



Elementary School Principals' Perceptions Regarding Early Childhood Education

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Abstract

Elementary principals are increasingly responsible for the supervision, support, and evaluation of early childhood teachers and young children. Previous research demonstrated that principals may prefer to hire elementary-certified rather than early childhood-certified teachers and that principals without early childhood preparation may not advocate for developmentally appropriate practices. This study examines elementary principals' preparation for and perceptions of early childhood education, including their knowledge of child development and hiring preferences. We use state certification data to understand principals' preparation and survey data to explore principals' perceptions and practices. Findings indicate that few principals hold early childhood certification while most supervise early childhood teachers and young children. Principals also indicated a lack of commitment to the PreK-3 continuum. Along with previous literature, our findings suggest that principal preparation requirements should be revised to ensure that all who support and evaluate early childhood teachers and young children receive relevant coursework and experiences.

Keywords: *principals, preparation, early childhood education, perceptions, elementary*

Introduction

Strong leadership is vital for any organization, including our schools. School principals affect both teacher and student performance. While teachers influence the children in their classroom, principals impact all the students in the school building. In fact, a principal's leadership is only second to teaching for impact on children's learning outcomes (Mead, 2011). Therefore, it is imperative that schools have effective and knowledgeable principals, and those principals hire the most qualified teachers to maximize student achievement.

Twenty years ago, the federal government in the United States set a goal that all children would enter school ready to learn (Goals 2000: Educate Americans Act of 2000). Accordingly, the U.S. federal government and many individual states are investing in early childhood education (ECE) programs (birth - third grade), especially for children at risk for school failure. There is a consensus that high-quality early childhood programs are vital for cognitive, social, and academic outcomes (Barnett, 2011; Calder, 2014), make a significant impact on long-term health and well-being (Phillips and Meloy, 2012), and aid in the development of citizenship, and relationship-

building, (Douglas, 2018). Studies show that achievement gaps appear early in a child's life and widen over the years a child is in school (PreKindergarten-3rd Grade National Work Group, 2013). Attending high-quality PreKindergarten (PreK) programs for one- or two years at ages 3 and 4 will reduce the gap by about one-third (Reynolds, et. al., 2017). Although this reduction is impressive, it is apparent we must look beyond one or two years of PreK for answers to our educational shortfalls.

A national discussion in the United States has been underway regarding the disconnect in early childhood between the birth-to-age-five sector and kindergarten to third grade. The PreK-3rd movement intends to create a continuum of learning (Ritchie and Gutmann, 2014) that concentrates on quality services for children and families along that continuum. This intervention includes a focus on bridging the disparities between the ECE field and the K-12 school system (Howard, 2008). The PreK-3 continuum builds on the notion that achievement gaps reflect fragmented services and inconsistent quality from grade to grade and accounts for a "fade-out" effect (Guernsey et al., 2014). This means even if a child receives a high-quality PreK experience, the effects begin to fade out or converge without appropriate curriculum and high-quality teaching in kindergarten through third grade. Typically, school district transition policies focus on supporting children moving from PreK to kindergarten and kindergarten to elementary school. Research suggests that without successful transitions from a high-quality early childhood system to a high-quality elementary system, the academic and social gains that a child makes in the early years may not transfer to future long-term success (Howard, 2008). Principals who understand ECE could provide support for seamless transition through the continuum as the instructional leaders of their school (Hallsisey, 2017).

The current study examines principals' preparation for and experiences in early childhood education. Given the focus on preschool/prekindergarten of previous studies, the current study examines the full spectrum of ECE in public schools, following the PreK-3 continuum.

Literature Review

Principals' Background and Preparation

The National Governors Association acknowledged that two of the most important criteria for student success are principal leadership and high-quality instruction in PreK-3 in the United States (Szekely, 2013). Over the past two decades, the number of preschool/pre-kindergarten classrooms housed in elementary schools has increased exponentially. In 2000, there were about 776,000 prekindergarten students enrolled in elementary school, whereas, in the fall of 2020, 1.5 million prekindergarten children were projected to be enrolled (National Center for Educational Statistics, 2020). This puts 3- and 4-year olds under the supervision and leadership of elementary school principals across the country. Research finds that about one-fourth of school leaders have an early childhood background (Abel et al., 2016). Many principals likely do not have any training and only limited experiences with early childhood classrooms (Mead, 2011). It is estimated that only one out of five principals in the United States believe they are well-trained in early childhood (Bouffard, 2018). Principals may not understand nor have been exposed to developmentally appropriate practices (DAP) or constructivist teaching approaches. They may hold beliefs that early childhood teacher preparation is less rigorous than elementary (ELEM) preparation (Abers-Biddle, 2014). Principals may be more likely to hire ELEM-certified teachers for the primary grades be-

cause their own preparation aligns more closely with ELEM than ECE (Abel et al., 2016). Principals often have only a rudimentary understanding of what teachers should know about child development to support cognitive and social-emotional development, let alone whether they are using appropriate practices in their classrooms. For these reasons, many principals believe they need more training in ECE curriculum, developmental milestones, appropriate behavioral expectations, and disciplinary practices, and providing pedagogical support to ECE teachers (Shue et al., 2010). Without an understanding of ECE, principals' explicit leadership decisions may conflict with DAP (Hallsiey, 2017). For example, school decisions to restrict play (both inside and outside), utilization of extrinsic rewards, and elimination of the arts are diametrically opposite of ECE beliefs and foundational research of DAP (Copple and Bredekamp, 2008). These decisions may have a negative impact on children's learning and development including opportunities for building self-regulation.

Despite the research, the vast majority of educational leadership programs, state licensure exams, or certification requirements across the United States do not mandate knowledge of ECE (Brown et al., 2014). The background and experiences of principals vary greatly and often include fields such as elementary education, secondary education content areas, art, or music (Abel et al., 2016).

Principals' Staffing Preferences

Teacher certification requirements and the issuance of teaching certificates (or licenses) for grade levels or content areas are set by each state. "Grade-level overlap" occurs when certification is shared for one or more grade levels (Fowler, 2017). When focusing on the grades included in the PreK-3 continuum, two certification areas overlap – early childhood education and elementary education. When states addressed the need for special licensure for teachers of young children by creating the ECE certification area, most did not reconfigure the ELEM certification area – causing grade-level overlap. During the 1970s – 1990s, grade-level overlap steadily increased (Fowler, 2017). In the state where the current study was conducted, as in many other states, ECE certification covers birth through third grade and ELEM encompasses grades first - sixth, overlapping three grades (first, second, and third).

Elementary school principals should be concerned about grade-level overlap because there are major differences between the histories, beliefs, and practices between ECE and ELEM teachers. The National Association for the Education of Young Children (NAEYC) provides guidelines for DAP for teaching children from birth through age eight (Bredekamp, 1987; Copple and Bredekamp, 2008). Beyond the use of DAP, and perhaps more relevant for today's principals, ECE certification impacts student outcomes. Teachers who use developmentally appropriate teaching strategies were associated with positive student outcomes in first and second grades as well as higher achievement test scores (Huffman and Spears, 2000). Hooper (2018) found a positive, significant effect on kindergarten achievement in reading and mathematics when their teachers were ECE-certified.

Many principals, however, do not value the differences between certification areas (Engel, 2013). Rather, principals tend to look at a mix of personal and professional qualities when making hiring or staffing decisions, with the expectation that all teachers, regardless of certification area, will know the content, teach it, and motivate students to learn (Harris et al., 2010). Studies on principal hiring decisions have also indicated that teachers are hired if they have more subject-area

experience, justifying that an ELEM teacher can be moved across a larger grade span than an ECE teacher (Albers-Biddle, 2013).

In Florida, elementary principals stated they did not know the differences between ECE and ELEM and that the certification area was irrelevant (Albers-Biddle, 2014). However, they tended to hire teachers that held ELEM certification over ECE because they could move ELEM teachers around to a wider range of grade levels. Also in this study, principals indicated they believed specialized knowledge was needed for primary teachers but they did not know what these practices looked like or how they were different. Finally, although all principals in the Florida study stated they knew about DAP, probing questions revealed principals had little understanding of the foundations of ECE or appropriate practices (Albers-Biddle, 2014). This would suggest that teachers who are most qualified for the early primary grades may not be the teachers principals prefer to hire.

Principals' Perceptions of Early Childhood

Considering their hiring preferences, one might question principals' perceptions about ECE. Several studies have examined principals' perceptions about preschool, prekindergarten, or early childhood leadership. One study examined Nebraska's school administrators' (both principals and superintendents) perceptions of preschool education (Florendo, 2012). This study posed questions to administrators around four categories – Research about PreK, Perceptions of PreK, Curriculum, and Resources. Administrators ranked their knowledge of Curriculum as the highest category and Resources for early childhood as the lowest.

Several years later, Williams (2015) studied Alabama principals' perceptions of the benefits of prekindergarten. This study used the Florendo (2012) Likert-scaled questions and introduced demographic variables that were used to examine principals' responses. These variables included gender, race, years of experience, education level, school classification, school enrollment, and free/reduced lunch. Williams found, similar to Florendo (2012), that principals believed themselves knowledgeable about early childhood curriculum. Identification of letters and numbers, learning to write one's name, expanding vocabulary, and learning social and emotional skills were identified as being of high importance to principals for PreK children. Additionally, demographic variables of race, years of experience, educational level, school classification, school enrollment, and free/reduced lunch rate, and Title 1/Non-Title 1 revealed statistically significant relationships with principals' perceived benefits of prekindergarten (Williams, 2015).

The National Principals' Survey on Early Childhood Instructional Leadership (Abel et al., 2016) reported data from 321 principals from across the United States. The vast majority of schools from the survey were identified as PreK – 8th grade while about 15% were providing PreK only. About 24% of the principals held ECE certification and about 62% had reported having experience teaching early childhood or elementary education (Abel et al., 2016). According to the national survey results, principals believe they have knowledge of and strong relationships with federally funded PreK programs in their community. An examination of the importance of classroom activities (e.g., learning areas, children interacting, dramatic play, independent seatwork, whole group instruction, letter recognition, and technology use) in PreK, kindergarten, and first grade suggest that children using learning areas and children interacting were deemed nearly equally important across the three grade levels while the use of dramatic play was seen the least important in first grade compared to all activities. Independent seatwork was identified as least important in PreK and most important in first grade. Whole group instruction was nearly equally

important in kindergarten and first grade and not very important in PreK. Letter recognition was most important in kindergarten, slightly less important in first grade, and least important in PreK.

The national survey also investigated the instructional leadership roles and responsibilities of principals. Nearly 80% of principals identified creating collegiality (81%), completing formal evaluations (80%), and observing and providing feedback and support (77%) as the most frequently identified responsibilities. Under 40% of surveyed principals believed their roles should include establishing a data system (37%), aligning curriculum to the Prek-3 continuum (34%), and ensuring that appropriate child assessment was occurring (28%).

Purpose of the Study

Too many elementary principals lack the early childhood knowledge and instructional leadership skills to ensure consistent, seamless instruction every year from prekindergarten through third grade and rarely do principal preparation programs close this gap in their knowledge. Thus, we must ask, “Are young children receiving the fundamental early childhood education that is developmentally appropriate and will lead to lasting outcomes?” It seems important to describe the instructional leadership and teacher support that is present in our schools to identify what resources and opportunities are needed to assist principals in their development as leaders presiding over preschool through third-grade children.

Research Questions

The research for this study is framed around the following questions:

1. To what extent do elementary principals hold early childhood certification and to what extent do they supervise teachers and/or classrooms in the early childhood grades?
2. What characteristics are important to principals when hiring a teacher for kindergarten and for third grade?
3. What are principals' beliefs about early childhood vs. elementary teachers in the primary grades (first, second, and third grades)?
4. What are elementary principals' perceptions about local early childhood programs and their knowledge of early childhood education?
5. Is there a significant difference between principals' perceptions of the benefits of early childhood education when grouped according to gender, ethnicity, qualifications, number of certifications, and years of experience?

Method

This study was an investigation of elementary school principals in one Midwestern state. The researchers used state administrative data and individually administered online surveys to assess principals' qualifications for, and perceptions of, early childhood education.

Measures

State Administrative Data

We collected state certification information about the approximately 1500 elementary principals serving in the 2015-2016, 2016-2017, and 2017-2018 school years in one Midwestern state. All elementary principals must hold an appropriate administrative (principal) certification, but in this state, there are no requirements for the subject areas or grade levels of prior teaching certificates. Everyone's record was reviewed for non-administrative certifications. For the purposes of this study, the researchers indicated if an individual had an Elementary Education (ELEM) certificate (grades first - sixth), an Early Childhood Education (ECE) certificate (Birth - grade three), an Early Childhood Special Education (ECSE) certificate (Birth - grade three), or none of the above.

Principal Survey

To access principals' perceptions, all elementary principals in the same Midwestern state were surveyed in the Fall of 2019. All principals were emailed a link to an electronic survey. This survey was adapted from Williams' (2015) study of the perceptions of central Alabama elementary principals on the benefits of pre-kindergarten programs and The National Principals Survey on Early Childhood Instructional Leadership (Abel et al., 2016). The survey used in the current study included demographic questions about the principal and their school as well as questions about their hiring practices for teachers in pre-kindergarten/kindergarten, and the early primary grades (first through third). The final section of the survey asked about principals' perceptions of important practices and experiences in early childhood classrooms in their school.

Analyses

To address research question one, the team reported descriptive statistics about the percentage of current elementary principals across the state who hold an ECE or ECSE certificate. These percentages were compared to the percentage of principals who hold an ELEM certificate and those who do not hold an ECE, ECSE, or ELEM credential. Also, survey data were used to indicate what percentage of current principals supervise teachers/classrooms in the early childhood grades (particularly Pre-k - grade three), and what grade levels they consider to be part of their "early childhood program."

To explore research question two, descriptive statistics were reported regarding principals' hiring practices for pre-kindergarten/kindergarten teachers in contrast to their hiring practices for first through third grade teachers. These questions included the degree and certification preferences for the different grade levels.

For research question three, principals' perceptions about the most important characteristics for teachers in Kindergarten and teachers in 3rd grade were explored. Descriptive statistics about the percentage of principals who reported that a characteristic was important for each grade level were also included. Additional details about the percentage of principals reporting that a characteristic was important in one grade and not another were added.

To address research question four, principals' responses to rating scale items on the perceptions survey were used. These items included two questions related to local practices (ECE

recruitment for K-3 classrooms and professional development for preschool teachers) and four items related to the principals' knowledge (early brain development, positive long term ECE impact studies, cost-benefit compared to later programs, and academic benefits of high-quality ECE program). Finally, principals' responses about the importance of four types of skills in pre-kindergarten were studied.

To examine the fifth research question, the principal survey respondents were first described by individual and school characteristics. Then those characteristics were used to group principals to explore differences in their perceptions of the benefits of early childhood education. Analyses of variance (ANOVAs) were conducted to explore group differences in principal perceptions as reported in research question four.

Results

Principals' Responsibilities and Certifications

To better understand principals' responsibilities for supervising early childhood teachers and classrooms, the researchers first examined the proportion of surveyed principals who reported supervising early childhood grades in their building. Out of 150 survey respondents, 66.7% reported having a pre-kindergarten class in their building, while more than 80% reported having kindergarten (86.7%), first grade (84.7%), second grade (82.7%), and third grade (80.7%) classes. However, when asked about which grade levels were included in their early childhood program, principals were most clear about the youngest grades: 88.7% included pre-kindergarten and 63.3% included kindergarten. However, these percentages dropped sharply thereafter. With each year increase, fewer and fewer principals included the grade level in their early childhood (32.0% included first grade, 13.3% included second grade, and only 5.3% included third grade.)

Next, principals' background and training in early childhood were examined by assessing all elementary principals' teaching certifications. In the most recent year, 2017-2018, only 19.8% of principals held an ECE certificate and 1.8% held an ECSE certificate. In comparison, 71.3% held an ELEM certificate. Interestingly, more than 25% of elementary school principals in the 2017-2018 school year had never held an ECE, ECSE, or ELEM certificate. Many of these principals held only K-12 certificates in specialized areas such as art or a foreign language or moved to the elementary setting after having worked in middle or high schools.

To follow up, the certifications of principals in the 2015-2016 and 2016-2017 school years were analyzed. While many of these principals were still serving in the 2017-2018 year, looking at the data over time allows us to examine the trends. As shown in Table 1, the percentages of principals with ECE, ECSE, and ELEM certificates have remained very stable over those three school years.

Table 1: *Elementary Principals' Certificates*

School Year	n	ELEM	ECE	ECSE	Other Only
2017-18	1579	71.3	19.8	1.8	25.9
2016-17	1556	70.4	19.1	1.5	27.2
2015-16	1525	71.7	17.9	1.6	26.1

Principals' Hiring Preferences

When it comes to hiring teachers, principals' identified preferences for the qualifications of teachers they hired into early childhood positions. The researchers asked principals about their preferences for hiring pre-kindergarten and kindergarten teachers and their preferences for first, second, and third grade teachers. These preferences are important because of the differences in certification requirements. Teachers must hold an ECE certificate to teach in pre-kindergarten or kindergarten. For first, second, and third grades, teachers can be hired with an ECE or ELEM certificate (or both).

On the survey, principals reported that hiring pre-kindergarten and kindergarten teachers with a degree in early childhood education (62.7%) were most important. In comparison, 26.7% reported that teacher certification in early childhood education (which licensed teachers can test into as well) was their most important criterion, and 10.7% reported other criteria were most important in their hiring.

When asked about hiring teachers for the grades that can have either certification (first second, or third), principals reported a preference for ELEM certification overall (48%). About a quarter of principals (24.7%) chose ECE certification as the most important, and another quarter (27.3%) reported no preference in certification when hiring for these grades.

In a seemingly contradictory finding, principals reported that given two equally experienced and qualified teachers for a first-grade position, overall, they would be much more likely to hire an ECE certified teacher (65.3%) than an ELEM certified one (34.7%).

Preferred Teacher Characteristics

Principals were also asked about characteristics or practices that were important to them in kindergarten teachers and third grade teachers. There were ten practices that principals were asked to report on related to teachers' instruction: following a district curriculum, willingness to differentiate, maintain a quiet room, maintaining control, providing projects, centers, and play, providing concrete relevant learning materials, designing valid tests, providing opportunities for cooperative work, managing reading groups, whole group, and seat work, and integrating the curriculum.

Two characteristics were rated by most principals to be important for teachers in both kindergarten and third grade classrooms (see Table 2). Both of the characteristics were related to how teachers teach and work with their young students. Most important was the willingness to differentiate instruction based on a child's developmental level. The second most important was the teacher providing opportunities for cooperative work in small informal groups.

Table 2: *Percentage of Principals Reporting a Characteristic as Important to Hiring Across Grade Levels*

	Kindergarten	3rd Grade
Ability to follow a district curriculum	49.3	70.0
Willingness to differentiate instruction based on a child's developmental level	96.7	96.7
Maintains a quiet room where children work on their own or with a teacher-led small group	8.7	18.7
Maintains classroom control	81.3	86.7
Provides instruction consisting of projects, learning centers, and play-based learning	85.3	62.7
Provides learning materials that are concrete and relevant to children's life	74.7	82.0
Ability to design valid tests	14.0	36.7
Provides opportunities for cooperative work in small, informal groups	87.3	89.3
Management of reading groups, whole group activities and seat work	56.7	82.7
Ability to integrate the curriculum	76.0	82.7

The two least selected characteristics were also the same across grade levels. Maintaining a quiet room was the least selected criterion, with only 8.7% of principals designating it as important in kindergarten and 18.7% designating it in third grade. The ability to design valid tests was also not frequently selected as important. It is interesting to note that for both criteria, principals saw them as more important for third grade teachers to be able to do than for kindergarten teachers.

Overall, there was only one case in which principals reported a characteristic as important for kindergarten teachers more often than for third grade teachers. More than 85% of principals said that it was important for kindergarten teachers to provide instruction consisting of projects, learning centers, and play-based learning. Only 62.7% of principals reported that this was important for third grade teachers. The overall ratings for importance of criteria were higher for 3rd grade almost across the board, perhaps indicating that there are other, untapped criteria principals find important in hiring kindergarten teachers.

Local Practices and ECE Knowledge

To explore principals' perceptions about local practices, their own ECE knowledge, and program priorities for pre-kindergarten survey respondents' ratings were analyzed. Table 3 illustrates the principals' responses. Across all items, the mean principal ratings indicate "some" supportive local practices, "some" early childhood education knowledge, and "some" to "a lot" of importance for early skills in the pre-kindergarten classroom. However, on all but two items, some principals indicated no supportive practices, no ECE knowledge, and that skills were not important in pre-kindergarten. The two items every principal reported to be at least "a little" important were communication, talking, and vocabulary expansion, and social and emotional skills in pre-kindergarten.

Table 3: *Elementary Principals' Perceptions*

	All Respondents		
	Range	Mean	SD
Local Practices			
K-3 ECE Recruitment	1-4	3.11	.89
Preschool PD Opportunities	1-4	2.72	.90
Knowledge			
Early Brain Development	1-4	3.01	.79
Positive Impact Studies	1-4	2.91	.93
Benefit over Later Intervention	1-4	3.07	.86
Academic Achievement	1-4	3.29	.73
Importance in Pre-K			
Letter/Number ID	1-4	3.25	.73
Name Writing	1-4	3.17	.70
Communication/Vocabulary	2-4	3.84	.40
School Routines	1-4	3.29	.77
Social and Emotional Skills	2-4	3.89	.35

Differences in Principals' Perceptions of ECE

To compare principals' perceptions of early childhood by their personal or school characteristics, the researchers first had to identify the characteristics of the principal respondents to the survey. They are primarily white (91.3%) and female (72%) and work largely in small (50% less than 300 students), rural (64%), Title 1 schools (83.3%). The economic diversity in their schools is varied, and the principals represent a range of certifications, degrees, and years of experience as principals (see Table 4). This group is more likely to hold an ECE (30.7%) or ECSE certificate (2.7%) than elementary certification. However, it is worth noting that a larger percentage of the principals held Middle School certifications than held the two early childhood certificates combined.

Table 4: *Characteristics of Principal Survey Respondents*

Characteristic	Percent of Respondents
Education	
Masters	22.0
Education Specialist	29.3
Doctorate	27.3
Other	1.3
Years of Principal Experience	
Under 3	21.3
3-5	20.7
6-10	25.3
11-15	16.7
16-20	6.7
20+	9.3
Certifications	
Early Childhood Education	30.7
Early Childhood Special Education	2.7
Elementary Education	82.7
Middle School	34.7
Secondary	28.0
Other	28.7

Group mean comparisons indicated that principals' perceptions did vary some by subgroup. Female respondents reported statistically higher levels of knowledge on all four of the ECE knowledge questions: early brain research, long term impact studies, pre-k intervention and academic achievement effects than their male counterparts (see Table 5). In contrast, male principals reported that letter and number ID was significantly more important in pre-kindergarten. Respondents were also grouped into two groups by their previous early childhood training: those that have/had an Early Childhood Education certificate and those that did not. Once again, statistically significant differences were found between the two groups on the four knowledge questions and the importance of letter and number identification in pre-kindergarten (as seen in Table 5). ECE certified principals were significantly more likely to have knowledge of early brain development research positive impact studies pre-k intervention and academic achievement effects than their peers without ECE certification. In contrast, non-ECE certified principals were significantly more likely to value letter and number identification in pre-kindergarten than their ECE certified peers. Knowledge patterns mostly held by gender and ECE certification indicate are parallel, such that all groups except ECE certified principals had more knowledge of early intervention and academic achievement effects than they do of early brain research and positive impact studies. ECE principals also had strong knowledge of early brain research.

Table 5: Principals' Perceptions by Gender and ECE Certification [Mean (SD)]

	Female (n=108)	Male (n=42)	ECE Certified	Non-ECE Certified
Local Practices				
K-3 ECE Recruitment	3.19 (.90)	2.90 (.82)	3.11 (1.00)	3.12 (.84)
Preschool PD Opportunities	2.73 (.92)	2.69 (.84)	2.76 (.87)	2.70 (.91)
Knowledge				
Early Brain Development	3.18 (.72)**	2.60 (.83)	3.48 (.63) **	2.81 (.71)
Positive Impact Studies	3.06 (.90)**	2.50 (.89)	3.26 (.86) **	2.75 (.92)
Benefit over Later Intervention	3.22 (.81)**	2.69 (.87)	3.35 (.71) **	2.95 (.90)
Academic Achievement	3.41 (.68)**	2.98 (.75)	3.52 (.59) **	3.18 (.76)
Importance in Pre-K				
Letter/Number ID	3.16 (.73)	3.48 (.71)**	2.98 (.75)	3.37 (.90)**
Name Writing	3.11(.67)	3.31 (.75)	3.00 (.73)	3.24 (.68)
Communication/Vocabulary	3.88 (.35)	3.74 (.50)	3.89 (.32)	3.82 (.44)
School Routines	3.26 (.78)	3.36 (.76)	3.24 (.82)	3.31 (.75)
Social and Emotional Skills	3.92 (.34)	3.83 (.38)	3.93 (.25)	3.88 (.39)

Comparisons by racial group were not meaningful because of the overall racial homogeneity of the principal respondents. The small group size for all non-white racial groups' means that is difficult to know if this difference is significant or to which group to ascribe the differences.

Across principal reported items, the only statistically significant difference in groups divided by years of experience was in their knowledge of early brain development research (see Table 6). Principals with more than 20 years of experience reported significantly more than those

with 3-15 years of experience. Though slightly lower, those with less than 3 years and with 16-20 years of experience were not statistically different from their most experienced peers. In this case, it seems that those with highest and lowest levels of experience may have received the most knowledge of early childhood development and effects, perhaps indicating a period in the recent past when this knowledge was seen as less important or relevant to principals in elementary school settings.

Table 6: *Principals' Perceptions by Experience [Mean (SD)]*

	< 3 years (n=32)	3-5 years (n=31)	6-10 years (n=38)	11-15 years (n=25)	16-20 years (n=10)	20+ years (n=14)
Local Practices						
K-3 ECE Recruitment	3.25 (.84)	3.13 (.85)	2.92 (1.05)	3.24 (.78)	3.00 (.94)	3.14 (.77)
Preschool PD Opportunities	2.53 (.88)	2.87 (.89)	2.58 (.92)	2.72 (.89)	3.50(.71)	2.64 (.84)
Knowledge						
Early Brain Development	3.06 (.76)	2.87 (.85)	2.84 (.82)	2.84 (.75)	3.50 (.53)	3.64 (.50)**
Positive Impact Studies	2.88(.84)	2.87 (.96)	2.79 (.94)	2.76 (.97)	3.30 (.48)	3.36 (.93)
Benefit over Later Intervention	3.06 (.76)	3.00 (.93)	2.95 (.87)	2.92 (1.00)	3.40 (.70)	3.64 (.50)
Academic Achievement	3.25 (.72)	3.10 (.79)	3.18 (.77)	3.40 (.71)	3.50 (.53)	3.71 (.47)
Importance in Pre-K						
Letter/Number ID	3.44 (.67)	3.29 (.78)	3.13 (.78)	3.04 (.68)	3.30 (.48)	3.36 (.84)
Name Writing	3.22 (.66)	3.13 (.76)	3.16 (.82)	3.04 (.54)	3.20 (.63)	3.36 (.63)
Communication/Vocabulary	3.81 (.47)	3.84 (.37)	3.84 (.44)	3.72 (.46)	4.00 (.00)	4.00 (.00)
School Routines	3.38 (.71)	3.32 (.83)	3.21 (.91)	2.96 (.68)	3.60 (.52)	3.57 (.51)
Social and Emotional Skills	3.88 (.42)	3.90(.30)	3.84 (.44)	3.96 (.20)	4.00(0.00)	3.86 (.36)

Finally, when respondents were grouped by their highest level of education, the only statistical difference across groups was in their reports of the availability of professional development for preschool teachers. A significant difference was identified with master's degree holders reporting the lowest levels of professional development and Education Specialists reporting the highest levels (see Table 7). Overall, levels of professional development were seen to be low across all principal respondents. For the other criteria. The variability across principals in their understanding seemed to be unrelated to their highest education level.

Table 7: Principals' Reports by Education Level [Mean (SD)]

	Masters (n=33)	Education Specialist (n=74)	Specialist (n=41)	Doctorate (n=41)	Other Education (n=2)
Local Practices					
K-3 ECE Recruitment	3.12 (.86)	3.11 (.84)		3.15 (.96)	2.50 (2.12)
Preschool PD Opportunities	2.39(.86)	2.93 (.88)*		2.61 (.89)	2.50 (.71)
Knowledge					
Early Brain Development	3.09 (.91)	2.92 (.74)		3.10(.80)	3.50(.71)
Positive Impact Studies	3.00 (1.03)	2.72 (.85)		3.15 (.94)	3.50 (.71)
Benefit over Later Intervention	3.06 (.83)	2.95 (.87)		3.29 (.84)	3.50 (.71)
Academic Achievement	3.18 (.73)	3.24 (.72)		3.44 (.74)	3.50 (.71)
Importance in Pre-K					
Letter/Number ID	3.21 (.70)	3.27 (.73)		3.29 (.72)	2.00 (1.41)
Name Writing	3.06 (.70)	3.23 (.65)		3.20 (.72)	2.00(1.41)
Communication/Vocabulary	3.88 (.33)	3.80 (.44)		3.88 (.33)	4.00 (.00)
School Routines	3.36 (.74)	3.28 (.73)		3.27 (.81)	2.50 (2.12)
Social and Emotional Skills	3.94 (.24)	3.88 (.40)		2.88 (.33)	4.00(.00)

Discussion

This study explored principals' preparation for their leadership role in elementary schools, as well as their current responsibilities and perceptions regarding early childhood education. Overall, few principals had training or experience in early childhood education, though many supervise pre-kindergarten through third grade classrooms. Differences in knowledge about early childhood and practices emerged by subgroups, with female, very experienced, and early childhood certified principals demonstrating stronger knowledge of ECE.

Our research indicates some differences from the research of Abel et al. (2016) regarding certification backgrounds of principals. They found about one-fourth of principals nationally hold ECE certification. A review of our state data for principals indicates that about one-fifth of principals in our state hold an ECE certificate. In contrast, our survey respondents identified that more than one-third were ECE certified. We believe this discrepancy, in part, can be attributed to the fact that principals with an ECE background were more responsive to the survey than ELEM - certified principals because the survey dealt with early childhood topics. It is unclear why there are fewer ECE-certified principals in the state than the national average.

The results of this study indicate that ECE certification matters. Principals with ECE certification are more knowledgeable about development in early childhood, and about DAP. Many elementary education programs (and secondary education and certification programs for K-12 subjects like art and music) require few, if any, child development courses. Without this knowledge, leaders will not understand why early childhood education is different from upper elementary education and may impose developmentally inappropriate practices in pre-kindergarten, kindergarten, and first through third grade classrooms. Given that nearly all elementary principals oversee

most of the grades within the PreK-3rd continuum, an increase in the percentage of principals with a background in ECE and child development is needed.

The data also indicate that principals did not distinguish their values for teachers of kindergarten and third grade. The most and least important characteristics for teachers were the same. This may be related to the literature, which indicates that principals do not differentiate between early childhood and elementary certification (Engel, 2013) and the overall search for a mix of professional and personal qualities is most important. The study results indicate that nearly two-thirds of principals thought ECE certification was important for teachers of pre-kindergarten and kindergarten. However, principals' hiring preferences are less defined for the overlap grades of first, second, and third grade with nearly half of the surveyed principals stating they preferred an ELEM-certified teacher and nearly 28% indicating they had no preference of certification area. Perhaps these results are related to the research of Harris et al. (2010) who found that principals believe all teachers know their content and how to teach it. It could also indicate indifference to the focus on preparation related to child development needed for teachers through at least the third grade.

Although principals support and evaluate teachers in the early childhood grade levels, the findings from this study corroborate previous literature that suggests principals do not get adequate coursework or training in their leadership preparation programs to serve as instructional leaders for ECE classrooms (Shue et al., 2010). Previous research suggests only 20% of principals feel they were adequately trained for supervising ECE (Bouffard, 2018). Similarly, in the current study, principals felt, overall, that they had only "some" knowledge about ECE. It is not surprising that this was the result when there was such a large percentage of principals with middle school backgrounds that participated in the study.

Finally, the current study suggests there is not a commitment to a PreK-3 continuum within the study state. The findings clearly outlined principals' identification of pre-kindergarten and kindergarten as "early childhood". As for the overlap grades of first, second and third, our research clearly indicated that few principals believe the overlap grades are part of the ECE program. Principals showed resistance to the PreK-3 continuum even though a large percentage of the respondents indicated they were ECE-certified. The findings from this study indicate that special attention should be given to the overlap grades in this state to reduce the fade-out effect after moving beyond kindergarten.

Implications

It is clear from this study and previous literature that school leaders and early childhood educations should advocate for more ECE knowledge and experience for principal candidates. As the number of preschool programs in public schools grows in the United States, it will be increasingly important that building leaders can support early childhood teachers and students in high-quality, developmentally appropriate instruction.

In addition, the study results suggest that a move to separate grade bands might make preparation and hiring more straightforward for principals and ensure that children receive high-quality, developmentally appropriate instruction across the early childhood span. Choosing to completely separate the grade bands into distinct early childhood (birth or preschool to grade three) and elementary (grades fourth - eighth) ranges, like has been done in the state of Pennsylvania, is more likely to mean that teachers with knowledge of early childhood and DAP will be leading instruction for young children.

Future Research

Additional examination of principals' preparation for serving as instructional leaders in ECE is needed. For example, a policy analysis of states' requirements of principal preparation for elementary schools and an analysis of the alignment with early childhood program funding and site location may point to a possible source of disconnect between preparation and practice for principals. This could indicate a possible direction for future change.

A larger-scale study of elementary principals' perceptions of early childhood education and their local practices is also in order. By conducting a nationally representative study, perceptions and practices could be explored and connected to the structures and policies in place statewide, including ECE and Elementary certification availability, overlap grades, and principals' preparation requirements.

Conclusion

Strong leadership in elementary schools requires that leaders be prepared to serve as instructional leaders to all of the ages and grade levels that they supervise. This preparation for early childhood education (through third grade) includes an understanding of child development and developmentally appropriate practices for teaching young children. Current certification structures across the United States mean that elementary principals are most likely to hold elementary education certification, which often does not include any child development coursework. However, most elementary principals supervise multiple early childhood grade levels. Principals' knowledge and perceptions of childhood education are related to their own experience and education. Thus, specific opportunities in leadership preparation for learning about and preparing to appropriately support and develop early childhood educators are desperately needed.

References

- Albers-Biddle, L. (2013, June) Principals' preferences for hiring teachers in primary grades. National Association for Early childhood Teacher Educators Professional Development Institute. San Francisco, CA.
- Albers-Biddle, L. (2014) Staffing Practices of Elementary School Principals for Teachers in Primary Grades and Implications for the PreK-3rd Continuum. Electronic Theses and Dissertations, 2004-2019. 4721.
- Abel, M.B., Talan, T.N., Polit, K.D. & Bornfreund, L. (2016) National principal's survey early childhood instructional leadership. *McCormick Center for Early Childhood Leadership Publication 1*. Available: <https://digitalcommons.edu/mccormickcenter-pubs/1>
- Barnett, W.S. (2011) Effectiveness of early education intervention. *Science*, 339 (6045), 975-978. Retrieved from: <http://www.sciencemag.org/content/333/6045/975>
- Bouffard, L. (2018, February 13) Principals aren't ready for public Pre-K. *Education Week*, Available: <https://www.edweek.org>
- Bredenkamp, S. (Ed) (1987) *Developmentally appropriate practices in early childhood programs*. Washington, DC: National Association for the Education of Young Children.
- Brown, K.C., Squires, J., Tadros, L.C. & Horowitz, M. (2014) *What do we know about principal preparation licensure requirements, and professional development for school leaders?*

- Center for Enhancing Early Learning Outcomes, Policy Report July 2014. Available: www.ceelo.org.
- Calder, J. (2014) Early childhood education: Investment brings big results. *Montana Business Quarterly*, 52(2), 18-20.
- Copple, C. and Bredekamp, S. (Eds.) (2008) *Developmentally appropriate practices for programs serving children birth through age 8*. Washington, DC: NAEYC
- Douglass, A. (2018) Positive relationships at work in early childhood education. In M. Vareen & S. Donaldson (Eds.), *Toward a positive psychology for relationships: New directions in theory and research*. (pp. 93-117). Santa Barbara, CA: Praeger.
- Engel, M. (2013) Problematic preferences? A mixed method examination of principals' preferences for Teacher characteristics in Chicago. *Educational Administration Quarterly*, 49(1), 52-91.
- Florendo, J.M. (2014) *Nebraska public school administrators' perceptions of preschool education*. *Educational Administration Thesis, Dissertations, and Student Research*.112. Retrieved from <https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1116&context=cehseda> ddiss
- Fowler, C. (2017) Exploring the relationship between early childhood and elementary grade-level overlap and early childhood teacher output. *Journal of Early Childhood Teacher Education*, 38(2),150-163.
- Goals 2000: Educate American Act. Retrieved from <http://tecweb.org/eddevel/telecon/de99.html>
- Guernsey, L., Bornfreund, L., McCann, C. & Williams, C. (2014) *Subprime earning: development in America since the Great Recession*. New America Foundation. Retrieved from: <http://earlyd.newamerica.net/dashboard>.
- Hallissey, M. (2017) An examination of principals' leadership and its impact on early elementary grades. Unpublished dissertation
- Harris, D., Rutledge, S., Ingle, W. & Thompson, C. (2010) Mix and match: What principals look for when teachers and implications for teacher quality policies. *Education Finance and Policy*, 5(2), 228-246.
- Hooper, A. (2018) The influence of early childhood certification on kindergarten and first grade students' academic outcomes. *Early Child Development and Care*, 188(10), 1419-1430.
- Howard, M. (2008) Early care and education: Aligning the early years and the early grades. *The Progress of Early Childhood reform*, 9(1), Education Commission of the States. Retrieved from: <http://www.ecs.org/html/Document.asp?chouseid7768>.
- Huffman, L.R. & Spears, P.W. (2000) Academic performance among at-risk children: The role of developmentally appropriate practices. *Early Childhood Research Quarterly*, 15, 167-184.
- Mead, S. (2011) PreK-3rd: Principals as crucial instructional leaders. *Foundations for Child Development*. Retrieved from: <http://fcd-us.org/resources/prek-3rd-principals-crucial-instructional-leaders>.
- National Center for Educational Statistics (2020) Annual report. Retrieved from: https://nces.ed.gov/fastfacts/display.asp?id=372#PK12_enrollment
- Phillips, D.A. and Meloy, M.E. (2012) High-quality school-based pre-k can boost early learning for children with special needs. *Exceptional Children*, 78(4), 471-490.
- PreK-3rd Grade National Work Group (2013) Reducing *the achievement gap by 4th grade: The PreK-3rd approach in action*. Retrieved from: <http://prek-3rdgradenationalworkgroup.org/>

- Reynolds, A.J., Hayaka, M., Ou, S.R., Mondri, C.F., England, M.M., Candee, A.J., & Semrilo NE (2017) Scaling and sustaining effective early childhood programs through school-family-community collaborations. *Child Development*, 88(5), 1453-1465.
- Ritchie, S. & Gutmann, L. (2014). *FirstSchool: Transforming PreK-3rd grade for African American, Latino, and low-income children*. NY: Teachers College Press.
- Shue, P.L., Shore, R.A. & Lambert, R.G. (2010) PreOKkindergarten in public schools: An examination of elementary school principals' perceptions, needs, and confidence levels in North Carolina. *Leadership and Policy in Schools*, 11, 216-233.
- Szekely, A. (2013) *Leading for early success: Building school principals' capacity to lead high-quality early education*. Report for National Governors Association Center for Best Practices, May. www.nga.org/center.
- Williams, M.T. (2015) *Perceptions of central Alabama principals on the benefits of pre-kindergarten programs*. Retrieved from <https://etd.auburn.edu/bitstream/handle/10415/4787/Perceptions%20of%20Central%20Alabama%20Elementary%20Principals%20on%20the%20Benefits%20of%20Pre-Kindergarten%20Programs.pdf?sequence=2&isAllowed=y>

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