of six master's degrees and three of four doctoral degree programs also reported incorporating these standards.

Degree programs that reported incorporating standards:

- The standards most frequently mentioned by both associate and bachelor's degree programs were:

  ⇒ Indiana Core Knowledge and Core Competencies for Professionals serving infants, toddlers, preschoolers, children, youth and their families: Core Knowledge Area 6: Family and Community Partnerships, and
  ⇒ NAEYC Professional Preparation Standards/CAEP: Standard 2, Building Family and Community Relationships.

- The vast majority of associate degree programs also mentioned:

  ⇒ NAEYC Program Accreditation Standards: Standard 7: Families (87 percent), and
  ⇒ NAEYC: Effective Family Engagement Principles (80 percent).

Figure 5.3 *displays the percentage of degree programs that require the content area of family engagement. See* ***Appendix Table A5-3*** *for the age-group focus of the required content.*

Figure 5.4 *displays the family engagement standards reported by degree programs requiring any standards.*

Figure 5.3: Family Engagement Coursework Required by Indiana Early Childhood Higher Education Degree Programs, by Program

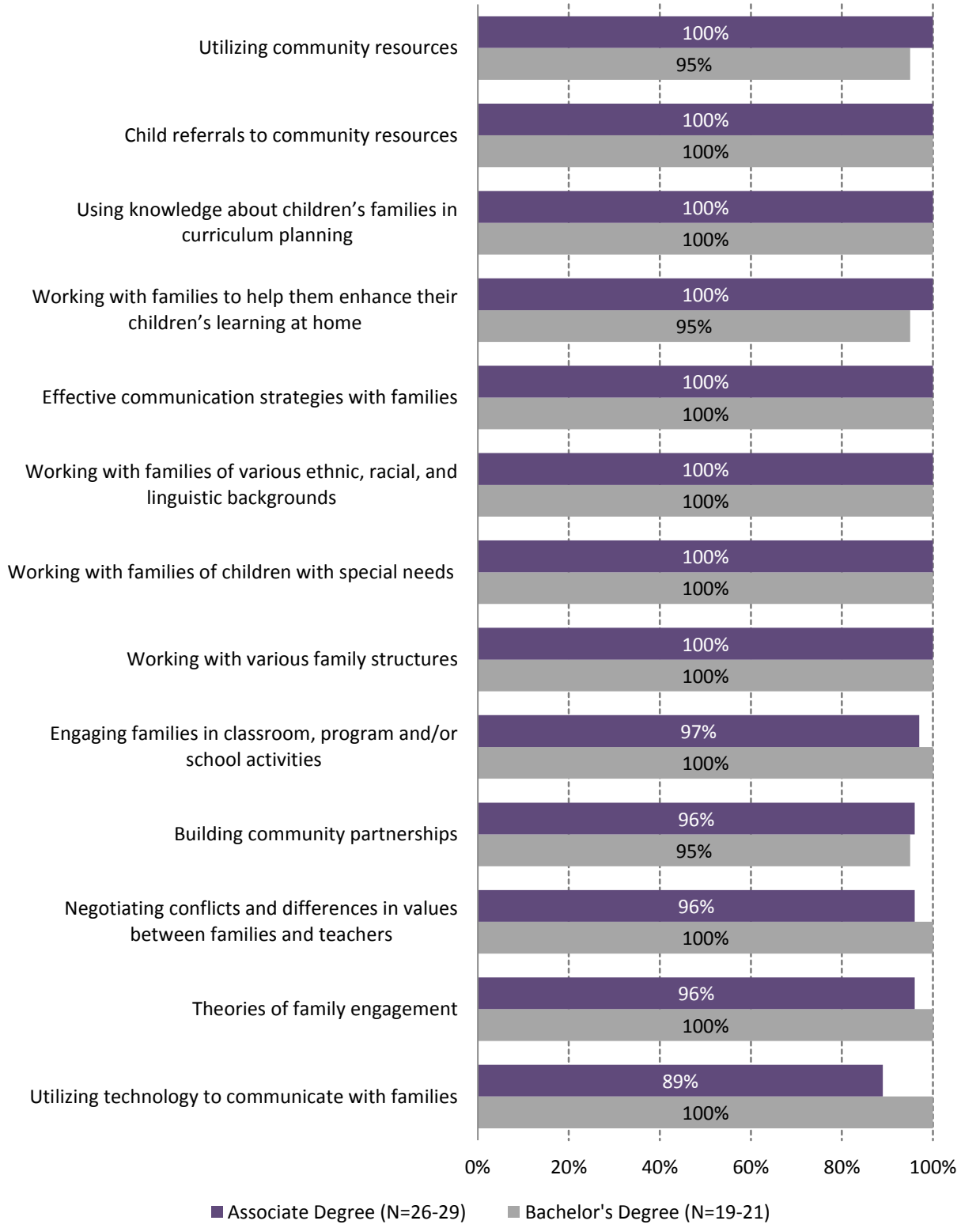
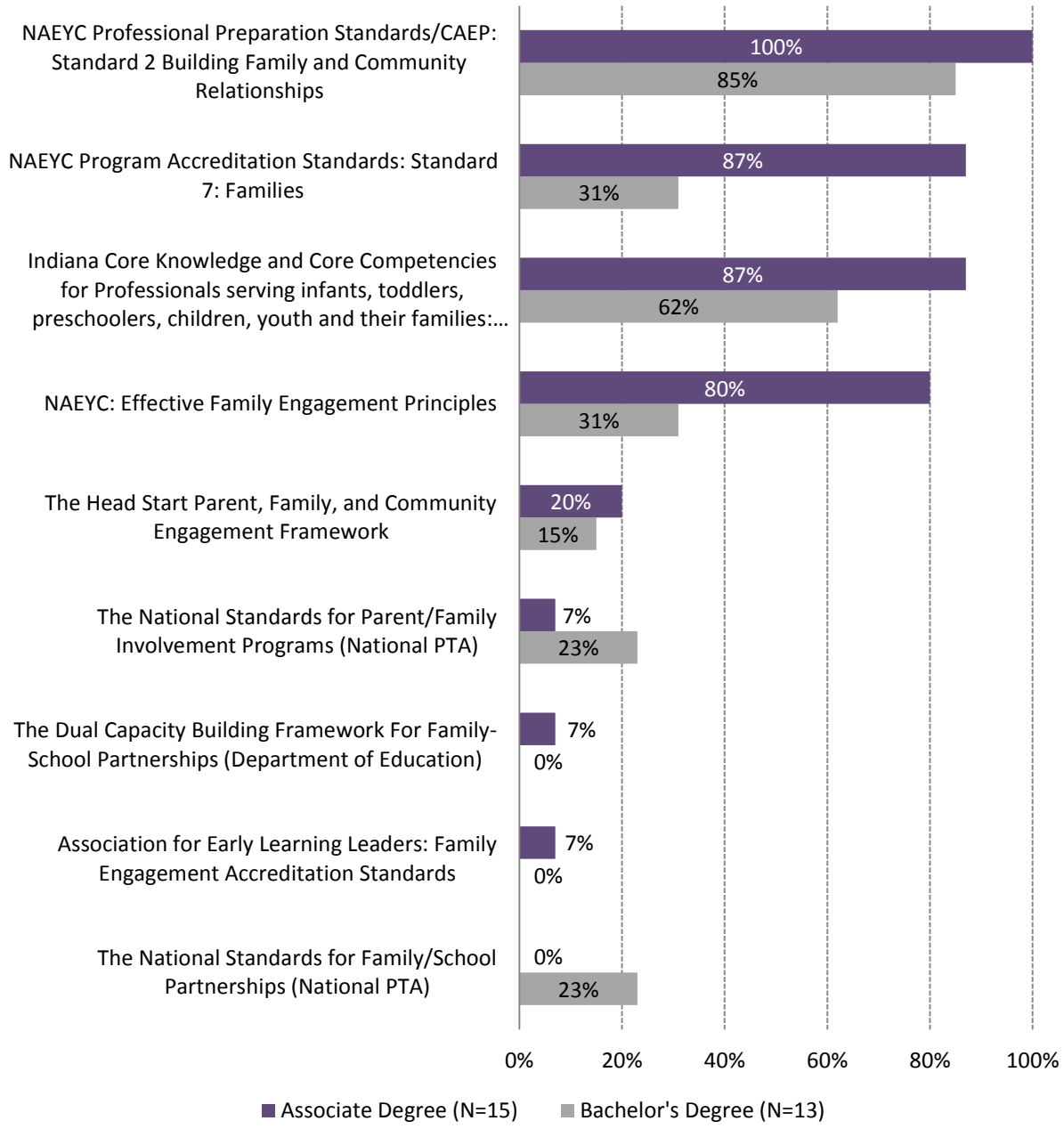


Figure 5.4: State and National Family Engagement Standards Incorporated into Family Engagement Content of Indiana Early Childhood Higher Education Degree Programs, by Program



Teaching Early Mathematics

The Inventory explored the early mathematics content area in depth. This content area was divided into two subject areas: "Teaching Math Skills to Children" and "Development of Children's Mathematical Understanding."

The Inventory asked program leads about: 1) topics within these content areas required for the degree; and 2) the age-group focus of required coursework. (See **Figures 5.5** and **5.6**, and **Appendix Tables A5-4** and **A5-5**.)

The Inventory also asked program leads about the alignment of math coursework with state and national early math standards.

In addition, the Inventory asked about the structure of math-related courses:

1. Whether math content was taught as a separate course, or within child development and/or teaching and curriculum courses covering multiple topics. (See **Figure 5.7**.)

2. Whether contextualized math courses (those that relate mathematical concepts to the math that early childhood practitioners need in their profession) were offered to students, and if so, who taught such courses.

3. Whether math content aligned with state or national math standards. (See **Figure 5.8** and **5.9**.)

Please note that data for the master's and doctoral degree programs are not included in the figures because of small sample sizes. The data are included in the narrative as appropriate.

Teaching Math Skills to Children (See **Figure 5.5** and **Appendix Table A5-4**)

- All five topics in the "teaching math skills to children" content area were required by 95 percent or more of associate and bachelor's degree programs.

- All five topics in the "teaching math skills to children" content area were required by at least two of the six master's degree programs and at least two of the four doctoral degree programs.

Development of Children's Mathematical Understanding (See **Figure 5.6** and **Appendix Table A5-5**)

- Seven of the eight topics in the "development of children's mathematical understanding" content area were required by 90 percent or more of associate and bachelor's degree programs.

  ⇒ Approximately two-thirds of both degree programs required the topic "supporting English learners in developing mathematical knowledge as they concurrently acquire English."

- All eight topics were required by a least two of the six master's degree programs and at least two of the four doctoral degree programs.

Age-Group Focus for Early Math

- The age-group focus of early math topics varied by topic and degree level. Overall, however:

  ⇒ Degree programs at all levels were more likely to focus early math topics on preschool-age children than on children in other age groups.
  ⇒ Associate degree programs were more likely to focus early math topics on infants and toddlers than were other degree programs.
  ⇒ The focus on children in the early elementary grades varied by topic and degree level.

***Figures 5.5** and **5.6** display the percentages of degree programs that reported requiring certain topics for students to attain their degrees. See **Appendix Tables A5-4** and **A5-5** for the age-group focus of each topic.*

Figure 5.5: Coursework on Teaching Math Skills to Children Required by Indiana Early Childhood Higher Education Degree Programs, by Program

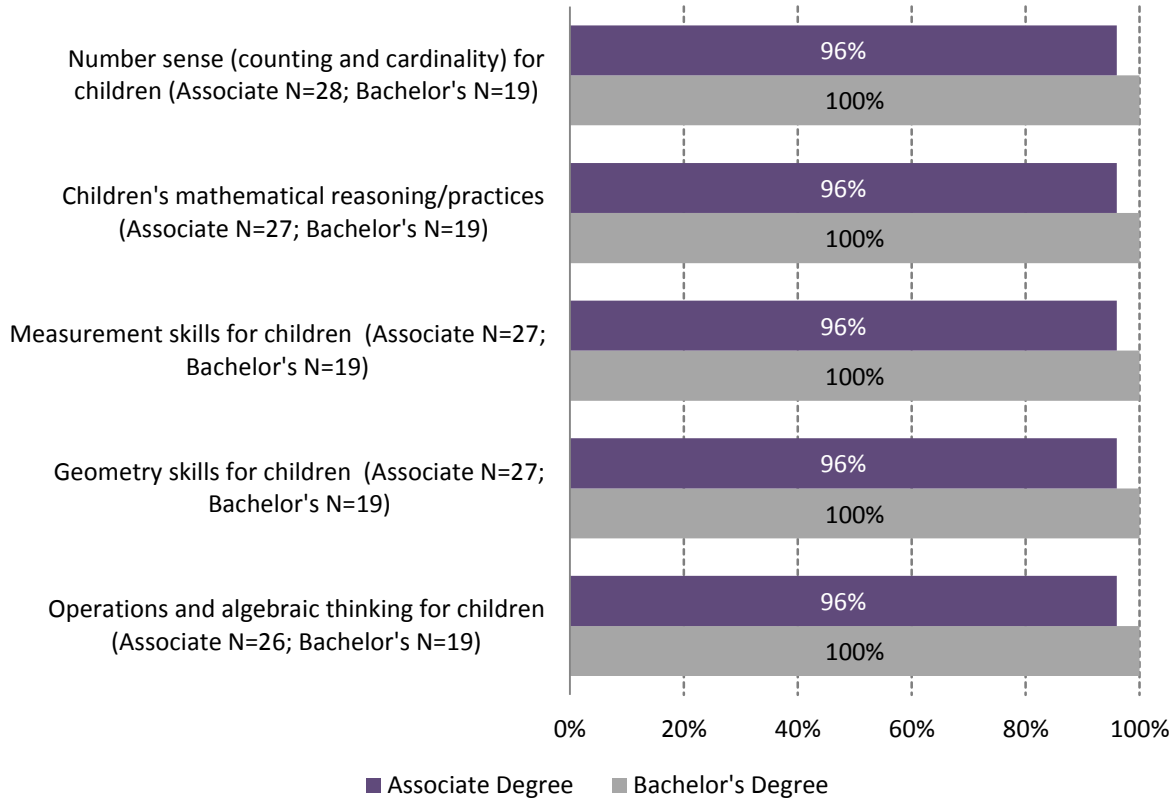
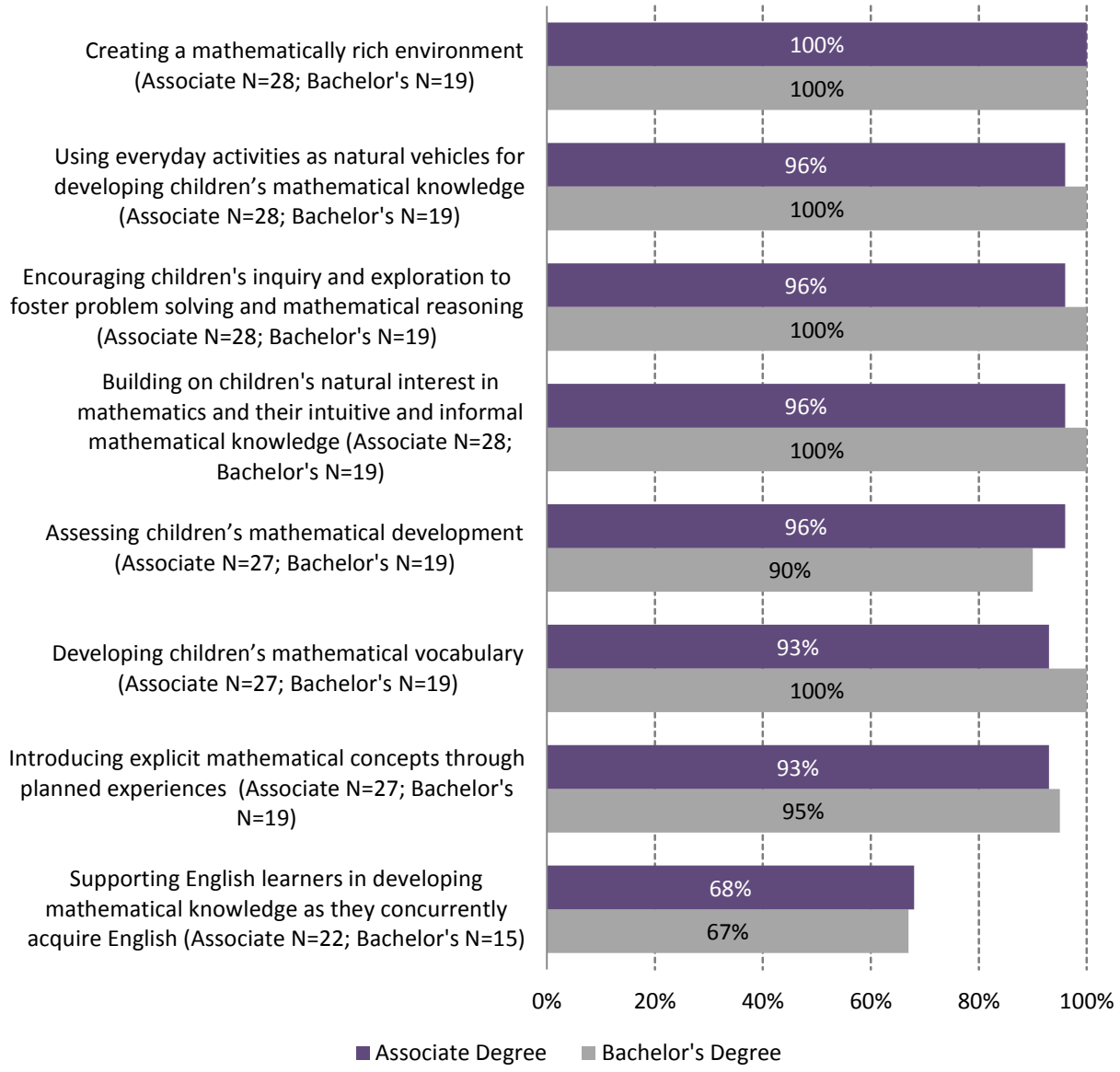


Figure 5.6: Coursework on Development of Children's Mathematical Understanding Required by Indiana Early Childhood Higher Education Degree Programs, by Program



Structure of Early Math Courses (See **Figure 5.7**)

Please note that data for master's and doctoral degree programs are not reported because of small sample sizes.

- Degree programs reported multiple course structures for their early math topics. Overall, they were more likely to report that early math topics were taught in courses covering multiple topics and domains than in separate early math courses.

  ⇒ Almost all associate (93 percent) and bachelor's (90 percent) degree programs reported that "teaching math skills to young children" is taught within a teaching/curriculum course covering multiple topics.

  ⇒ Almost all associate (96 percent) and approximately two-thirds of bachelor's degree programs reported that "development of young children's mathematical understanding" is taught within a child development course covering multiple domains.

  ⇒ Approximately two-thirds of associate and bachelor's degree programs also reported that topics related to both "development of young children's mathematical understanding" and "teaching math skills to young children" are taught together as one course.

  ⇒ Approximately two-thirds of bachelor's and one-third of associate degree programs reported that "development of young children's mathematical understanding" is taught as a separate course, not as part of a broader child development course.

  ⇒ More than one-half of bachelor's (58 percent) and less than one-third of associate (29 percent) degree programs reported "teaching math skills to young children" is taught as a separate course, not as part of a broader teaching/curriculum course.

- Approximately one-half (54 percent) of associate degree programs reported offering contextualized math courses, compared to about one-quarter (26 percent) of bachelor's degree programs.

Alignment of Early Math Coursework with State and National Standards (See **Figures 5.8** and **5.9**)

- More than three-quarters of associate (79 percent) and bachelor's (80 percent) degree programs reported aligning their math coursework with state and national math standards.

Degree programs that reported alignment:

⇒ Almost all associate (91 percent) and the vast majority of bachelor's (81 percent) degree programs reported aligning with the Foundations to the Indiana Academic Standards for Young Children from Birth to Age 5 - Mathematics.

⇒ Approximately two-thirds of associate and three-quarters of bachelor's degree programs reported aligning with the Indiana Academic Standards for Mathematics (Grades K-3 or higher).

⇒ Associate degree programs (78 percent) were more likely than bachelor's degree programs (56 percent) to report aligning with the Indiana Core Knowledge and Core Competencies for Professionals serving infants, toddlers, preschoolers, children, youth and their families.

⇒ Associate degree programs (74 percent) were also more likely than bachelor's degree programs (50 percent) to report aligning with NAEYC Accreditation Standard 2F.

⇒ Both associate and bachelor's degree programs were least likely to report aligning with the National Council of Teachers of Mathematics (NCTM) Principles and Standards for School Mathematics and the Head Start Child Development and Early Learning Framework/Program Performance Standards.

- Three of the six master's degree programs and two of the four doctorate programs also reported aligning their math coursework with state and national math standards.

Figure 5.7: Structure of Early Math-Related Coursework in Indiana Early Childhood Higher Education Degree Programs, by Program

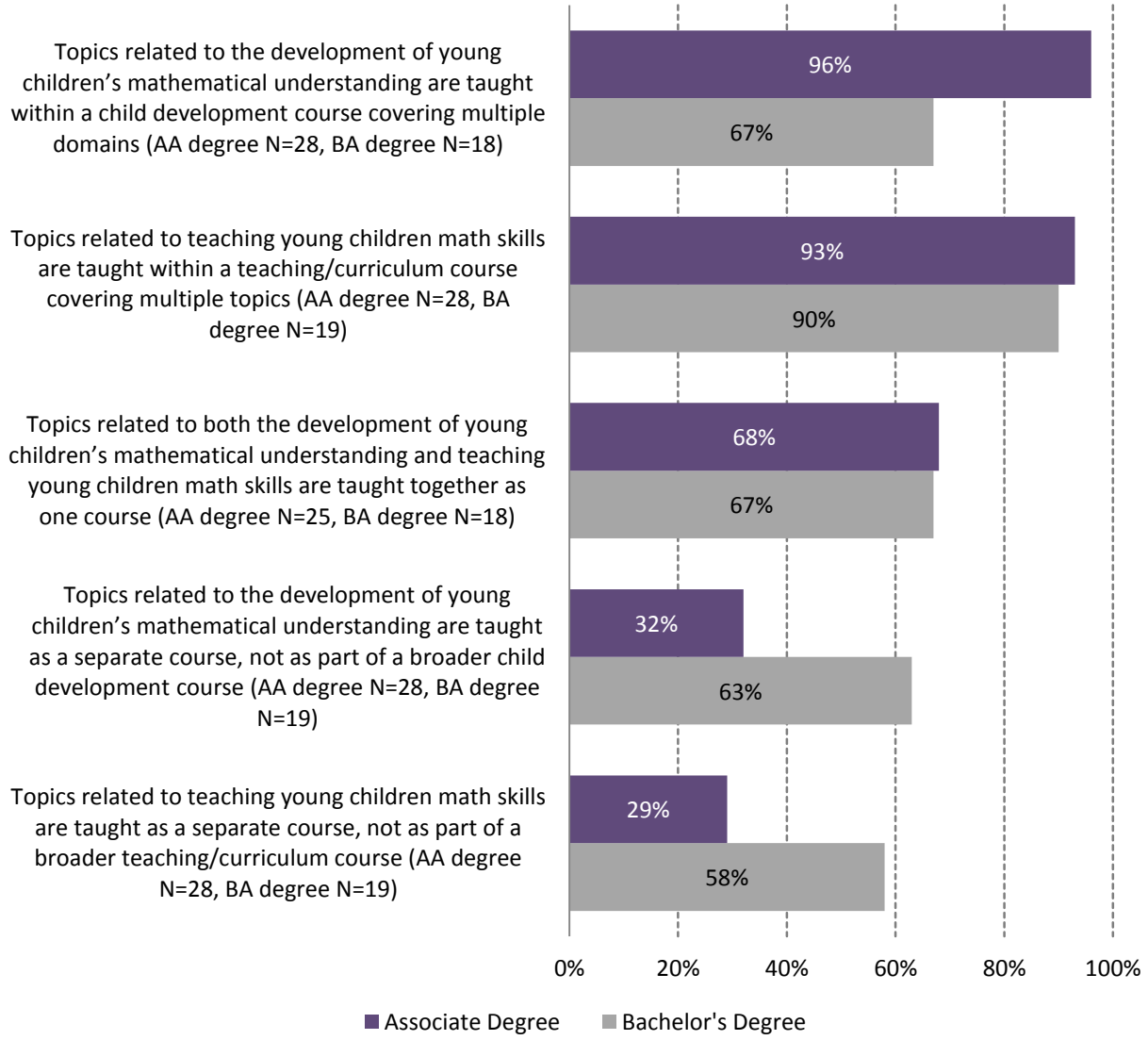


Figure 5.8: Indiana or National Math Standards Incorporated into Early Math Course Content of Indiana Early Childhood Higher Education Degree Programs, by Program

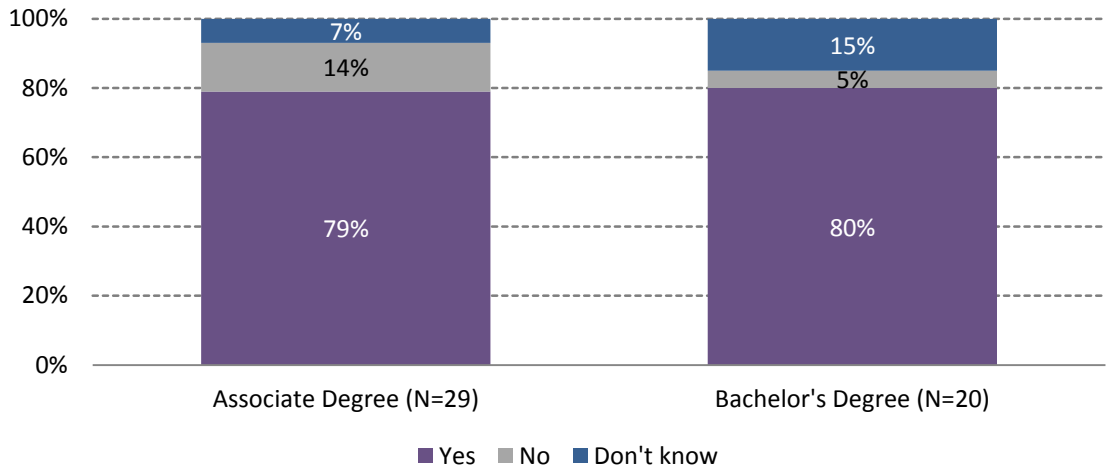
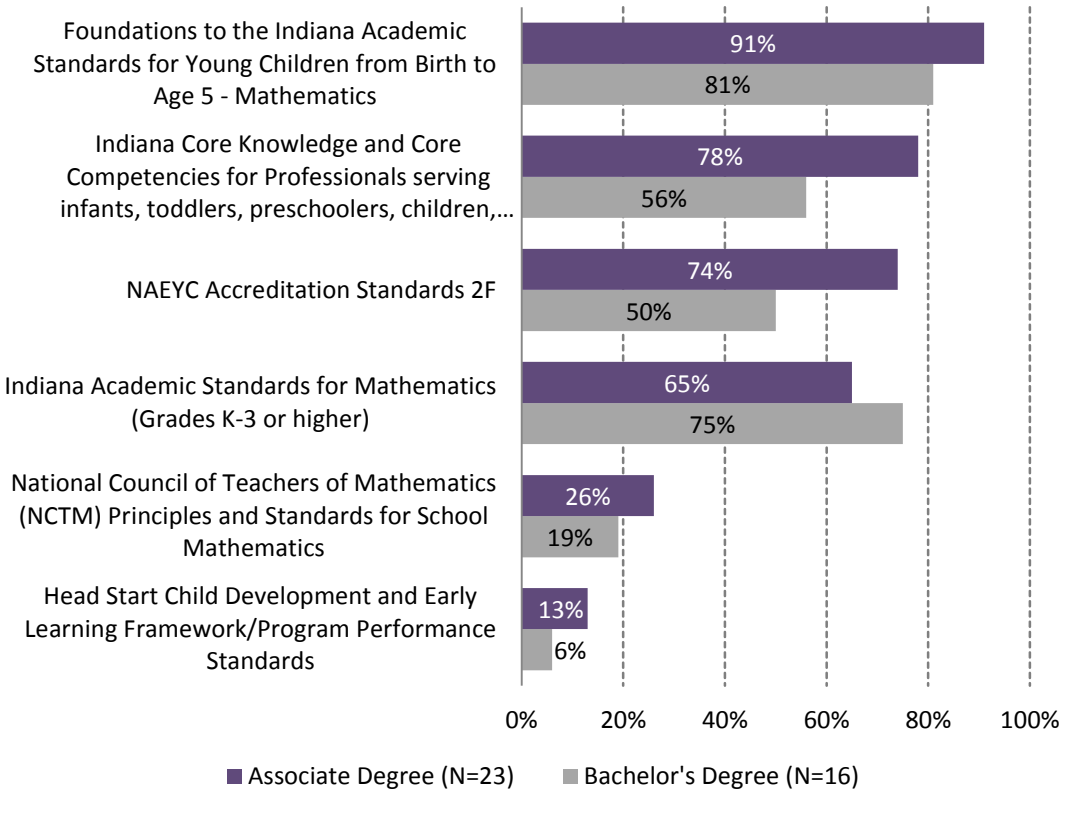


Figure 5.9: Indiana and National Math Standards Incorporated into Early Math Course Content of Indiana Early Childhood Higher Education Degree Programs, by Program



Faculty Members' Capacity to Teach Early Mathematics (See **Figures 5.10** and **5.11**, and **Appendix Tables A5-6** and **A5-7**)

The Inventory also asked faculty members to assess their capacity to prepare practitioners to teach math skills and promote children's mathematical understanding. For each of the 13 topics (see **Figures 5.10** and **5.11**, and **Appendix Tables A5-6** and **A5-7**), faculty members were asked to identify whether they:

1. Had limited familiarity
2. Were knowledgeable but not prepared to teach others
3. Were capable of preparing teachers working with children:

- Birth through 2 years
- 3 and/or 4 years (Pre-K)
- Grade 3 or higher

The Inventory also asked faculty members to identify the topics they had taught in the past two years in the subject areas of "Teaching Math Skills to Children" and "Development of Children's Mathematical Understanding." They were then asked to specify the age-group focus of the topics covered in their coursework. (See **Figures 5.12** and **5.13**, and **Appendix Tables A5-8** and **A5-9**.)

Please note that data for doctoral degree faculty members are not reported because of small sample size.

- Associate and master's degree faculty were more likely than bachelor's degree faculty to report the capacity to prepare practitioners to work with infants and toddlers around teaching math skills and promoting mathematical understanding.

  ⇒ At least 60 percent of associate degree faculty members reported the capacity to teach 11 of the 13 topics listed in the Inventory.
  ⇒ At least 60 percent of bachelor's degree faculty members reported the capacity to teach three of the 13 topics.
  ⇒ At least 60 percent of master's degree faculty members reported the capacity to teach 11 of the 13 topics.

- Faculty members at the associate, bachelor's, and master's degree levels were more likely to report the capacity to prepare practitioners to work with preschoolers than children in other age groups.

  ⇒ At least three-quarters of associate degree faculty members reported the capacity to teach 11 of the 13 topics listed in the Inventory.

⇒ At least three-quarters of bachelor's degree faculty members reported the capacity to teach eight of the 13 topics.

⇒ At least three-quarters of master's degree faculty members reported the capacity to teach 10 of the 13 topics.

- The topic for which faculty members (across the three degree levels and across age groups of children) were least likely to report the capacity to teach practitioners was "supporting English learners in developing mathematical knowledge as they concurrently acquire English."

Figure 5.10: Capability of Faculty to Prepare Teachers to Work with Infants and Toddlers: Math Skills - Reported by Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program

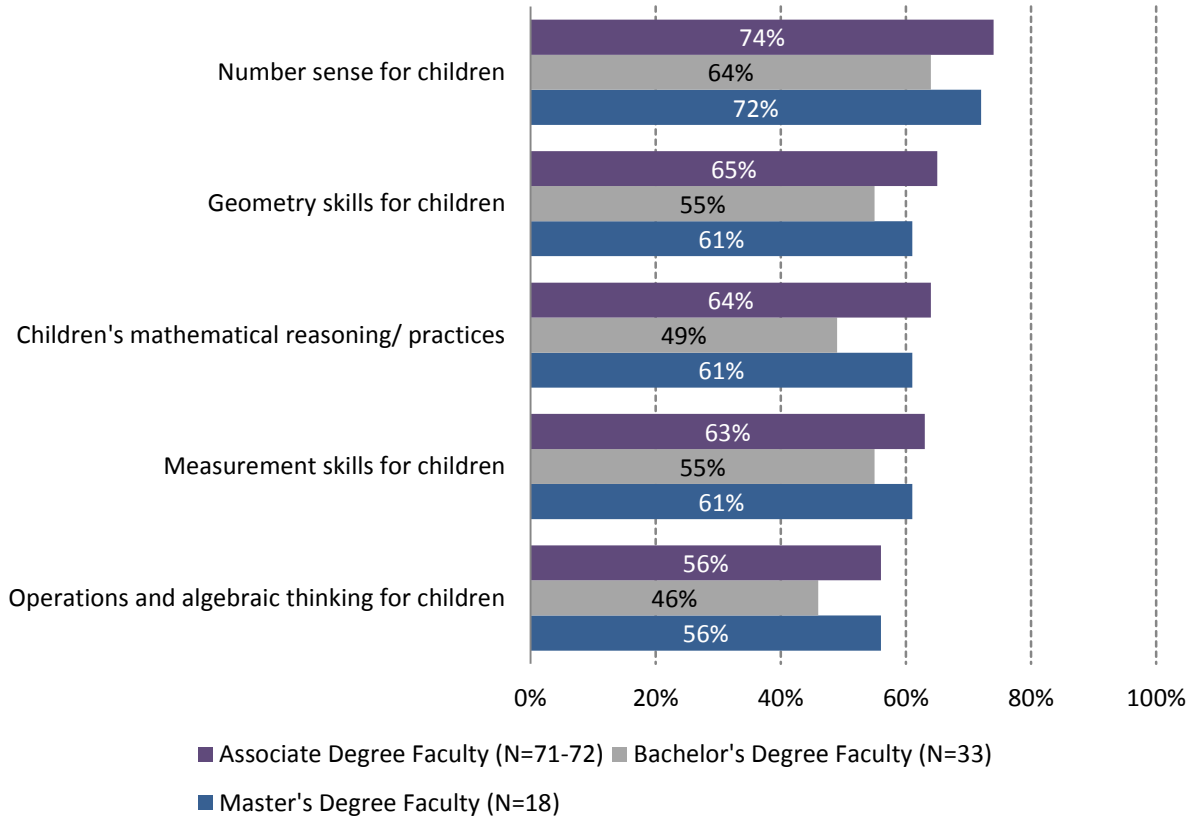
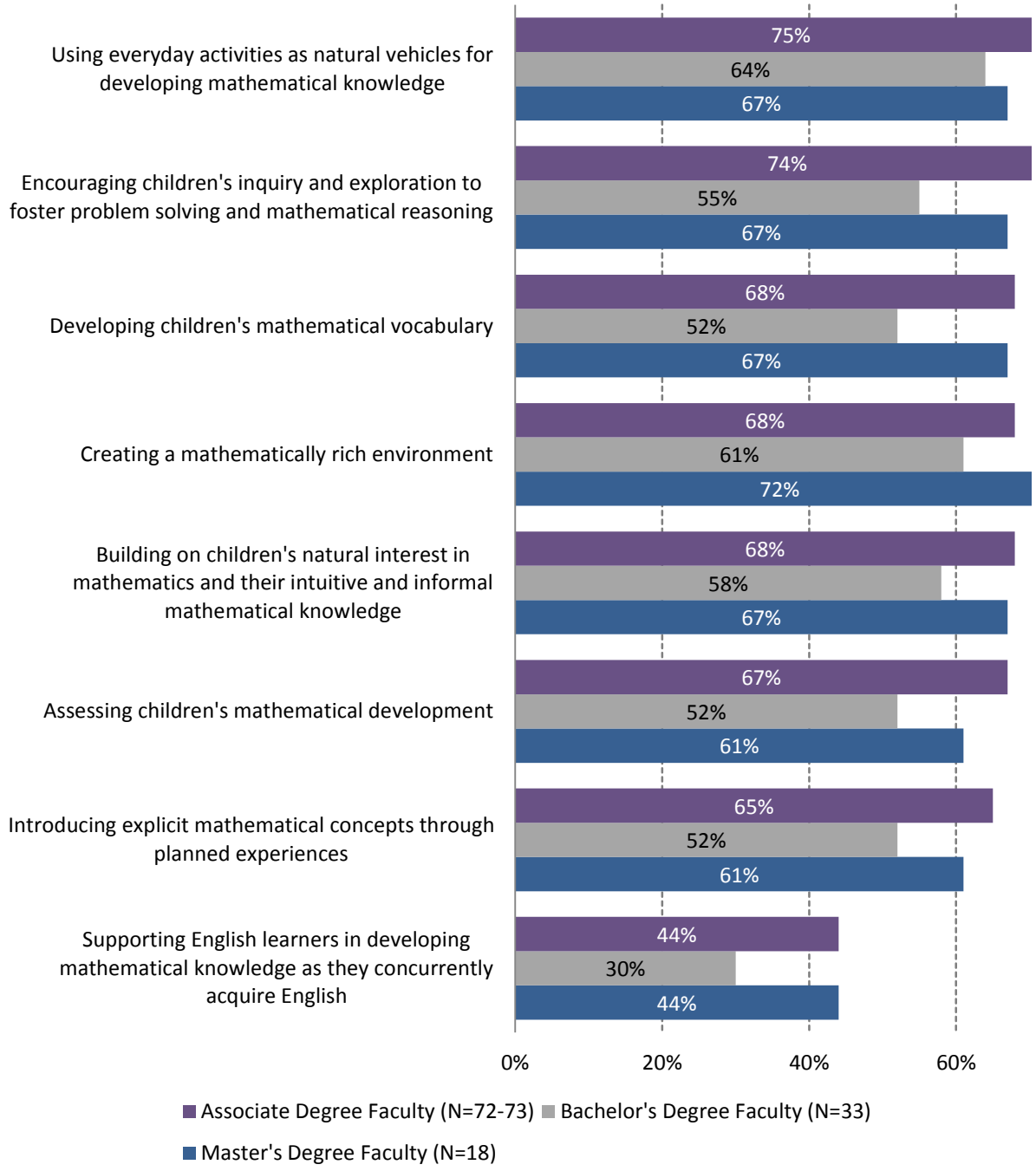


Figure 5.11: Capability of Faculty to Prepare Teachers to Work with Infants and Toddlers: Children's Mathematical Understanding - Reported by Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program



Early Mathematics Course Content Taught in the Past Two Years (See **Figure 5.12** and **5.13** and **Appendix Table A5-8** and **A5-9**)

Please note that data for doctoral degree faculty members are not reported because of small sample size.

- All early math topics listed in the Inventory were taught by at least 60 percent of faculty members at the associate, bachelor's, and master's degree levels during the past two years, with the following exceptions:

  ⇒ Approximately one-half of bachelor's degree faculty members reported having taught:
  - Operations and algebraic thinking for children,
  - Geometry skills for children,
  - Creating a mathematically rich environment, and
  - Assessing children's mathematical development.

  ⇒ Faculty members (across the three degree levels and across age groups of children) were least likely to report having taught the math topic, "supporting English learners in developing mathematical knowledge as they concurrently acquire English."

- Overall, faculty members at all degree levels were more likely to report having taught math topics with a focus on working with preschoolers than on working with children in both older and younger age groups.

- Although the age-group focus varied by topic, associate degree faculty members were the most likely overall to report focusing on math-related topics for infants and toddlers, and the least likely to report focusing on such content for children in the early elementary grades.

Figures 5.12 *and* ***5.13*** *display the percentages of faculty members at each degree level who reported teaching a given topic within the past two years. See* ***Appendix Tables A5-8*** *and* ***A5-9*** *for the age-group focus of the content taught.*

Figure 5.12: Coursework on Teaching Math Skills to Children Taught by Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program

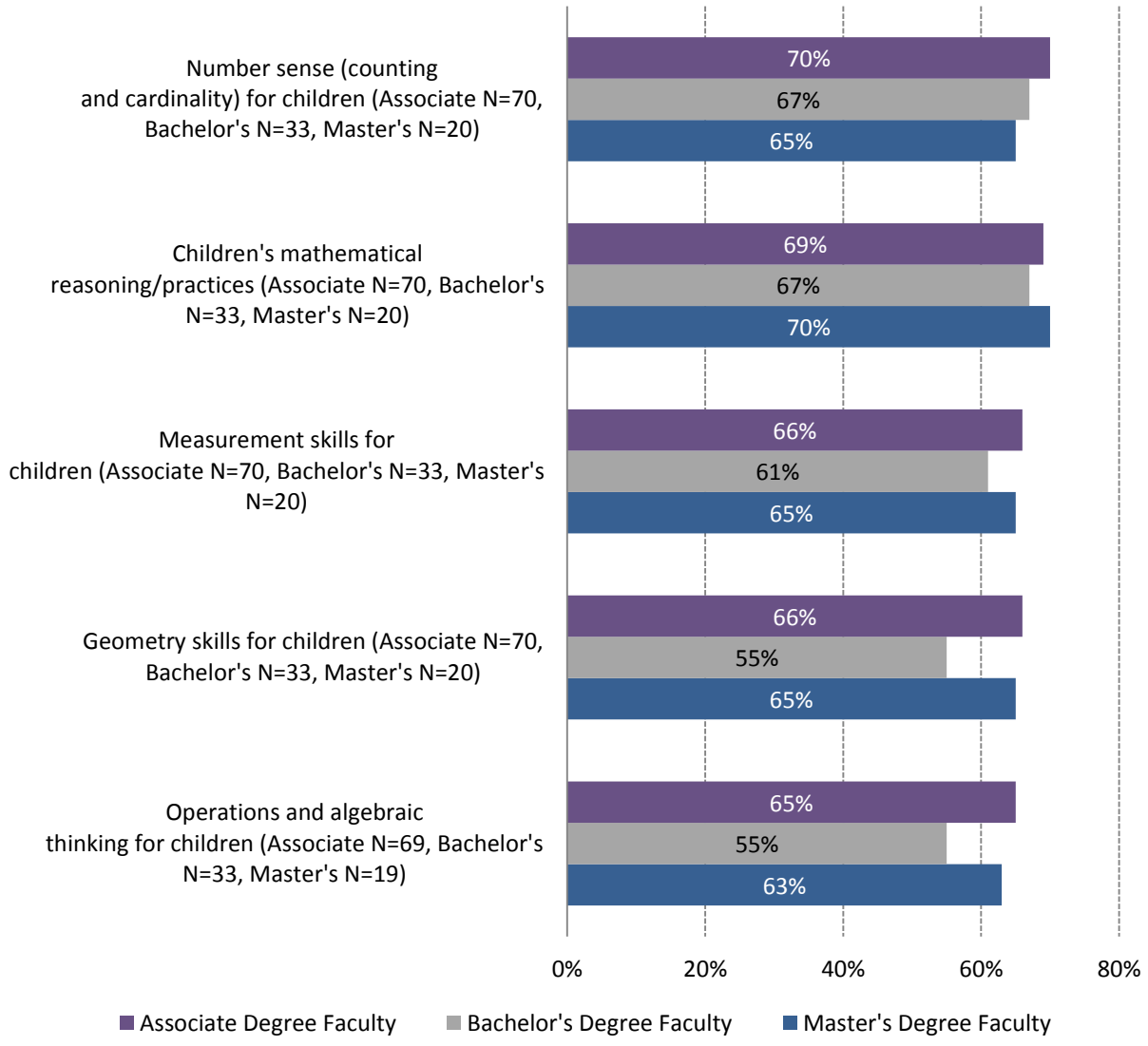
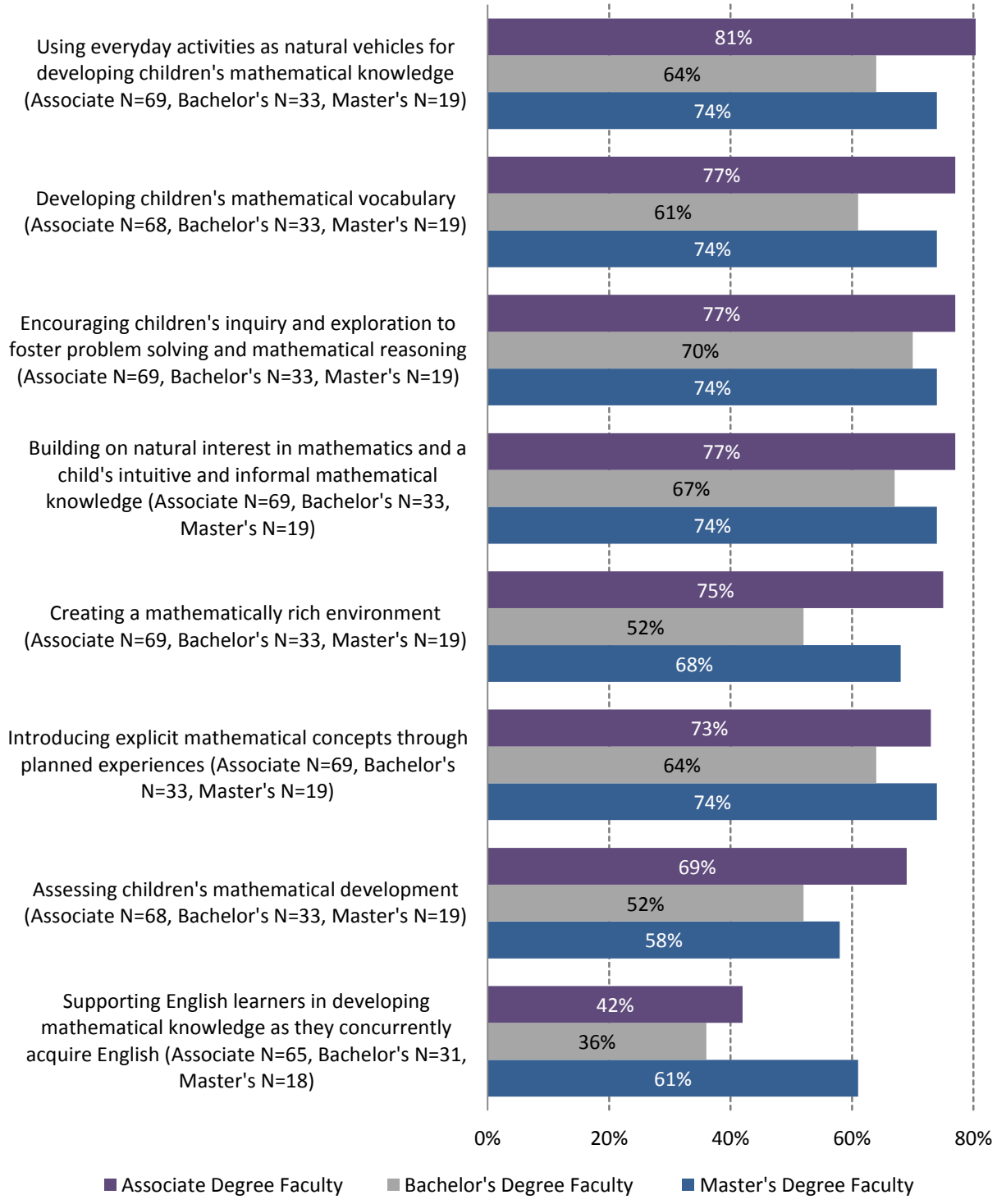


Figure 5.13: Coursework on Development of Children's Mathematical Understanding Taught by Faculty Participating in the Indiana Early Childhood Higher Education Inventory, by Degree Program



Level of Interest in Professional Development Topics Related to Early Math and Family Engagement

In addition to the professional development questions discussed in Chapter 3, the Inventory asked more specifically about faculty members' interest in professional development related to early mathematics and family engagement. Using a Likert scale of 1 to 5, with 1 being "no interest" and 5 being "very interested," faculty members were asked to rate how interested they would be in nine topics related to early mathematics and 12 topics related to family engagement.

(See **Figures 5.14** through **5.16**, and **Appendix Tables A5-10** through **A5-12**.)

Please note that data on doctoral degree faculty members are not included because of small sample size.

- When asked to rate their interest among a list of math-related topics for professional development, at least 50 percent of associate and bachelor's and at least 40 percent of master's degree faculty members reported that they would be "very interested" in two topics:

  ⇒ Creating a mathematically rich learning environment, and
  ⇒ Strategies to help practitioners who struggle with mathematics build confidence in their ability to facilitate children's mathematical understanding and skills.

- When asked to rate their interest among a list of family engagement-related topics for professional development, at least 45 percent of associate and bachelor's degree faculty members reported that they would be "very interested" in four topics:

  ⇒ Strategies for engaging families in classroom and program activities,
  ⇒ Teaching practitioners to work with families of children with special needs,
  ⇒ Effective communication strategies with families, and
  ⇒ Utilizing technology to communicate and interact with families.

- At least 40 percent of master's degree faculty members reported that they would be "very interested" in two family engagement topics:
  ⇒ Effective communication strategies with families, and
  ⇒ Utilizing technology to communicate and interact with families.

Figure 5.14 *displays the percentages of faculty members at all degree levels who reported that they would be "very interested" in professional development related to teaching math skills.* ***Appendix Table A5-10*** *displays the responses for all interest levels.*

Figure 5.15 *displays the percentages of faculty members at all degree levels who reported that they would be "very interested" in professional development related to development of mathematical understanding.* ***Appendix Table A5-11*** *displays the responses for all interest levels.*

Figure 5.16 *displays the percentages of faculty members at all degree levels who reported that they would be "very interested" in professional development related to family engagement.* ***Appendix Table A5-12*** *displays the responses for all interest levels.*

Figure 5.14: Level of Interest in Professional Development on Teaching Math Skills and Strategies, Reported by Faculty Participating in the Indiana Early Childhood Higher Education Inventory: Percentage Reporting 'Very Interested,' by Degree Program

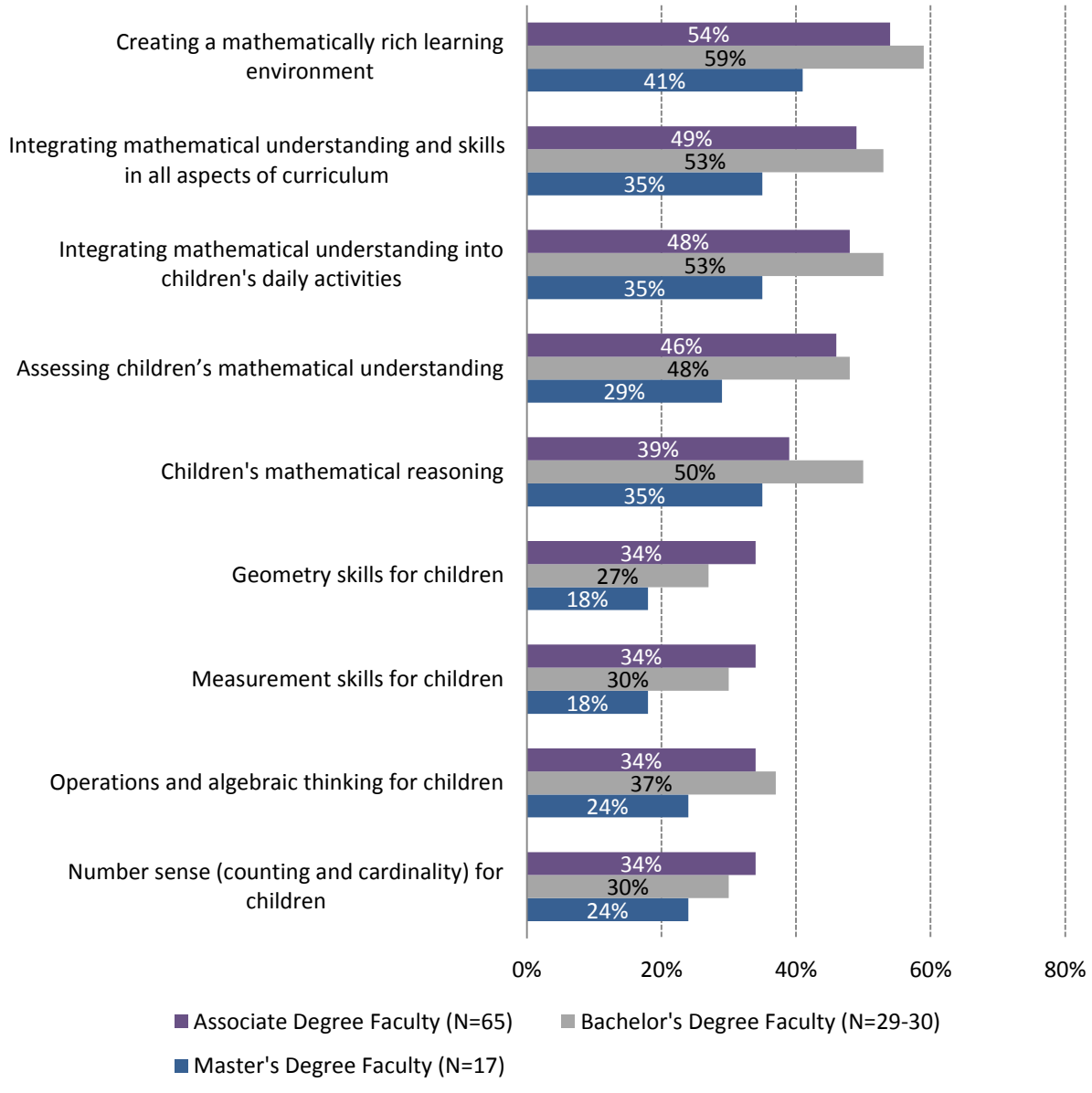


Figure 5.15: Level of Interest in Professional Development on Mathematical Understanding, Reported by Faculty Participating in the Indiana Early Childhood Higher Education Inventory: Percentage Reporting 'Very Interested,' by Degree Program

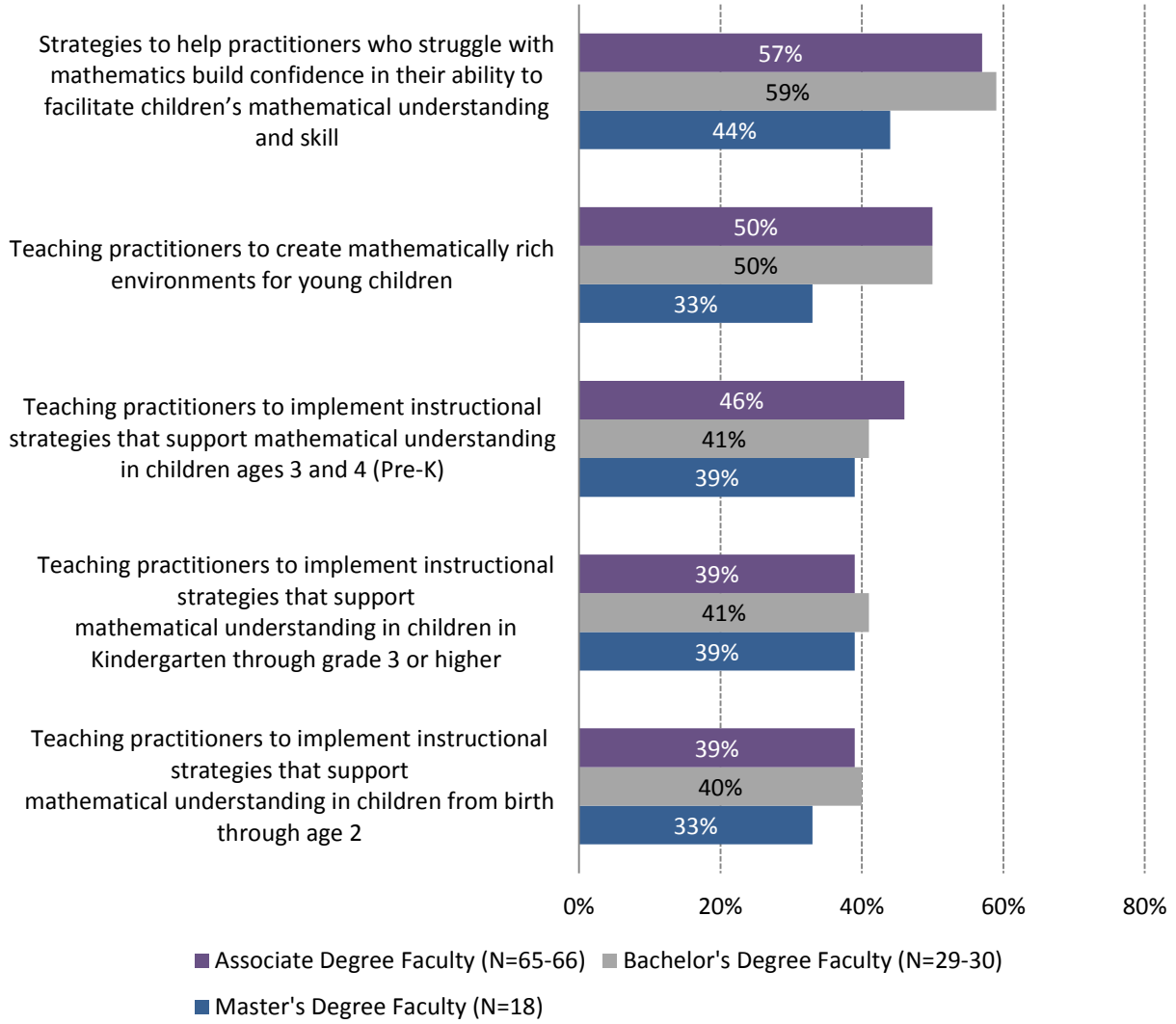
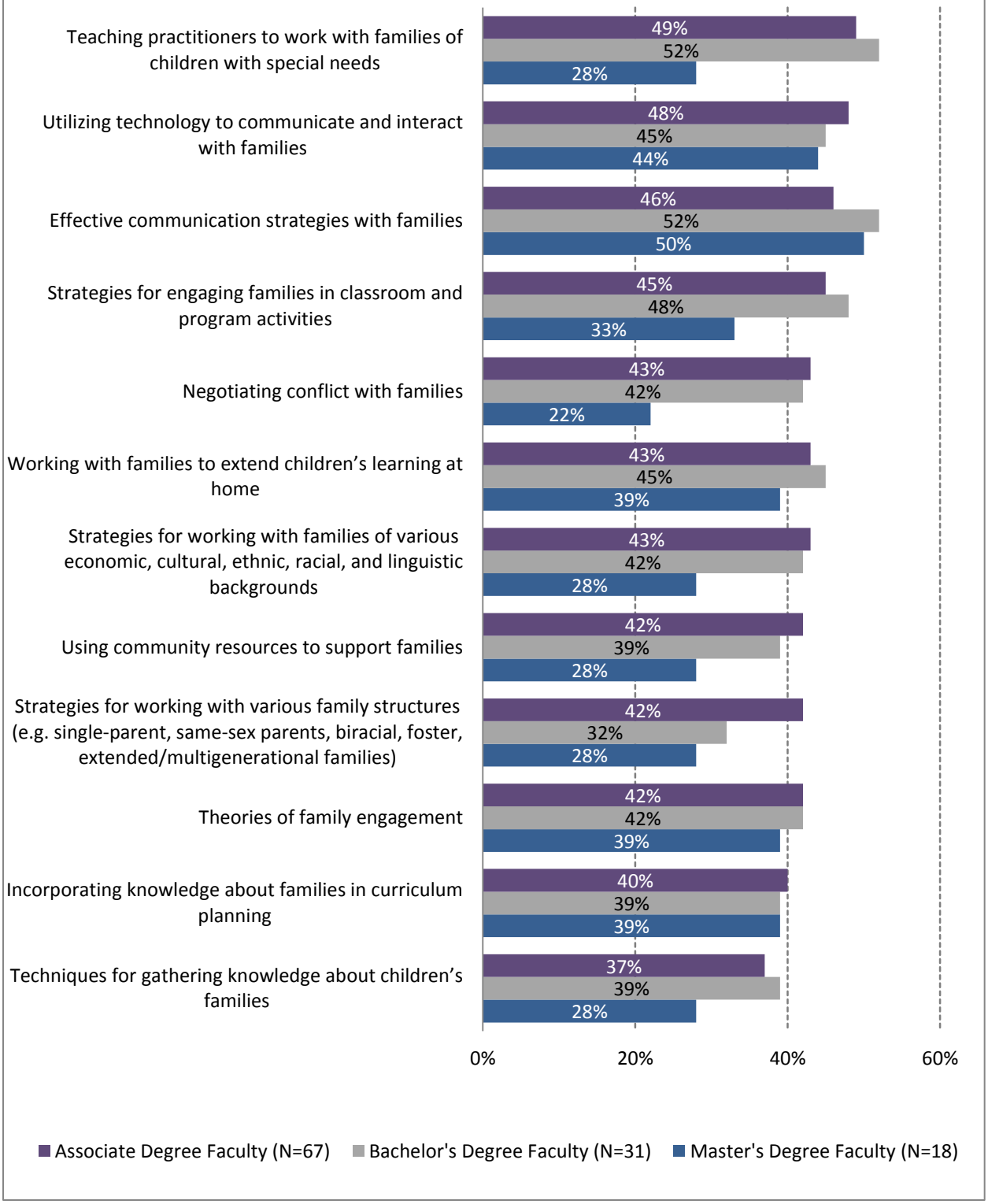


Figure 5.16: Level of Interest in Professional Development on Family Engagement, Reported by Faculty Participating in the Indiana Early Childhood Higher Education Inventory: Percentage Reporting 'Very Interested,' by Degree Program



APPENDIX

Appendix 1: Introduction

Table A1-1. Early Childhood Associate Degree Programs in Indiana

A.A.S. = Associate of Applied Science
A.S. = Associate of Science
A.A. = Associate of Arts
A.S.T. = Associate of Science Transfer

Name of Institution	Associate Degree Program(s)
Ancilla College	A.A.S. in Early Childhood Education A.S. in Early Childhood Education
Bethel College	A.A. in Early Childhood Education
Oakland City University	A.A. in Early Childhood Education
Saint Mary-of-the-Woods College	A.S. in Early Childhood/Mild Intervention
University of Southern Indiana	A.S. in Early Childhood Education
Vincennes University	A.S.T in Education: Early Childhood Concentration (Preschool) A.S. in Child Development
Bloomington – Ivy Tech Community College	A.A.S. in Early Childhood Education A.S. in Early Childhood Education
Columbus – Ivy Tech Community College	A.A.S. in Early Childhood Education A.S. in Early Childhood Education
East Central – Ivy Tech Community College	A.A.S. in Early Childhood Education A.S. in Early Childhood Education
Central Indiana – Ivy Tech Community College	A.A.S. in Early Childhood Education A.S. in Early Childhood Education
Kokomo - Ivy Tech Community College -	A.A.S. in Early Childhood Education A.S. in Early Childhood Education
Lafayette - Ivy Tech Community College	A.A.S. in Early Childhood Education A.S. in Early Childhood Education
North Central - Ivy Tech Community College	A.A.S. in Early Childhood Education A.S. in Early Childhood Education
Northeast - Ivy Tech Community College	A.A.S. in Early Childhood Education A.S. in Early Childhood Education

Table A1-1. Early Childhood Associate Degree Programs in Indiana (Continued)

Name of Institution	Associate Degree Program(s)
Northwest - Ivy Tech Community College	A.A.S. in Early Childhood Education A.S. in Early Childhood Education
Richmond - Ivy Tech Community College	A.A.S. in Early Childhood Education A.S. in Early Childhood Education
Sellersburg - Ivy Tech Community College	A.A.S. in Early Childhood Education A.S. in Early Childhood Education
Southeast - Ivy Tech Community College	A.A.S. in Early Childhood Education
Southwest - Ivy Tech Community College	A.A.S. in Early Childhood Education A.S. in Early Childhood Education
Wabash - Ivy Tech Community College	A.A.S. in Early Childhood Education A.S. in Early Childhood Education

Table A1-2. Early Childhood Bachelor's and Graduate Degree Programs in Indiana

Name of Institution	Bachelor's Degree Program(s)	Graduate Degree Program(s)
Anderson University	B.A. in Education: Elementary and Early Childhood Education	
Ball State University	B.A. in Child Development B.S. in Early Childhood Education B.S. in Early Childhood/Early Childhood Special Education (Dual major) B.S. in Early Childhood Education/Special Education (Minor non-licensure) B.S. in Early Childhood Special Education B.S. in Child Development	M.A. in Education: Elementary Education: Early Childhood Education Focus M.A. in Special Education: Early Childhood Special Education Focus Ph.D. in Early Childhood Education Ed.D. in Early Childhood Education
Bethel College	B.A. in Early Childhood Education	
Indiana State University	B.A. in Elementary Education: Early Childhood Education (optional licensing) B.A. in Special Education (Preschool – Grade 12) B.S. in Elementary Education: Early Childhood Education (optional licensing) B.S. in Special Education (Preschool –- Grade 12)	M.Ed. in Elementary Education Early Childhood Specialization Ph.D. in Curriculum and Instruction: Early Childhood Specialization
Indiana University Bloomington	B.S. in Early Childhood Education	M.S. in Elementary Education: Early Childhood Education Track M.S. in Education: Special Education: Early Childhood Specialty Track Ph.D. in Curriculum Studies: Early Childhood Education Focus Ph.D. in Special Education: Early Intervention (Early Childhood Special Education Focus) Ed.D. in Curriculum Studies: Early Childhood Education Focus

Name of Institution	Bachelor's Degree Program(s)	Graduate Degree Program(s)
Indiana University - Purdue University Fort Wayne	B.S. in Early Childhood Education Three tracks: Birth-5 years Preschool-Grade 3 Preschool-Grade 6	
Indiana University - South Bend	B.S. in Education: Elementary (pre-school license offered) B.S. in Education: Special Education (Preschool-Grade 12)	M.S. in Education: Special Education (Preschool-Grade 12)
Manchester University	B.A. in Elementary Education: Early Childhood Generalist B.S. in Elementary Education: Early Childhood Generalist	
Martin University	B.S. in Early Childhood Education	
Oakland City University	B.A. in Early Childhood Education	
Purdue University - Calumet	B.A. in Human Development and Family Studies: Option: Early Childhood	M.S. in Child Development and Family Studies
Purdue University North Central	B.S. in Early Childhood Education	
Purdue University-West Lafayette	B.S. in Early Childhood Education and Exceptional Needs/Mild Intervention Pre K-Grade 3	
Saint Mary-of-the-Woods College	B.S. in Early Childhood/Mild Intervention B.S. in Special Education: Preschool-Grade 12 (non-licensure) B.S. in Special Education: Preschool-Grade 12 (licensure) B.S. in Preschool-Grade 3 Education/Mild Intervention	
University of Southern Indiana	B.A. in Early Childhood Education B.A. in Early Childhood Education (Preschool-Grade 3) B.A. in Special Education: Mild Intervention Preschool-Grade 12 B.S. Early Childhood Education B.S. in Early Childhood Education Preschool-Grade 3 B.S. in Special Education: Mild Intervention (Preschool-Grade 12)	

Table A1-3. Type of Degree Programs Reported by Institutions Participating in the Indiana Early Childhood Higher Education Inventory

Type of Degree	Percentage Offered
Associate Degree (N=31)	
A.A. Degree	3%
A.S. Degree	55%
A.A.S. Degree	58%
A.A. Transfer	3%
A.S. Transfer	16%
Bachelor's Degree (N=21)	
B.A. Degree with licensure	29%
B.A. Degree without licensure	14%
B.S. Degree with licensure	57%
B.S. Degree without licensure	38%
Master's Degree (N=6)	
M.A. Degree with licensure	33%
M.A. Degree without licensure	50%
M.S. Degree with licensure	0%
M.S. Degree without licensure	33%
Doctoral Degree (N=4)	
Ed.D. Degree	50%
Ph.D. Degree	100%

Appendix 2: Early Childhood Higher Education Programs: Detailed Tables

Table A2-1. Required Coursework Related to Child Development and Learning: Age-Group Focus, by Degree Program

* Please interpret data with caution, as sample sizes are very small.
# Data are not reported because of very small sample size.

Age Group	Associate Degree	Bachelor's Degree	Master's Degree*	Doctoral Degree*
Knowledge about children's development in different domains (e.g., language development, cognitive development)				
Birth to two years	97%	91%	80%	100%
3 and/or 4 years (Pre-K)	97%	100%	100%	100%
K-grade 3 or higher	84%	81%	80%	100%
N	*31*	*21*	*5*	*4*
Development of children's early literacy skills				
Birth to two years	90%	81%	50%	#
3 and/or 4 years (Pre-K)	97%	100%	100%	#
K-grade 3 or higher	74%	71%	75%	#
N	*31*	*21*	*4*	#
Development of children's scientific understandings				
Birth to two years	83%	57%	#	#
3 and/or 4 years (Pre-K)	97%	100%	#	#
K-grade 3 or higher	79%	67%	#	#
N	*29*	*21*	#	#
Development of dual language learners				
Birth to two years	96%	53%	25%	#
3 and/or 4 years (Pre-K)	100%	77%	100%	#
K-grade 3 or higher	73%	71%	75%	#
N	*22*	*17*	*4*	#
Understanding the effects of culture, gender, class, and race on child development				
Birth to two years	90%	81%	67%	100%
3 and/or 4 years (Pre-K)	93%	95%	100%	100%
K-grade 3 or higher	83%	76%	83%	100%
N	*30*	*21*	*6*	*4*
Child development theory and its relationship to teaching				
Birth to two years	97%	81%	80%	100%
3 and/or 4 years (Pre-K)	94%	100%	100%	100%
K-grade 3 or higher	84%	62%	80%	100%
N	*31*	*21*	*5*	*4*

Table A2-1. Required Coursework Related to Child Development and Learning: Age-Group Focus, by Degree Program (Continued)

Age Group	Associate Degree	Bachelor's Degree	Master's Degree*	Doctoral Degree*
Understanding the effects of disability on child development				
Birth to two years	90%	76%	80%	100%
3 and/or 4 years (Pre-K)	94%	91%	100%	100%
K-grade 3 or higher	84%	67%	80%	100%
N	*31*	*21*	*5*	*4*

Table A2-2: Required Coursework Related to Teaching Diverse Child Populations: Age-Group Focus, by Degree Program

* Please interpret data with caution, as sample sizes are very small.
# Data are not reported because of very small sample size.

Age Group	Associate Degree	Bachelor's Degree	Master's Degree*	Doctoral Degree*
Teaching children who are experiencing poverty				
Birth to two years	93%	75%	#	100%
3 and/or 4 years (Pre-K)	96%	95%	#	100%
K-grade 3 or higher	86%	75%	#	100%
N	*28*	*20*		*4*
Teaching children with challenging behaviors				
Birth to two years	90%	80%	50%	#
3 and/or 4 years (Pre-K)	94%	95%	100%	#
K-grade 3 or higher	87%	80%	75%	#
N	*31*	*20*	*4*	*#*
Teaching children with special needs				
Birth to two years	87%	71%	40%	100%
3 and/or 4 years (Pre-K)	94%	91%	100%	100%
K-grade 3 or higher	81%	71%	100%	100%
N	*31*	*21*	*4*	*4*
Teaching children from multiple cultural and ethnic backgrounds				
Birth to two years	93%	85%	#	100%
3 and/or 4 years (Pre-K)	97%	95%	#	100%
K-grade 3 or higher	86%	75%	#	100%
N	*29*	*20*	*#*	*4*
Teaching children who are dual language learners				
Birth to two years	100%	59%	#	#
3 and/or 4 years (Pre-K)	96%	82%	#	#
K-grade 3 or higher	78%	77%	#	#
N	*23*	*17*	*#*	*#*

Table A2-3: Required Coursework Related to Teaching and Curriculum: Age-Group Focus, by Degree Program

* Please interpret data with caution, as sample sizes are very small.
# Data are not reported because of very small sample size.

Age Group	Associate Degree	Bachelor's Degree	Master's Degree*	Doctoral Degree*
Teaching children science skills				
Birth to two years	82%	45%	#	#
3 and/or 4 years (Pre-K)	93%	90%	#	#
K-grade 3 or higher	82%	75%	#	#
N	*28*	*20*	#	#
Teaching math skills to children				
Birth to two years	79%	45%	#	#
3 and/or 4 years (Pre-K)	93%	90%	#	#
K-grade 3 or higher	83%	75%	#	#
N	*29*	*20*	#	#
Teaching literacy skills to children				
Birth to two years	90%	76%	25%	#
3 and/or 4 years (Pre-K)	97%	96%	100%	#
K-grade 3 or higher	83%	76%	75%	#
N	*29*	*21*	*4*	#
Teaching art to children				
Birth to two years	90%	60%	#	#
3 and/or 4 years (Pre-K)	97%	90%	#	#
K-grade 3 or higher	83%	65%	#	#
N	*29*	*20*	#	#
Teaching social studies to children				
Birth to two years	93%	60%	#	#
3 and/or 4 years (Pre-K)	96%	90%	#	#
K-grade 3 or higher	82%	80%	#	#
N	*27*	*20*	#	#
Using play in the curriculum				
Birth to two years	93%	81%	60%	75%
3 and/or 4 years (Pre-K)	97%	95%	100%	100%
K-grade 3 or higher	87%	67%	80%	100%
N	*30*	*21*	*5*	*4*
Supporting and extending children's physical skills				
Birth to two years	89%	77%	25%	#
3 and/or 4 years (Pre-K)	96%	88%	100%	#
K-grade 3 or higher	89%	53%	75%	#
N	*28*	*17*	*4*	#

Table A2-3: Required Coursework Related to Teaching and Curriculum: Age-Group Focus, by Degree Program (Continued)

Age Group	Associate Degree	Bachelor's Degree	Master's Degree*	Doctoral Degree*
Supporting children's social development				
Birth to two years	90%	86%	60%	75%
3 and/or 4 years (Pre-K)	97%	95%	100%	100%
K-grade 3 or higher	90%	76%	80%	100%
N	*30*	*21*	*5*	*4*
Implementing integrated curriculum				
Birth to two years	87%	57%	60%	75%
3 and/or 4 years (Pre-K)	90%	95%	100%	100%
K-grade 3 or higher	77%	62%	80%	100%
N	*30*	*21*	*5*	*4*

Table A2-4: Required Coursework Related to Teaching Skills in Early Childhood Settings: Age-Group Focus, by Degree Program

* Please interpret data with caution, as sample sizes are very small.
# Data are not reported because of very small sample size.

Age Group	Associate Degree	Bachelor's Degree	Master's Degree*	Doctoral Degree*
Observation, assessment, and documentation to inform teaching and learning				
Birth to two years	87%	81%	33%	75%
3 and/or 4 years (Pre-K)	93%	95%	83%	100%
K-grade 3 or higher	83%	76%	83%	100%
N	*30*	*21*	*6*	*4*
Classroom management				
Birth to two years	83%	60%	0%	#
3 and/or 4 years (Pre-K)	93%	95%	100%	#
K-grade 3 or higher	90%	75%	75%	#
N	*30*	*20*	*4*	#
How to use different teaching techniques				
Birth to two years	86%	71%	40%	#
3 and/or 4 years (Pre-K)	93%	95%	100%	#
K-grade 3 or higher	86%	67%	80%	#
N	*29*	*21*	*5*	#

Table A2-5: Integration of Standards and Measures into Coursework, as Reported by Faculty Members

Data for doctoral degree faculty members are not reported because of very small sample size.

Method of Integration	Indiana Core Knowledge and Core Competencies	ERS	CLASS
Associate Degree			
Integrated into content of coursework (N=45)	69%	44%	31%
Integrated into student field experiences (N=31)	74%	52%	23%
Integrated into student assessment process (N=37)	68%	43%	30%
Required text for students (N=20)	50%	60%	30%
Resource text for students (N=30)	63%	53%	30%
Bachelor's Degree			
Integrated into content of coursework (N=24)	92%	25%	8%
Integrated into student field experiences (N=20)	95%	20%	10%
Integrated into student assessment process (N=21)	91%	24%	10%
Required text for students (N=13)	92%	23%	15%
Resource text for students (N=18)	89%	22%	11%
Master's Degree			
Integrated into content of coursework (N=14)	79%	43%	29%
Integrated into student field experiences (N=13)	77%	39%	15%
Integrated into student assessment process (N=12)	83%	33%	17%
Required text for students (N=9)	78%	22%	22%
Resource text for students (N=10)	80%	30%	20%

Appendix 3: Early Childhood Higher Education Faculty: Detailed Tables

Table A3-1: Coursework Taught Related to Child Development and Learning: Age-Group Focus, by Degree Program

Data for doctoral degree faculty members are not reported because of very small sample size.
If topic taught in past two years, age-group focus of the coursework:

Topic	Associate Degree Faculty	Bachelor's Degree Faculty	Master's Degree Faculty
Knowledge about children's development in different domains (e.g., language development, cognitive development)			
Birth to 2 years	83%	74%	87%
3 to 4 years	97%	90%	93%
K-3 or above	68%	71%	80%
N	*66*	*31*	*15*
Development of children's early literacy skills			
Birth to 2 years	79%	76%	71%
3 to 4 years	97%	90%	94%
K-3 or above	65%	66%	77%
N	*63*	*29*	*17*
Development of children's scientific understandings			
Birth to 2 years	66%	56%	71%
3 to 4 years	94%	80%	88%
K-3 or above	64%	64%	77%
N	*50*	*25*	*17*
Development of dual language learners			
Birth to 2 years	56%	58%	75%
3 to 4 years	91%	75%	92%
K-3 or above	71%	67%	67%
N	*34*	*12*	*12*
Understanding the effects of culture, gender, class, and race on child development			
Birth to 2 years	83%	80%	88%
3 to 4 years	97%	92%	94%
K-3 or above	68%	68%	75%
N	*65*	*25*	*16*

Table A3-1: Coursework Taught Related to Child Development and Learning: Age-Group Focus, by Degree Program (Continued)

Topic	Associate Degree Faculty	Bachelor's Degree Faculty	Master's Degree Faculty
Child development theory and its relationship to teaching			
Birth to 2 years	85%	83%	88%
3 to 4 years	97%	93%	94%
K-3 or above	69%	69%	69%
N	*65*	*29*	*16*
Understanding the effects of disability on child development			
Birth to 2 years	79%	72%	71%
3 to 4 years	95%	84%	93%
K-3 or above	67%	68%	79%
N	*57*	*25*	*14*

Table A3-2: Coursework Taught Related to Teaching Diverse Child Populations: Age-Group Focus, by Degree Program

Data for doctoral degree faculty members are not reported because of very small sample size.

If topic taught in past two years, age-group focus of the coursework:

Topic	Associate Degree Faculty	Bachelor's Degree Faculty	Master's Degree Faculty
Teaching children who are experiencing poverty			
Birth to 2 years	80%	74%	75%
3 to 4 years	98%	89%	94%
K-3 or above	67%	74%	69%
N	*61*	*27*	*16*
Teaching children with challenging behaviors			
Birth to 2 years	82%	69%	69%
3 to 4 years	94%	85%	88%
K-3 or above	72%	81%	69%
N	*54*	*26*	*16*
Teaching children with special needs			
Birth to 2 years	78%	68%	77%
3 to 4 years	94%	82%	92%
K-3 or above	70%	68%	62%
N	*50*	*22*	*13*
Teaching children from diverse cultural and ethnic backgrounds			
Birth to 2 years	79%	68%	67%
3 to 4 years	96%	84%	93%
K-3 or above	68%	64%	60%
N	*56*	*25*	*15*
Teaching children who are dual language learners			
Birth to 2 years	63%	71%	62%
3 to 4 years	87%	77%	92%
K-3 or above	68%	65%	62%
N	*38*	*17*	*13*

Table A3-3: Coursework Taught Related to Teaching and Curriculum: Age-Group Focus, by Degree Program

Data for doctoral degree faculty members are not reported because of very small sample size.

If topic taught in past two years, age-group focus of the coursework:

Topic	Associate Degree Faculty	Bachelor's Degree Faculty	Master's Degree Faculty
Teaching science skills to children			
Birth to 2 years	62%	47%	67%
3 to 4 years	92%	82%	100%
K-3 or above	60%	71%	58%
N	*52*	*17*	*12*
Teaching math skills to children			
Birth to 2 years	64%	48%	67%
3 to 4 years	94%	76%	100%
K-3 or above	56%	62%	58%
N	*53*	*21*	*12*
Teaching literacy skills to children			
Birth to 2 years	74%	65%	69%
3 to 4 years	95%	92%	94%
K-3 or above	60%	65%	69%
N	*58*	*26*	*16*
Teaching art to children			
Birth to 2 years	69%	67%	71%
3 to 4 years	94%	89%	100%
K-3 or above	55%	44%	71%
N	*51*	*18*	*14*
Teaching social studies to children			
Birth to 2 years	69%	38%	71%
3 to 4 years	94%	81%	93%
K-3 or above	61%	76%	64%
N	49	21	14
Using play in the curriculum			
Birth to 2 years	75%	76%	88%
3 to 4 years	97%	93%	100%
K-3 or above	57%	62%	69%
N	*69*	*29*	*16*

Table A3-3: Coursework Taught Related to Teaching and Curriculum: Age-Group Focus, by Degree Program (Continued)

Topic	Associate Degree Faculty	Bachelor's Degree Faculty	Master's Degree Faculty
Supporting and extending children's physical skills			
Birth to 2 years	79%	63%	69%
3 to 4 years	95%	89%	100%
K-3 or above	61%	63%	54%
N	*61*	*27*	*13*
Supporting children's social development			
Birth to 2 years	81%	70%	77%
3 to 4 years	96%	93%	100%
K-3 or above	63%	77%	71%
N	*67*	*30*	*17*
Implementing integrated curriculum			
Birth to 2 years	69%	46%	61%
3 to 4 years	93%	89%	94%
K-3 or above	69%	71%	72%
N	*58*	*28*	*18*
Implementing research-based curriculum (e.g., HighScope, Creative Curriculum)			
Birth to 2 years	75%	67%	73%
3 to 4 years	92%	93%	91%
K-3 or above	57%	40%	64%
N	*48*	*15*	*11*

Table A3-4: Coursework Taught Related to Teaching Skills in Early Childhood Settings: Age-Group Focus, by Degree Program

Data for doctoral degree faculty members are not reported because of very small sample size.

If topic taught in past two years, age-group focus of the coursework:

Topic	Associate Degree Faculty	Bachelor's Degree Faculty	Master's Degree Faculty
Observation, assessment, and documentation to inform teaching and learning			
Birth to 2 years	79%	62%	75%
3 to 4 years	97%	83%	88%
K-3 or above	65%	69%	75%
N	*66*	*29*	*16*
Classroom management			
Birth to 2 years	75%	52%	63%
3 to 4 years	93%	85%	88%
K-3 or above	60%	70%	75%
N	*57*	*27*	*16*
How to use different teaching techniques (e.g., planning, instructing, facilitating)			
Birth to 2 years	74%	52%	56%
3 to 4 years	95%	86%	89%
K-3 or above	63%	76%	78%
N	*62*	*29*	*18*

Table A3-5: Professional Development Experiences Related to Diverse Child Populations in Last Three Years, by Degree Program

Data for doctoral degree faculty members are not reported because of very small sample size.

If participated in any professional development, topic of experience:

Topic of Professional Development Experience	Associate Degree Faculty (N=58)	Bachelor's Degree Faculty (N=27)	Master's Degree Faculty (N=17)
Teaching practitioners to work with children from diverse cultural backgrounds	59%	56%	59%
Teaching practitioners to work with children with special needs	45%	37%	35%
Teaching practitioners to work with children who are dual language learners	29%	26%	35%

Table A3-6: Professional Development Experiences Related to Adult Learners in Last Three Years, by Degree Program

Data for doctoral degree faculty members are not reported because of very small sample size.

If participated in any professional development, topic of experience:

Topic of Professional Development Experience	Associate Degree Faculty (N=59)	Bachelor's Degree Faculty (N=28)	Master's Degree Faculty (N=17)
Strategies and techniques for mentoring/coaching of adult students	49%	54%	59%
Using technology to promote adult learning	39%	46%	41%
Strategies to provide quality academic/career advising to adult students	39%	14%	24%
Teaching economically diverse college students	31%	14%	29%
Strategies to supervise adult students in clinical/field experiences	29%	39%	29%
Teaching culturally and ethnically diverse college students	24%	14%	18%
Teaching adult students who are English language learners	10%	7%	12%

Table A3-7: Professional Development Experiences Related to Teaching Skills and Assessment in Last Three Years, by Degree Program

Data for doctoral degree faculty members are not reported because of very small sample size.
If participated in any professional development, topic of experience:

Topic of Professional Development Experience	Associate Degree Faculty (N=60)	Bachelor's Degree Faculty (N=28)	Master's Degree Faculty (N=17)
Child assessment (e.g., portfolios, using particular assessment tools such as the Work Sampling System)	55%	39%	59%
Teaching practitioners to use technology with children	42%	32%	41%
Teaching practitioners developmentally appropriate practice in infant and toddler settings	32%	21%	29%
Early childhood program assessment (e.g., Environment Rating Scale)	28%	25%	29%
Early childhood teacher assessment (e.g., CLASS)	27%	18%	18%

Table A3-8: Professional Development Experiences Related to Administration and Leadership in Last Three Years, by Degree Program

Data for doctoral degree faculty members are not reported because of very small sample size.
If participated in any professional development, topic of experience:

Topic of Professional Development Experience	Associate Degree Faculty (N=58)	Bachelor's Degree Faculty (N=27)	Master's Degree Faculty (N=17)
Theories of leadership	33%	22%	29%
Early childhood systems and policy	31%	26%	35%
Organizational development	24%	11%	29%

Table A3-9: Professional Development Experiences Related to Early Mathematical Development in Last Three Years, by Degree Program

Data for doctoral degree faculty members are not reported because of very small sample size.

If participated in any professional development, topic of experience:

Topic of Professional Development Experience	Associate Degree Faculty (N=59)	Bachelor's Degree Faculty (N=28)	Master's Degree Faculty (N=17)
Teaching practitioners to create mathematically rich environments for young children	22%	21%	24%
Teaching practitioners to implement instructional strategies that support mathematical understanding in children from birth through age 2	14%	14%	24%
Teaching practitioners to implement instructional strategies that support mathematical understanding in children ages 3 and 4 (PreK)	24%	21%	12%
Teaching practitioners to implement instructional strategies that support mathematical understanding in children in Kindergarten through grade 3 or higher	15%	7%	24%
Strategies to help practitioners who struggle with mathematics build confidence in their ability to facilitate children's mathematical understanding and skill	17%	7%	18%

Table A3-10: Professional Development Experiences Related to Family Engagement in Last Three Years, by Degree Program

Data for doctoral degree faculty members are not reported because of very small sample size.

If participated in any professional development, topic of experience:

Topic of Professional Development Experience	Associate Degree Faculty (N=59)	Bachelor's Degree Faculty (N=27)	Master's Degree Faculty (N=17)
Theories of family engagement	22%	33%	18%
Strategies for working with various family structures (e.g. single-parent, same-sex parents, biracial, foster, extended/multigenerational families)	32%	33%	12%
Strategies for working with families of various economic, cultural, ethnic, racial, and linguistic backgrounds	44%	33%	24%
Working with families to extend children's learning at home	31%	19%	29%
Strategies for engaging families in classroom and program activities	25%	37%	35%
Teaching practitioners to work with families of children with special needs	20%	19%	41%

Table A3-11: Professional Development Topics That Would Be Helpful, Related to Diverse Child Populations, by Degree Program

Data for doctoral degree faculty members are not reported because of very small sample size.

Topic of Professional Development Experience	Associate Degree Faculty (N=68)	Bachelor's Degree Faculty (N=33)	Master's Degree Faculty (N=19)
Teaching practitioners to work with children who are dual language learners	68%	70%	53%
Teaching practitioners to work with children with special needs	44%	61%	47%
Teaching practitioners to work with children from diverse cultural backgrounds	40%	52%	47%

Table A3-12: Professional Development Topics That Would Be Helpful, Related to Adult Learners, by Degree Program

Data for doctoral degree faculty members are not reported because of very small sample size.

Topic of Professional Development Experience	Associate Degree Faculty (N=67)	Bachelor's Degree Faculty (N=32)	Master's Degree Faculty (N=20)
Teaching adult students who are English language learners	37%	38%	30%
Strategies to supervise adult students in clinical/field experiences	36%	50%	25%
Using technology to promote adult learning	36%	41%	40%
Teaching culturally and ethnically diverse college students	34%	47%	25%
Strategies and techniques for mentoring/coaching of adult students	31%	53%	30%
Teaching economically diverse college students	30%	31%	30%
Strategies to provide quality academic/career advising to adult students	18%	28%	20%

Table A3-13: Professional Development Topics That Would Be Helpful, Related to Teaching Skills and Assessment, by Degree Program

Data for doctoral degree faculty members are not reported because of very small sample size.

Topic of Professional Development Experience	Associate Degree Faculty (N=66)	Bachelor's Degree Faculty (N=33)	Master's Degree Faculty (N=20)
Early childhood teacher assessment (e.g., CLASS)	46%	46%	45%
Teaching practitioners to use technology with children	41%	46%	40%
Teaching practitioners developmentally appropriate practice in infant and toddler settings	30%	30%	15%
Child assessment (e.g., portfolios, using particular assessment tools such as the Work Sampling System)	26%	49%	30%
Early childhood program assessment (e.g., Environment Rating Scale)	23%	36%	30%

Table A3-14: Professional Development Topics That Would Be Helpful, Related to Administration and Leadership, by Degree Program

Data for doctoral degree faculty members are not reported because of very small sample size.

Topic of Professional Development Experience	Associate Degree Faculty (N=65)	Bachelor's Degree Faculty (N=32)	Master's Degree Faculty (N=18)
Theories of leadership	39%	44%	39%
Early childhood systems and policy	32%	38%	39%
Organizational development	31%	44%	28%

Appendix 4: Challenges Facing Early Childhood Degree Programs, and Additional Resources Needed

Table A4-1: Challenges Facing Indiana Early Childhood Degree Programs Related to Lack of Resources and Support, by Program

* Please interpret data with caution, as sample sizes are very small.
Data for doctoral degree programs are not reported because of very small sample size.

Challenges	Associate Degree (N=24)	Bachelor's Degree (N=13)	Master's Degree (N=4)*
Faculty administrative responsibilities that interfere with time with students (e.g., lack of time for teaching, advising)	71%	69%	50%
Lack of recognition of the value of early childhood from within the department or school	38%	46%	0%
Insufficient number of full-time faculty	38%	23%	25%
Insufficient academic support for students for whom English is a second language	38%	8%	0%
Inequitable distribution of resources compared to other programs in the institution	29%	23%	25%
Lack of articulation between 2-year and 4-year college early childhood degree programs	29%	15%	0%
Insufficient ability to recruit students	29%	39%	100%
Insufficient resources to offer enough courses/sections to meet student needs	13%	8%	25%
Insufficient access to quality clinical experience sites	13%	39%	25%
Insufficient number of part-time faculty	8%	0%	0%
Insufficient ability to support students to complete the program (e.g., basic skills supports, tutoring)	8%	39%	0%
Insufficient course content focused on children younger than five	0%	0%	0%

Table A4-2: Challenges Facing Indiana Early Childhood Degree Programs Related to Need for Additional Faculty Expertise, by Program

Data for master's degree and doctoral degree programs are not reported because of very small sample sizes.

Challenges	Associate Degree (N=16)	Bachelor's Degree (N=10)
Need for additional faculty expertise in teaching infants and toddlers	63%	30%
Need for additional faculty expertise in teaching preschool-age children	13%	40%
Need for additional faculty expertise in math pedagogy for young children	38%	20%
Need for additional faculty expertise in science pedagogy for young children	31%	20%
Need for additional faculty expertise in promoting literacy in young children	0%	10%
Need for additional faculty expertise in the social/emotional development of young children	6%	0%
Need for additional faculty expertise in teaching young children who are dual language learners	75%	80%
Need for additional faculty expertise in teaching young children with special needs	13%	30%
Need for additional faculty expertise in working with diverse populations of young children	19%	20%
Need for additional faculty expertise in working with diverse populations of college students	25%	20%
Need for additional faculty expertise in working with and engaging diverse populations of families	6%	20%

Appendix 5: Family Engagement and Early Mathematics

Table A5-1: Importance of Including Selected Topics in Early Childhood Higher Education Degree Programs: Percentages of Faculty Members Reporting "Very Important," by Age Group and Program

Data for doctoral degree programs are not reported because of very small sample size.

Topic	Birth to 2 years	3 and/or 4 years	K-grade 3 or higher
Associate Degree Faculty (N=73-74)			
Understanding the domains and sequences of mathematical knowledge in young children and how to promote their mathematical understanding and ability to solve problems	35%	73%	92%
Understanding the components and sequences of literacy development in young children and how to promote their skills related to oral and written language	70%	87%	95%
Understanding socio-emotional development, its relationship to learning and how to support children's socio-emotional skills	85%	91%	88%
Understanding normal and atypical motor development in young children and its relationship to learning and how to facilitate their motor skills	89%	87%	70%
Understanding and implementing an integrated strategy to engage families in on-going and reciprocal partnerships and its relationship to outcomes for children	82%	84%	82%
Bachelor's Degree Faculty (N=33)			
Understanding the domains and sequences of mathematical knowledge in young children and how to promote their mathematical understanding and ability to solve problems	27%	70%	88%
Understanding the components and sequences of literacy development in young children and how to promote their skills related to oral and written language	64%	82%	91%
Understanding socio-emotional development, its relationship to learning and how to support children's socio-emotional skills	91%	97%	91%

Table A5-1: Importance of Including Selected Topics in Early Childhood Higher Education Degree Programs: Percentages of Faculty Members Reporting "Very Important," by Age Group and Program (Continued)

Topic	Birth to 2 years	3 and/or 4 years	K-grade 3 or higher
Bachelor's Degree Faculty (N=33)			
Understanding normal and atypical motor development in young children and its relationship to learning and how to facilitate their motor skills	85%	85%	70%
Understanding and implementing an integrated strategy to engage families in on-going and reciprocal partnerships and its relationship to outcomes for children	94%	94%	94%
Master's Degree Faculty (N=20)			
Understanding the domains and sequences of mathematical knowledge in young children, and how to promote their mathematical understanding and ability to solve problems	15%	80%	95%
Understanding the components and sequences of literacy development in young children and how to promote their skills related to oral and written language	60%	95%	90%
Understanding socio-emotional development, its relationship to learning and how to support children's socio-emotional skills	80%	85%	85%
Understanding normal and atypical motor development in young children and its relationship to learning and how to facilitate their motor skills	85%	85%	60%
Understanding and implementing an integrated strategy to engage families in on-going and reciprocal partnerships and its relationship to outcomes for children	90%	90%	90%

Table A5-2: Capability of Teaching Coursework on Young Children's Development, as Reported by Faculty Members: Age-Group Focus, by Degree Program

Data for doctoral degree programs are not reported because of very small sample size.

Topic	Birth to 2 years	3 and/or 4 years	K-grade 3 or higher
Associate Degree Faculty			
Scaffolding children's mathematical development and promoting their ability to solve problems (N=70)	67%	83%	66%
Scaffolding children's literacy development and promoting their oral and written skills (N=71)	73%	83%	75%
Supporting children's socio-emotional development and skills (N=70)	74%	80%	87%
Facilitating the developmental course of motor development in young children (N=71)	66%	80%	70%
Integrating families in partnerships to support children's learning (N=71)	73%	79%	85%
Bachelor's Degree Faculty			
Scaffolding children's mathematical development and promoting their ability to solve problems (N=33)	46%	70%	55%
Scaffolding children's literacy development and promoting their oral and written skills (N=36)	58%	75%	58%
Supporting children's socio-emotional development and skills (N=32)	72%	84%	78%
Facilitating the developmental course of motor development in young children (N=33)	55%	76%	58%
Integrating families in partnerships to support children's learning (N=32)	75%	75%	84%
Master's Degree Faculty			
Scaffolding children's mathematical development and promoting their ability to solve problems (N=19)	47%	74%	68%
Scaffolding children's literacy development and promoting their oral and written skills (N=21)	57%	71%	71%
Supporting children's socio-emotional development and skills (N=19)	63%	74%	79%
Facilitating the developmental course of motor development in young children (N=19)	58%	68%	74%
Integrating families in partnerships to support children's learning (N=19)	74%	79%	84%

Table A5-3: Family Engagement: Age-Group Focus, by Degree Program

* Please interpret data with caution, as sample sizes are very small.
# Data are not reported because of very small sample size.

If topic required for the degree program, age group focus of the coursework:

Age-Group Focus	Associate Degree	Bachelor's Degree	Master's Degree*	Doctoral Degree*
Theories of family engagement				
Birth to two years	93%	75%	40%	100%
3 and/or 4 years (Pre-K)	96%	100%	80%	100%
K-grade 3 or higher	85%	70%	80%	100%
N	*27*	*20*	*5*	*4*
Working with various family structures (e.g., single parents, same-sex parents, opposite-sex parents, extended/multi-generational families)				
Birth to two years	89%	80%	25%	100%
3 and/or 4 years (Pre-K)	96%	95%	75%	100%
K-grade 3 or higher	89%	75%	100%	100%
N	*28*	*20*	*4*	*4*
Working with families of children with special needs				
Birth to two years	90%	67%	40%	100%
3 and/or 4 years (Pre-K)	97%	91%	80%	100%
K-grade 3 or higher	90%	71%	80%	100%
N	*29*	*21*	*5*	*4*
Working with families of various ethnic, racial, and linguistic backgrounds				
Birth to two years	90%	86%	20%	100%
3 and/or 4 years (Pre-K)	97%	95%	80%	100%
K-grade 3 or higher	86%	71%	80%	100%
N	*29*	*21*	*5*	*4*
Engaging families in classroom, program and/or school activities				
Birth to two years	86%	76%	40%	#
3 and/or 4 years (Pre-K)	93%	95%	80%	#
K-grade 3 or higher	89%	67%	80%	#
N	*28*	*21*	*5*	*#*
Effective communication strategies with families				
Birth to two years	90%	76%	50%	100%
3 and/or 4 years (Pre-K)	93%	95%	100%	100%
K-grade 3 or higher	90%	71%	75%	100%
N	*29*	*21*	*4*	*4*

Table A5-3: Family Engagement: Age-Group Focus, by Degree Program (Continued)

Age-Group Focus	Associate Degree	Bachelor's Degree	Master's Degree*	Doctoral Degree*
Utilizing technology to communicate with families				
Birth to two years	88%	76%	50%	#
3 and/or 4 years (Pre-K)	92%	95%	100%	#
K-grade 3 or higher	92%	71%	75%	#
N	*25*	*21*	*4*	*#*
Working with families to help them enhance their children's learning at home				
Birth to two years	86%	75%	50%	#
3 and/or 4 years (Pre-K)	97%	90%	100%	#
K-grade 3 or higher	86%	55%	75%	#
N	*29*	*20*	*4*	*#*
Using knowledge about children's families in curriculum planning				
Birth to two years	89%	71%	50%	75%
3 and/or 4 years (Pre-K)	93%	91%	100%	100%
K-grade 3 or higher	86%	62%	75%	100%
N	*28*	*21*	*4*	*4*
Negotiating conflicts and differences in values between families and teachers				
Birth to two years	92%	74%	50%	#
3 and/or 4 years (Pre-K)	96%	95%	100%	#
K-grade 3 or higher	88%	68%	75%	#
N	*25*	*19*	*4*	*#*
Building community partnerships				
Birth to two years	93%	74%	50%	#
3 and/or 4 years (Pre-K)	96%	95%	75%	#
K-grade 3 or higher	89%	68%	75%	#
N	*27*	*19*	*4*	*#*
Child referrals to community resources				
Birth to two years	86%	74%	50%	100%
3 and/or 4 years (Pre-K)	93%	95%	75%	100%
K-grade 3 or higher	90%	79%	75%	100%
N	*29*	*19*	*4*	*4*
Utilizing community resources				
Birth to two years	86%	68%	50%	#
3 and/or 4 years (Pre-K)	97%	90%	75%	#
K-grade 3 or higher	86%	63%	75%	#
N	*29*	*19*	*4*	*#*

Table A5-4: Teaching Math Skills to Children: Age-Group Focus, by Degree Program

Data for master's degree and doctoral degree programs are not reported because of very small sample sizes.

If topic required for the degree program, age-group focus of the coursework:

Age-Group Focus	Associate Degree	Bachelor's Degree
Number sense for children		
Birth to two years	89%	47%
3 and/or 4 years (Pre-K)	96%	90%
K-grade 3 or higher	78%	90%
N	*27*	*19*
Operations and algebraic thinking for children		
Birth to two years	52%	42%
3 and/or 4 years (Pre-K)	88%	74%
K-grade 3 or higher	80%	90%
N	*25*	*19*
Measurement skills for children		
Birth to two years	73%	42%
3 and/or 4 years (Pre-K)	96%	79%
K-grade 3 or higher	81%	90%
N	*26*	*19*
Geometry skills for children		
Birth to two years	77%	47%
3 and/or 4 years (Pre-K)	96%	79%
K-grade 3 or higher	81%	90%
N	*26*	*19*
Children's mathematical reasoning/practices		
Birth to two years	73%	42%
3 and/or 4 years (Pre-K)	89%	84%
K-grade 3 or higher	81%	90%
N	*26*	*19*

Table A5-5: Development of Children's Mathematical Understanding: Age-Group Focus, by Degree Program

Data for master's degree and doctoral degree programs are not reported because of very small sample sizes.

If topic required for the degree program, age-group focus of the coursework:

Age-Group Focus	Associate Degree	Bachelor's Degree
Building on children's natural interest in mathematics and their intuitive and informal mathematical knowledge		
Birth to two years	89%	53%
3 and/or 4 years (Pre-K)	96%	90%
K-grade 3 or higher	85%	74%
N	*27*	*19*
Encouraging children's inquiry and exploration to foster problem solving and mathematical reasoning		
Birth to two years	89%	47%
3 and/or 4 years (Pre-K)	96%	90%
K-grade 3 or higher	85%	74%
N	*27*	*19*
Using everyday activities as natural vehicles for developing children's mathematical knowledge		
Birth to two years	89%	58%
3 and/or 4 years (Pre-K)	96%	90%
K-grade 3 or higher	85%	68%
N	*27*	*19*
Introducing explicit mathematical concepts through planned experiences		
Birth to two years	80%	33%
3 and/or 4 years (Pre-K)	96%	83%
K-grade 3 or higher	76%	72%
N	*25*	*18*
Creating a mathematically rich environment		
Birth to two years	86%	53%
3 and/or 4 years (Pre-K)	93%	90%
K-grade 3 or higher	86%	63%
N	*28*	*19*
Supporting English learners in developing mathematical knowledge as they concurrently acquire English		
Birth to two years	87%	30%
3 and/or 4 years (Pre-K)	93%	80%
K-grade 3 or higher	87%	80%
N	*15*	*10*

Table A5-5: Development of Children's Mathematical Understanding: Age-Group Focus, by Degree Program (Continued)

Age-Group Focus	Associate Degree	Bachelor's Degree
Developing children's mathematical vocabulary		
Birth to two years	88%	53%
3 and/or 4 years (Pre-K)	88%	74%
K-grade 3 or higher	84%	74%
N	*25*	*19*
Assessing children's mathematical development		
Birth to two years	73%	41%
3 and/or 4 years (Pre-K)	89%	82%
K-grade 3 or higher	81%	77%
N	*26*	*17*

Table A5-6: Capability of Teaching Coursework on Teaching Math Skills to Children, as Reported by Faculty Members, by Age Group and Degree Program

Data for doctoral degree faculty members are not reported because of very small sample size.

Early Math Topic	Birth to 2 years	3 to 4 years	K-grade 3 or higher
Associate Degree Faculty			
Number sense for children (N=72)	74%	83%	79%
Operations and algebraic thinking for children (N=71)	56%	70%	65%
Measurement skills for children (N=72)	63%	81%	75%
Geometry skills for children (N=72)	65%	78%	65%
Children's mathematical reasoning/ practices (N=72)	64%	81%	71%
Bachelor's Degree Faculty			
Number sense for children (N=33)	64%	79%	70%
Operations and algebraic thinking for children (N=33)	46%	70%	64%
Measurement skills for children (N=33)	55%	79%	67%
Geometry skills for children (N=33)	55%	76%	58%
Children's mathematical reasoning/ practices (N=33)	49%	76%	61%
Master's Degree Faculty			
Number sense for children (N=18)	72%	83%	94%
Operations and algebraic thinking for children (N=18)	56%	72%	83%
Measurement skills for children (N=18)	61%	78%	94%
Geometry skills for children (N=18)	61%	83%	94%
Children's mathematical reasoning/ practices (N=18)	61%	83%	89%

Table A5-7: Capability of Teaching Coursework on Development of Children's Mathematical Understanding, as Reported by Faculty Members, by Age Group and Degree Program

Data for doctoral degree faculty members are not reported because of very small sample size.

Early Math Topic	Birth to 2 years	3 to 4 years	K-grade 3 or higher
Associate Degree Faculty			
Building on children's natural interest in mathematics and their intuitive and informal mathematical knowledge (N=72)	68%	89%	74%
Encouraging children's inquiry and exploration to foster problem solving and mathematical reasoning (N=72)	74%	88%	72%
Using everyday activities as natural vehicles for developing mathematical knowledge (N=73)	75%	86%	74%
Introducing explicit mathematical concepts through planned experiences (N=72)	65%	83%	71%
Creating a mathematically rich environment (N=72)	68%	86%	72%
Supporting English learners in developing mathematical knowledge as they concurrently acquire English (N=72)	44%	56%	44%
Developing children's mathematical vocabulary (N=72)	68%	86%	71%
Assessing children's mathematical development (N=72)	67%	88%	69%
Bachelor's Degree Faculty			
Building on children's natural interest in mathematics and their intuitive and informal mathematical knowledge (N=33)	58%	85%	55%
Encouraging children's inquiry and exploration to foster problem solving and mathematical reasoning (N=33)	55%	82%	49%
Using everyday activities as natural vehicles for developing mathematical knowledge (N=33)	64%	85%	58%
Introducing explicit mathematical concepts through planned experiences (N=33)	52%	73%	52%
Creating a mathematically rich environment (N=33)	61%	79%	55%
Supporting English learners in developing mathematical knowledge as they concurrently acquire English (N=33)	30%	42%	27%

Table A5-7: Capability of Teaching Coursework on Development of Children's Mathematical Understanding, as Reported by Faculty Members, by Age Group and Degree Program (Continued)

Early Math Topic	Birth to 2 years	3 to 4 years	K-grade 3 or higher
Bachelor's Degree Faculty			
Developing children's mathematical vocabulary (N=33)	52%	73%	52%
Assessing children's mathematical development (N=33)	52%	73%	46%
Master's Degree Faculty			
Building on children's natural interest in mathematics and their intuitive and informal mathematical knowledge (N=18)	67%	83%	89%
Encouraging children's inquiry and exploration to foster problem solving and mathematical reasoning (N=18)	67%	83%	83%
Using everyday activities as natural vehicles for developing mathematical knowledge (N=18)	67%	83%	89%
Introducing explicit mathematical concepts through planned experiences (N=18)	61%	78%	83%
Creating a mathematically rich environment (N=18)	72%	78%	89%
Supporting English learners in developing mathematical knowledge as they concurrently acquire English (N=18)	44%	56%	61%
Developing children's mathematical vocabulary (N=18)	67%	83%	83%
Assessing children's mathematical development (N=18)	61%	72%	78%

Table A5-8: Coursework Taught Related to Teaching Math Skills to Children: Age-Group Focus

Data for doctoral degree faculty members are not reported because of very small sample size.

If topic taught in past two years, age-group focus of the coursework:

Topic	Associate Degree Faculty	Bachelor's Degree Faculty	Master's Degree Faculty
Number sense (counting and cardinality) for children			
Birth to 2 years	63%	46%	62%
3 to 4 years	96%	82%	85%
K-3 or above	57%	64%	62%
N	*49*	*22*	*13*
Operations and algebraic thinking for children			
Birth to 2 years	56%	33%	58%
3 to 4 years	93%	72%	83%
K-3 or above	56%	61%	67%
N	*45*	*18*	*12*
Measurement skills for children			
Birth to 2 years	59%	30%	46%
3 to 4 years	91%	85%	92%
K-3 or above	54%	60%	62%
N	*46*	*20*	*13*
Geometry skills for children			
Birth to 2 years	61%	39%	46%
3 to 4 years	94%	78%	85%
K-3 or above	52%	67%	69%
N	*46*	*18*	*13*
Children's mathematical reasoning/practices			
Birth to 2 years	60%	46%	57%
3 to 4 years	94%	82%	86%
K-3 or above	56%	69%	64%
N	*48*	*22*	*14*

Table A5-9: Coursework Taught Related to Development of Children's Mathematical Understanding: Age-Group Focus

Data for doctoral degree faculty members are not reported because of very small sample size.

If topic taught in past two years, age-group focus of the coursework:

Topic	Associate Degree Faculty	Bachelor's Degree Faculty	Master's Degree Faculty
Building on natural interest in mathematics and a child's intuitive and informal mathematical knowledge			
Birth to 2 years	66%	46%	57%
3 to 4 years	93%	77%	86%
K-3 or above	60%	68%	71%
N	*53*	*22*	*14*
Encouraging children's inquiry and exploration to foster problem solving and mathematical reasoning			
Birth to 2 years	66%	48%	57%
3 to 4 years	96%	83%	86%
K-3 or above	59%	65%	71%
N	*53*	*23*	*14*
Using everyday activities as natural vehicles for developing children's mathematical knowledge			
Birth to 2 years	70%	43%	57%
3 to 4 years	95%	91%	93%
K-3 or above	63%	67%	64%
N	*56*	*21*	*14*
Introducing explicit mathematical concepts through planned experiences			
Birth to 2 years	60%	43%	57%
3 to 4 years	98%	86%	86%
K-3 or above	62%	71%	71%
N	*50*	*21*	*14*
Creating a mathematically rich environment			
Birth to 2 years	69%	47%	54%
3 to 4 years	98%	94%	92%
K-3 or above	60%	59%	62%
N	*52*	*17*	*13*
Supporting English language learners in developing mathematical knowledge as they concurrently acquire English			
Birth to 2 years	56%	36%	64%
3 to 4 years	85%	73%	73%
K-3 or above	63%	64%	55%
N	*27*	*11*	*11*

Table A5-9: Coursework Taught Related to Development of Children's Mathematical Understanding: Age-Group Focus (Continued)

Topic	Associate Degree Faculty	Bachelor's Degree Faculty	Master's Degree Faculty
Developing children's mathematical vocabulary			
Birth to 2 years	68%	42%	57%
3 to 4 years	96%	90%	86%
K-3 or above	56%	70%	71%
N	*52-53*	*19-20*	*14*
Assessing children's mathematical development			
Birth to 2 years	64%	41%	55%
3 to 4 years	98%	82%	91%
K-3 or above	64%	65%	64%
N	*47*	*17*	*11*

Table A5-10: Interest in Professional Development on Teaching Math Skills and Strategies

Data for doctoral degree faculty members are not reported because of very small sample size.

Professional Development Topic	1- No Interest	2	3	4	5-Very Interested	Total
Associate Degree Faculty						
Number sense (counting and cardinality) for children (N=65)	9%	11%	15%	31%	34%	100%
Operations and algebraic thinking for children (N=65)	7%	14%	14%	31%	34%	100%
Measurement skills for children (N=65)	8%	8%	23%	28%	34%	100%
Geometry skills for children (N=65)	8%	9%	20%	29%	34%	101%
Children's mathematical reasoning (N=65)	8%	5%	15%	34%	39%	100%
Assessing children's mathematical understanding (N=65)	6%	3%	12%	33%	46%	100%
Integrating mathematical understanding and skills in all aspects of curriculum (N=65)	6%	3%	11%	31%	49%	100%
Integrating mathematical understanding into children's daily activities (N=65)	6%	3%	15%	28%	48%	100%
Creating a mathematically rich learning environment (N=65)	6%	5%	12%	23%	54%	100%

Table A5-10: Interest in Professional Development on Teaching Math Skills and Strategies (Continued)

Professional Development Topic	1- No Interest	2	3	4	5-Very Interested	Total
Bachelor's Degree Faculty						
Number sense (counting and cardinality) for children (N=30)	10%	20%	10%	30%	30%	100%
Operations and algebraic thinking for children (N=30)	10%	20%	3%	30%	37%	100%
Measurement skills for children (N=30)	10%	23%	3%	34%	30%	100%
Geometry skills for children (N=30)	10%	20%	3%	40%	27%	100%
Children's mathematical reasoning (N=30)	10%	17%	0%	23%	50%	100%
Assessing children's mathematical understanding (N=29)	7%	10%	7%	28%	48%	100%
Integrating mathematical understanding and skills in all aspects of curriculum (N=30)	3%	17%	10%	17%	53%	100%
Integrating mathematical understanding into children's daily activities (N=30)	7%	13%	10%	17%	53%	100%
Creating a mathematically rich learning environment (N=29)	3%	14%	3%	21%	59%	100%
Master's Degree Faculty						
Number sense (counting and cardinality) for children (N=17)	18%	23%	18%	18%	23%	100%
Operations and algebraic thinking for children (N=17)	18%	18%	23%	18%	23%	100%
Measurement skills for children (N=17)	18%	29%	12%	23%	18%	100%
Geometry skills for children (N=17)	17%	29%	18%	18%	18%	100%
Children's mathematical reasoning (N=17)	18%	23%	12%	12%	35%	100%
Assessing children's mathematical understanding (N=17)	17%	18%	18%	18%	29%	100%
Integrating mathematical understanding and skills in all aspects of curriculum (N=17)	12%	23%	24%	6%	35%	100%
Integrating mathematical understanding into children's daily activities (N=17)	18%	18%	23%	6%	35%	100%
Creating a mathematically rich learning environment (N=17)	12%	23%	18%	6%	41%	100%

Table A5-11: Interest in Professional Development on Mathematical Understanding

Data for doctoral degree faculty members are not reported because of very small sample size.

Professional Development Topic	1- No Interest	2	3	4	5-Very Interested	Total
Associate Degree Faculty						
Teaching practitioners to create mathematically rich environments for young children (N=66)	8%	4%	9%	29%	50%	100%
Teaching practitioners to implement instructional strategies that support mathematical understanding in children from birth through age 2 (N=66)	9%	8%	12%	32%	39%	100%
Teaching practitioners to implement instructional strategies that support mathematical understanding in children ages 3 and 4 (Pre-K) (N=66)	9%	4%	14%	27%	46%	100%
Teaching practitioners to implement instructional strategies that support mathematical understanding in children in kindergarten through grade 3 or higher (N=66)	8%	6%	11%	36%	39%	100%
Strategies to help practitioners who struggle with mathematics build confidence in their ability to facilitate children's mathematical understanding and skill (N=65)	8%	3%	8%	24%	57%	100%
Bachelor's Degree Faculty						
Teaching practitioners to create mathematically rich environments for young children (N=30)	7%	13%	7%	23%	50%	100%
Teaching practitioners to implement instructional strategies that support mathematical understanding in children from birth through age 2 (N=30)	7%	13%	7%	33%	40%	100%

Table A5-11: Interest in Professional Development on Mathematical Understanding (Continued)

Professional Development Topic	1- No Interest	2	3	4	5-Very Interested	Total
Teaching practitioners to implement instructional strategies that support mathematical understanding in children ages 3 and 4 (Pre-K) (N=29)	7%	17%	14%	21%	41%	100%
Teaching practitioners to implement instructional strategies that support mathematical understanding in children in kindergarten through grade 3 or higher (N=29)	7%	21%	10%	21%	41%	100%
Strategies to help practitioners who struggle with mathematics build confidence in their ability to facilitate children's mathematical understanding and skill (N=29)	3%	7%	10%	21%	59%	100%
Master's Degree Faculty						
Teaching practitioners to create mathematically rich environments for young children (N=18)	17%	11%	28%	11%	33%	100%
Teaching practitioners to implement instructional strategies that support mathematical understanding in children from birth through age 2 (N=18)	17%	11%	28%	11%	33%	100%
Teaching practitioners to implement instructional strategies that support mathematical understanding in children ages 3 and 4 (Pre-K) (N=18)	17%	11%	33%	0%	39%	100%
Teaching practitioners to implement instructional strategies that support mathematical understanding in children in kindergarten through grade 3 or higher (N=18)	11%	17%	33%	0%	39%	100%
Strategies to help practitioners who struggle with mathematics build confidence in their ability to facilitate children's mathematical understanding and skill (N=18)	17%	6%	33%	0%	44%	100%

Table A5-12: Interest in Professional Development on Family Engagement

Data for doctoral degree faculty members are not reported because of very small sample size.

Professional Development Topic	1- No Interest	2	3	4	5-Very Interested	Total
Associate Degree Faculty (N=67)						
Theories of family engagement	4%	5%	21%	28%	42%	100%
Strategies for working with various family structures (e.g. single parents; same-sex parents; biracial, foster, or extended/multigenerational families)	4%	5%	15%	34%	42%	100%
Strategies for working with families of various economic, cultural, ethnic, racial, and linguistic backgrounds	5%	3%	15%	34%	43%	100%
Working with families to extend children's learning at home	5%	2%	19%	31%	43%	100%
Strategies for engaging families in classroom and program activities	6%	2%	16%	31%	45%	100%
Teaching practitioners to work with families of children with special needs	8%	0%	12%	31%	49%	100%
Negotiating conflict with families	8%	0%	12%	37%	43%	100%
Effective communication strategies with families	9%	2%	10%	33%	46%	100%
Techniques for gathering knowledge about children's families	8%	3%	16%	36%	37%	100%
Using community resources to support families	6%	3%	16%	33%	42%	100%
Incorporating knowledge about families in curriculum planning	6%	0%	13%	40%	40%	100%
Utilizing technology to communicate and interact with families	6%	3%	16%	27%	48%	100%
Bachelor's Degree Faculty (N=31)						
Theories of family engagement	10%	16%	19%	13%	42%	100%
Strategies for working with various family structures (e.g. single parents; same-sex parents; biracial, foster, or extended/multigenerational families)	6%	7%	23%	32%	32%	100%
Strategies for working with families of various economic, cultural, ethnic, racial, and linguistic backgrounds	6%	10%	19%	23%	42%	100%
Working with families to extend children's learning at home	6%	3%	23%	23%	45%	100%
Strategies for engaging families in classroom and program activities	6%	10%	10%	26%	48%	100%

Table A5-12: Interest in Professional Development on Family Engagement (Continued)

Professional Development Topic	1- No Interest	2	3	4	5-Very Interested	Total
Teaching practitioners to work with families of children with special needs	6%	6%	13%	23%	52%	100%
Negotiating conflict with families	3%	0%	19%	36%	42%	100%
Effective communication strategies with families	3%	10%	13%	22%	52%	100%
Techniques for gathering knowledge about children's families	3%	16%	19%	23%	39%	100%
Using community resources to support families	6%	6%	23%	26%	39%	100%
Incorporating knowledge about families in curriculum planning	3%	6%	13%	39%	39%	100%
Utilizing technology to communicate and interact with families	3%	3%	16%	33%	45%	100%
Master's Degree Faculty (N=18)						
Theories of family engagement	17%	22%	11%	11%	39%	100%
Strategies for working with various family structures (e.g. single parents; same-sex parents; biracial, foster, or extended/multigenerational families)	11%	11%	28%	22%	28%	100%
Strategies for working with families of various economic, cultural, ethnic, racial, and linguistic backgrounds	11%	11%	11%	39%	28%	100%
Working with families to extend children's learning at home	17%	17%	5%	22%	39%	100%
Strategies for engaging families in classroom and program activities	17%	11%	6%	33%	33%	100%
Teaching practitioners to work with families of children with special needs	17%	5%	17%	33%	28%	100%
Negotiating conflict with families	5%	6%	28%	39%	22%	100%
Effective communication strategies with families	5%	11%	17%	17%	50%	100%
Techniques for gathering knowledge about children's families	11%	11%	17%	33%	28%	100%
Using community resources to support families	11%	11%	11%	39%	28%	100%
Incorporating knowledge about families in curriculum planning	11%	5%	17%	28%	39%	100%
Utilizing technology to communicate and interact with families	11%	22%	11%	11%	45%	100%

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