THE WHAT OF EARLY CHILDHOOD EDUCATION

Each section of this book focuses on a different aspect of early childhood education, beginning with defining just what this field is. Part I addresses the *what* of early childhood education.

1 THE SCOPE OF AND NEED FOR EARLY CHILDHOOD EDUCATION

LEARNING OBJECTIVES

1.1 Describe the four core position statements of the National Association for the Education of Young Children (NAEYC).

1.2 Outline the factors that have contributed to the growth of early childhood education programs over the past few decades.

1.3 Discuss the components of early childhood education, including the age groups of children, the settings, and the funding sources.

1.4 Analyze the factors that define high-quality early childhood education.

1.5 Summarize the key issues related to early childhood education that will impact its future.

NAEYC Professional Standards and Competencies Considered in Chapter 1

See the Standards and Competencies Correlation Matrix in the Appendix.

- *Standard 1c:* Understand the ways that child development and the learning process occur in multiple contexts, including family, culture, language, community, and early learning setting, as well as in a larger societal context that includes structural inequities.
- *Standard 6a:* Identify and involve themselves with the early childhood field and serve as informed advocates for young children, families, and the profession.
- *Standard 6b*: Know about and uphold ethical and other early childhood professional guidelines.

Each and every child, birth through age 8, has the right to equitable learning opportunities—in centers, family child care homes, or schools—that fully support their optimal development and learning across all domains and content areas. Children are born eager to learn; they take delight exploring their world and making connections. The degree to which early learning programs support children's delight and wonder in learning reflects the quality of that setting. Educators who engage in developmentally appropriate practice foster young children's joyful learning and maximize the opportunities for each and every child to achieve their full potential. (NAEYC, 2022, p. xxx)

Welcome to the profession of **early childhood education**! If you are currently or have ever been around small humans, you know how enriching and delightful it is. If you have not, you are in for a treat! In this chapter, we will be exploring some important foundations, like what is this field? Why is it important? What is its future? There is so much to discuss about early childhood education, so much to share. As you begin learning about this field, the answers to some of these questions will gain greater significance and become more focused. This chapter presents an overview of the field of early childhood education. We begin this journey with a brief introduction to the four core position statements of the central professional organization of early childhood educators, the National Association for the Education of Young Children (NAEYC).

NAEYC'S FOUR CORE POSITION STATEMENTS

The NAEYC is a membership organization that promotes high-quality early learning for children birth through age 8 by connecting practice, policy, and research (NAEYC website, About Us). One of the roles that NAEYC has taken is to provide the field with position statements on topics of importance to the early childhood profession, which are available for free on the NAEYC website under the Resources tab (www.NAEYC.org). These statements are updated regularly to align with current research. Recently, NAEYC has organized its position statements in a way that highlights the four that are central to the profession and foundational to the organization. These four statements will be described and briefly discussed in this section. The fifth foundational document of the NAEYC is its standards for the accreditation of early learning programs, which will be discussed in more detail in the Defining Quality section of this chapter.

Advancing Equity in Early Childhood Education

Equity is a term you will hear a lot in the context of the profession of early childhood education. At its simplest, equity is defined as everyone getting what they need to be successful (Alanís & Iruka, 2021, p. xix). Note that this is different from *equality*, which means that everyone gets the same thing. Equity recognizes that not everyone needs the same supports to succeed and that not everyone has been treated fairly in receiving access to such supports.

The Advancing Equity position statement begins with the vision that "all children have the right to equitable learning opportunities that enable them to achieve their full potential as engaged learners and valued members of society" (Alanís & Iruka, p. x). Let's unpack this a bit. First, "all children" refers to each and every young child, birth through age 8, regardless of race, class, culture, gender, ability and disability, language, national origin, indigenous heritage, religion, and other identities. The position statement recognizes that individual and institutional implicit and explicit biases are pervasive in the social context of the United States and these biases create inequities for young children and their families. Second, "equitable learning opportunities" means that all children have the right to high-quality learning experiences that match their needs and build on their strengths. Finally, the vision ends with the goal of children reaching "their full potential as engaged learners and valued members of society" (Alanís & Iruka, p. x). This means that early childhood professionals should be doing everything in their power to help children reach their full potential by providing engaging learning experiences, and they should be valuing and supporting each child's unique strengths and capacities.

The Advancing Equity position statement provides recommendations for the entire early childhood profession, including educators, administrators of programs, facilitators of professional learning and educator preparation, and public policymakers. We will be discussing these recommendations in more detail in the specific chapters that address these groups. The position statement begins with the following six recommendations for everyone involved in the early childhood profession:

1. Build awareness and understanding of your culture, personal beliefs, values, and biases.

2. Recognize the power and benefits of diversity and inclusivity.

3. Take responsibility for biased actions, even if unintended, and actively work to repair the harm.

4. Acknowledge and seek to understand structural inequities and their impact over time.

5. View your commitment to cultural responsiveness as an ongoing process.

6. Recognize that the professional knowledge base is changing.

We will be revisiting these recommendations throughout the book. It's a good idea to begin this journey by critically reflecting on yourself and the implicit and explicit biases that you have. A variety of implicit bias tests are available on the internet through Harvard University's Project Implicit (https://implicit.harvard.edu/implicit/). A good friend of mine, Tiffany Young, an expert in professional

learning related to diversity, equity, and inclusion, likes to begin her workshops with the reminder, "If you have a brain, you have bias." You might want to read that again. Biases develop as a normal part of the human experience in an inequitable world. Because of this, it's important for us to become increasingly aware of them so we can act in accordance with our values and avoid allowing unexamined biases to influence how we treat children and families. Rather than fighting against the idea that you might have a bias, get curious. One of the questions the Advancing Equity position statement asks us to consider is how our various social identities have affected us, both in supportive ways and in oppressive ways. We all have experienced injustice and privilege because of one or more of our social identities. Getting curious about these is an important first step in our journey as early childhood educators.

Code of Ethical Conduct and Statement of Commitment

The NAEYC's Code of Ethics, reaffirmed and updated in 2011, provides the guidelines for responsible behavior and ways to resolve typical ethical dilemmas that arise in early care and education settings (NAEYC, 2011). Although it is currently under revision as of the time of this writing, the new position statement is not yet publicly available. You will find it on the NAEYC website once the revision is complete. The Code of Ethics outlines our responsibilities to children, to families, to colleagues, and to community and society. It begins by listing seven core values.

"We have made a commitment to

1. Appreciate childhood as a unique and valuable stage of the human life cycle

2. Base our work on knowledge of how children develop and learn

3. Appreciate and support the bond between the child and family

4. Recognize that children are best understood and supported in the context of family, culture, community, and society

5. Respect the dignity, worth, and uniqueness of each individual (child, family member, and colleague)

6. Respect diversity in children, families, and colleagues

7. Recognize that children and adults achieve their full potential in the context of relationships that are based on trust and respect." (NAEYC, 2011, p. 1)

After stating these core values, the position statement identifies the ideals and principles of ethical conduct toward each main group (children, families, colleagues, and community). We will examine the Code of Ethical Conduct and Statement of Commitment in more detail in Chapter 4. It's worth reflecting on the first principle here, to ground yourself in our main commitment as early childhood professionals. The first principle reads,

Above all, we shall not harm children. We shall not participate in practices that are emotionally damaging, physically harmful, disrespectful, degrading, dangerous, exploitative, or intimidating to children. This principle has precedence over all others in this Code. (NAEYC, 2011, p. 3)

It may seem obvious that those charged with the care and education of young children should act in accordance with a deep regard for and lack of harm toward those children. Take some time to consider the previously stated principle. Have you ever observed an educator engaged in practices that are potentially damaging or disrespectful? Have you ever observed an educator engaging in non-harmful, humanizing practices? What were the differences in how they behaved and how children reacted?

Developmentally Appropriate Practice

Arguably the most well-known position statement of the NAEYC is that about **developmentally appropriate practice (DAP)**. The core consideration of DAP is that early childhood educators match their practices with what they know about children's development in general, the particular children

in their care, and the social and cultural contexts in which the children are developing. DAP is defined as "methods that promote each child's optimal development and learning through a strengths-based, play-based approach to joyful, engaged learning" (NAEYC, 2022, p. xxx). DAP requires us to have a deep knowledge of child development so that we can match what we do with what we know is appropriate for a child's age. An obvious example is that we would not teach algebra to a group of 3-year-olds that are just gaining skills in number sense. That would be developmentally *inappropriate*. A developmentally appropriate educator recognizes what skills and abilities children are working on in each domain of development so that they can provide experiences that support and grow those skills and abilities. This educator also recognizes the influence of context (e.g., cultural, linguistic, ability) on the children in their care, themselves, and their programs.

DAP is a position statement available for free on the NAEYC website, and there is a book that provides much more detail and examples, *Developmentally Appropriate Practice in Early Childhood Programs Serving Children From Birth Through Age 8* (4th edition). The position statement and book were developed collaboratively with input from many professionals, and the statement was amended and adopted by NAEYC, most recently in 2020. The major basis for DAP is its compelling and lasting commitment to be a strong voice for children and as a call to action for early childhood professionals (NAEYC, 2022, p. xxix). It reflects NAEYC's mission to promote programs for young children and their families that are of a high quality and that contribute positively to children's development. In the preface of the DAP book, Volume Editor Susan Friedman writes, "Developmentally appropriate practice encompasses the knowledge and considerations educators need to apply to create, participate in, and sustain effective and joyful learning environments" (p. xvi). This last part of the quote is important, because DAP is not just about effective learning, it also emphasizes *joyful* learning for young children. We will come back to this time and again throughout the book. Developmentally appropriate decisions about what is good for children are based on a general knowledge of children's development and learning, understanding of each individual child in a group, and familiarity with the social and cultural contexts within which children are being raised. Throughout the remainder of this text, we will visit and revisit DAP, in relation to the various topics we discuss, to emphasize its importance.

Professional Standards and Competencies for Early Childhood Educators

The NAEYC Professional Standards and Competencies position statement outlines what early childhood educators should know and be able to do and are an important component of NAEYC accreditation of early childhood professional preparation programs. Accredited higher education programs must illustrate that they are teaching content and providing practical experiences to their students that align with the standards and competencies. Students who graduate from a NAEYC-accredited higher education program will have opportunities in their program to demonstrate growth and developing expertise in the standards and competencies. Thus, you will see a list of standards and competencies that are addressed at the beginning of each chapter of this book. The identified standards are also tied to the learning objectives for each chapter. We will discuss the standards and competencies in more detail in Chapter 4.

Research shows that when early childhood professionals have specialized experience, training, and education, children benefit. The NAEYC Standards and Competencies describe the "knowledge, skills, values, and dispositions early childhood educators must demonstrate to effectively promote the development, learning, and well-being of all young children" (NAEYC, 2020, p. 6). The most recent edition expands the scope of the Standards and Competencies to not only assist professional preparation programs in determining learning outcomes for college students, but to also to serve the entire profession by providing a "vision of sustained excellence for early childhood educators" (p. 6).

We began this chapter with an overview of the core position statements to orient you to the field of ECE and its core considerations. Each one of these statements will be interwoven throughout the book as we gain deeper understanding and perspective.

Now that we have an introduction to the foundational position statements of the early childhood education (ECE) profession, let's begin with an in-depth look at the scope and need for ECE. We will examine ECE in terms of why the field has grown so rapidly in the past several decades, what is included in the field, how quality is defined in programs for young children, and what the future might hold.

THE GROWTH OF EARLY CHILDHOOD EDUCATION

Although the importance and value of education in the early years of life has been acknowledged for more than 2,000 years (Lascarides & Hinitz, 2000), relatively recent factors have brought ECE to the forefront of public awareness. Fundamental changes in the economy, family life, public awareness, and public support have had a profound effect on ECE. In recent years, media outlets have directed a spotlight on child care, particularly after the COVID-19 pandemic underscored its essential role in supporting parents in the workforce. When early care and education centers shut down in the early stages of the pandemic, parents' ability to work, even from home, was impacted. Indeed, the U.S. Bureau of Labor Statistics reported that 865,000 women left the labor force in September 2020 alone, 4 times greater than the number of men (Kashen et al., 2020). Labor force participation by women decreased by more than 2 percentage points between 2019 and 2020, partly due to a decline in the supply of child care. Herbst (2022) relays that "the pandemic and its consequent economic contraction immediately and substantially reduced the supply of child care" (p. 8). Over 15,000 child care providers closed from December 2019 to March 2021 (Herbst, 2022). Perhaps never before has the need for child care as an essential service been recognized as soundly. "Rarely has the role of child care in supporting our economy, by freeing up parents' time and minds to focus on work, been more self-evident" (Abbott, 2020, para. 1).

The growing need for and use of early care and education over the past 70 years has occurred primarily due to changes in family life. These changes include many complex factors such as a rising cost of living, an increased number of dual-income families, an increase in single-parent families, and greater family mobility resulting in less support available from extended family members.

The needs of working families are not the only reason early childhood has been a public focus. Over the past several decades, research has shown the success of publicly funded and other intervention programs such as Head Start in supporting children and families to reach their full potential. There has also been increased attention to the equitable supports needed for children with disabilities, children who have experienced trauma, and other groups of children who have been minoritized. In addition, recent research on the amazingly complex and rapid development of very young children's brains has given us further insight into the importance of the early years. Finally, many professionals are outspoken and eloquent advocates for the rights of children to high-quality early care and education experiences.

Changes in Family Life

"Typical" family life has changed considerably since the end of World War II. Demographic information indicates that increasing numbers of women of childbearing age are entering the workforce. The number of women with young children entering the workforce had mostly increased up to the COVID-19 pandemic; the pandemic saw the first major decline in women's labor force participation in decades (Aaronson et al., 2021; Henry & O'Trakoun, 2023). Even with this recent downturn in labor force participation, most mothers no longer stay at home to rear their young children. Economic necessity forces many families to rely on two paychecks because one simply does not provide for all their financial needs. The cost of raising a child from birth to age 17 has increased dramatically since 1960. Estimates indicate that, in 2022, the annual cost of raising a child was $16,007 to $17,141 per child for a middle-income family, with child care costs accounting for the third largest category of expenses, after only housing and food (USA Facts, 2024). Further, the cost of living has increased, making it harder for families to make ends meet with just one paycheck. While some families have two working parents for personal and professional reasons, many find two incomes a necessity for survival.

Whereas in 1950 only 12% of the mothers of children under 6 worked (Children's Defense Fund, 2000), by 2021, 66% of mothers with children under 6 were in the labor force (Bureau of Labor Statistics, 2023). While labor force participation rates tend to increase as children reach preschool age and older, American Community Survey data reveal that as of 2019, fully 64% of mothers with infants were employed (Herbst, 2022). This growth in the number of families in which all parents work has dramatically increased the need for child care. As mentioned briefly earlier, the COVID-19 pandemic has resulted in a decrease in the labor force participation rate for mothers, after decades of steady

increases. This decrease was caused, in part, by the shortage of child care and what amounts to a child care crisis due to a severe staffing shortage. Mothers' employment was impacted more than fathers', because mothers took on more of the caregiving burden. Further, Aaronson and colleagues (2021) reported that the largest impact of COVID-19 on mothers' labor force participation was on single, Black, and non-college-educated mothers.

Another family change that has affected the demand for child care is the increase in the number of single parents. In 2007, about 23% of children lived with only their mother (8% through divorce and 9% never married). In 2023, about 21% of children lived with a single mother (6% through divorce and 11% never married; U.S. Census Bureau, 2023). The 2023 census update indicates that 71% of children live with two parents, although they may or may not be married (U.S. Bureau of the Census, 2023). In most instances, divorced single parents who have custody of the children are mothers. The 2020 U.S. Census Bureau's Current Population Survey reported that close to 26% of children live in single-parent households, with 82% of these being single-mother households (Hemez & Washington, 2021). Nonetheless, an increasing number of fathers have custody or joint custody of their children. Not only will a single parent experience a significant decrease in income and standard of living but will also have to work (or work longer hours) to support the family. Of course, to work outside the home, the single parent needs to find appropriate child care.

Single parents as a group also include teen mothers, some still finishing their high school education. The teen birth rate has steadily declined since 1991; the CDC reports a record low rate of 13.9 births per 1,000 young women aged 15 through 19 (National Vital Statistics Reports, 2023). The same report indicates that teen births have declined 67% since 2007 and 78% since 1991. Nevertheless, teen parents still exist and their children also need child care while their parents are at school or work. Approximately two thirds of single mothers work outside the home. In 2021, the median income for single mothers was $51,168 while that figure jumped to $106,921 for married couples. Single mothers are more likely to live below the federal poverty threshold (31.3%), experience food insecurity (24.3%), and lack health insurance (9.2%) compared to married-couple families (Single Mother Guide, 2024).

BRAIN SCIENCE

Linking Quality Early Learning Environments With Brain Science

The brain undergoes remarkable and continuous development after birth, and this development is particularly robust in the early childhood years. Most strikingly, brain cells—neurons—become increasingly interconnected, neurons themselves become more complex, and the connections between neurons become coated with a fatty substance—myelin—that speeds the communication between neurons (Lebel & Deoni, 2018). Another important component of brain development is the pruning that occurs as brain connections that are not used or needed are trimmed away (Huttenlocher, 1990). This pruning is completely normal and makes for a more efficient brain. Much like a good Wi-Fi signal, the speed of brain cell connections enables children to engage in increasingly complex thinking, activities, and skills (e.g., Barnea-Goraly et al., 2005). Indeed, all aspects of child development have as their source the developing brain. What's cool is that the brain is not just developing on its own in a decontextualized skull. Instead, the brain relies on environmental inputs for its development. This is both a blessing (when the environment is filled with supportive, sensitive, language-rich, interactive experiences) and a curse (when the environment is deprived, abusive, or neglectful; Shonkoff, 2017). Importantly, for parts of the brain that rely on the environment to develop, the necessary features of the environment are present for all children (e.g., exposure to patterned light and gravity). However, as social animals, human brains also expect face-to-face interactions, turn taking, and the like. Therefore, early childhood educators have the unique, and extremely important, ability to impact children's brain development. High-quality learning environments that include warm, sensitive, and responsive educators; hands-on learning experiences; exposure to rich language; and protection from adversity set the brain on a positive trajectory (McCoy, 2016; Shonkoff, 2017).

A third change in family life is the increasing mobility of many of today's families, particularly those with the highest education levels (Hurst, 2022). Work demands cause some families to move away from relatives who might otherwise provide caregiving support for young children. Family mobility results in only the **nuclear family** for caregiving support, contributing to the declining influence of the **extended family**, a network of relatives such as grandparents, uncles and aunts, or adult siblings beyond the immediate family. Nevertheless, 55% of adults in the United States report that they live in driving distance to at least some extended family members (Hurst, 2022). However, only about 22%

of grandparents reported that they provided regular child care to their grandchildren (Krogstad, 2015), due at least in part to the fact that most grandparents are still in the workforce themselves (U.S. Census Bureau, 2022). The number of grandparents who have primary responsibility for the care of their grandchildren is increasing, with about 2.5 million children under the age of 6 living with a grandparent. If these grandparents are still in the workforce, they also need access to child care.

Years ago, the most prevalent form of child care was that provided by a relative. This is no longer the case. There has been a remarkable increase in formal child care participation since 1968 (Herbst, 2022). The 2019 Early Childhood Program Participation Survey revealed that 59% of children from birth to age 5 are in nonparental care on a regular basis each week (Cui & Natzke, 2021). Of preschool-aged children, the predominant nonparental child care setting is center-based care (35%) followed by relative care (23%) and nonrelative care (12%) (Herbst, 2022). Further, Herbst (2022) reports that formal child care participation for 3-year-olds grew from 9% in 1968 to 39% in 2018. For 4-year-olds, the rate jumped from 23% to 67%. Interestingly, most of the growth in formal child care usage for preschoolers occurred prior to 2000, with the rate remaining steady between 2005 and 2019 (Herbst, 2022). It will be interesting to see if these rates change as we begin to analyze child care participation data following the most impactful period of the COVID-19 pandemic. It is clear that, at least up until 2019, formal child care participation was more common than parental care for young children not yet in elementary school.

Changes such as increasing numbers of dual-income families and single-parent families and a decline in the ability of extended family to provide regular child care have dramatically raised the demand for child care and brought ECE to the forefront of public attention. "Childcare is not only crucial for the development of young children, but also essential for the millions of working parents with young children" (Child Care Aware of America, 2020).

Today, an increasing number of women in their childbearing years are in the workforce. It is estimated that more than 65% of mothers of young children work, requiring some form of child care for their children. Experts predict a continuing rise in the percentage of working mothers and children requiring care.

Chad Springer/Image Source/Getty Images

Research has shown that programs such as Head Start offer many positive benefits for children from families experiencing poverty.

ZUMA Press Inc/Alamy Stock Photo

Benefits of Early Childhood Education

The need for child care among working families makes ECE a topic of national prominence. However, this need is not the only reason for ECE's increasing importance. On a parallel track, there has been extensive discussion and research about the benefits of early education for children and families who are underresourced. Thus, children from families living below the federal poverty threshold, children

who speak a first language other than English, children with disabilities, and children considered "at risk" for other reasons sometimes have the opportunity to enroll in publicly funded programs. This trend has paralleled the increasing diversity of today's families in America. Diversity can be based on numerous elements, including nationality, race or ethnicity, religion, social class, gender, and exceptionality (Robles de Melendez & Beck, 2018).

Since the mid-1960s, federal, state, and local support has increased as a result of mounting evidence that high-quality early childhood programs can and do make a long-term difference that carries into adulthood. Researchers have concluded that high-quality early childhood programs improve the lives of the children and families involved. Each chapter of this book includes a feature called Take a Closer Look. The feature in this chapter reviews some of the research on the impact of high-quality child care. Although publicly funded programs and subsidized child care are expensive to communities, their cost is more than recovered in subsequent years. A recent analysis of studies of the impact of ECE found that children who had been enrolled in high-quality early care and education later experienced a reduction in placement into special education, were less likely to be held back a grade in school, and were more likely to graduate from high school (McCoy et al., 2017). We will discuss more specific aspects of some of this research in Chapter 5.

Child Advocacy

A third factor that has brought early childhood education into the public consciousness is the urgency with which many professionals view the plight of increasing numbers of children, families, and child care providers, particularly since the COVID-19 pandemic began. Of particular concern are the many families that face abject poverty, lacking the most basic necessities. Yet the social dilemmas reach beyond the needs of families who fall below the federal poverty threshold to working parents with moderate incomes who are beset by the scarcity of affordable, high-quality care. Over 30 years ago, Dr. T. Berry Brazelton (1990), a well-known pediatrician and child advocate, concluded that America is failing its children because they are subject to more deprivations than any other segment of society. Many children in the United States live in families whose incomes fall below the federal poverty threshold. The monthly child poverty rate in January 2022 was 17% in America, or nearly 1 in 5 children (Center on Poverty and Social Policy, 2022). Further, this report found that the monthly poverty rate jumped nearly 5 percentage points in the one month between December 2021 and January 2022, after the monthly Child Tax Credit payments provided during the beginning stages of the COVID-19 pandemic expired. Moreover, the disparity in the monthly poverty rate by race and ethnicity is striking and illustrates the structural inequities that make it more difficult for some families to survive (Table 1.1).

TABLE 1.1 Monthly Child Poverty Rate	
Children	**January 2022 Poverty Rate**
All	17.0%
White	11.4%
Black	25.4%
Latino	23.9%
Asian	15.1%

Source: Based on data provided in https://www.povertycenter.columbia.edu/news-internal/monthly-poverty-january-2022

In its report on child poverty in America, the Children's Defense Fund (2019) expressed deep concern about the number of children who grow up in poverty:

> It is a moral disgrace and profound economic threat that nearly 1 in 5 children are poor in the wealthiest nation on earth. Permitting more than 12.8 million of our children to live in poverty when we have the means to prevent it is unjust and unacceptable. (p. 3)

Organizations such as the Children's Defense Fund and the NAEYC view these concerns as social justice issues and actively advocate for children's rights. Their frequent lobbying for children's rights through **child advocacy** in the nation's capital has promoted legislation related to child care, mandatory education for children with disabilities, Head Start, health care for children living in families below the federal poverty threshold, and other vital services.

The needs of children and families have come to the attention of both political leaders and the public through the astute efforts of those dedicated to advocating the rights of children, including early childhood professionals. But there is a continuing need to promote a common concern for the welfare of all children. Based on current trends, researchers predict that the problems facing children and families will intensify, the gap between the well-to-do and the poor will widen, and the number of children who grow up in poverty will increase (Children's Defense Fund, 2016).

TAKE A CLOSER LOOK

Child Care as an Investment

For the past several decades, some early childhood researchers have argued that high-quality child care is a good economic investment in our country's future. A report from an important conference about this topic in the early 2000s concluded that "investments in quality child care and early education do more than pay significant returns to children—our future citizens. They also benefit taxpayers and enhance economic vitality" (Calman & Tarr-Whelan, 2005, p. 1). However, not all early childhood experts agree with this economic, capitalist-focused argument. Instead, they argue that children deserve the best environments because of who they are as humans rather than prioritizing their importance only in terms of later economic productivity. In this section, we will discuss both perspectives.

One of the most notable proponents of the importance of public investment in early childhood education is James Heckman, a Nobel Prize–winning economist. Considered among the 10 most influential economists in the world, Heckman launched the Pritzker Consortium on Early Childhood Development at the University of Chicago to bring together leading experts to identify how best to invest in young children in a way that will pay off for society. The consortium's goal is to "identify the most important development opportunities for children 5 years and younger, and to transform the way society and the business community view investments in early childhood education" (Heckman, as quoted in Harms, 2006b, p. 1).

Heckman's analysis shows that support for high-quality early childhood programs for "disadvantaged" children would raise high school graduation rates from 41% to 65% and college enrollment from 4.5% to 12%. However, if this support were sustained beyond the early years—through the remainder of childhood and adolescence—the combined intervention would result in high school graduation rates of 90% and college attendance of 37%. The payoff for society would be an improved workforce, the mainstay of the economy. Heckman sees childhood as "a multistage process where early investments feed into later investments. Skill begets skill; learning begets learning" (as quoted in Harms, 2006a, p. 1).

On the other side of this economic argument is the perspective that children deserve supportive, responsive, caring early childhood environments because, as humans, they deserve this respect. Rather than focusing on children and quality care as an investment in the future, such researchers focus on the importance of looking at what we want for the children of today (Moss, 2019). They also scrutinize the concept of "quality" itself, questioning whether a single definition or measurement is either possible or worthwhile. Rather than quantifying quality as a simple checklist of items, they argue that quality is a context-dependent construct with varying, subjective perspectives (Moss, 2019). Researchers using this perspective have found that quality is about relationships and connections among children and between children and educators, a feeling of belonging, and warmth (Grieshaber & Hunkin, 2023). These concepts are hard to quantify and can't be reduced to a simple measure. They also may differ based on the sociocultural context within which the program operates. So, the idea of quality as an investment is a somewhat controversial topic, with postfoundational scholars questioning whether the primary importance of good environments for children should be based on the investment in the future argument. They also question the very concept of "quality" as a definable, finite, singular concept that can be measured. Importantly, these scholars are not stating that children don't deserve inviting, intellectually provocative, and emotionally warm

environments and practices. They question the idea that "quality" is a single concept that is the same everywhere and question the economic argument as reductive.

The investment argument also presumes that early care and development programs are a marketplace that operates under economic principles and that individual programs can simply improve quality to improve the long-term outcomes of children and, indeed, society itself. While it's true that we do have evidence that early learning programs have impacted children's long-term outcomes, presuming that a single program will result in societal change keeps our focus at the program level rather than society itself. Indeed, even one of the founders of Head Start, Edward Zigler, concluded that thinking an early intervention program can solve the problem of poverty is magical thinking. In 2003, on the 40th anniversary of Head Start, he wrote:

There is no magical permanent cure for the problems associated with poverty. . . . Are we sure there is no magic potion that will push poor children into the ranks of the middle class? Only if the potion contains health care, childcare, good housing, sufficient income for every family, child rearing environments free of drugs and violence, support for parents in all their roles, and equal education for all students in school. Without these necessities, only magic will make that happen. (Zigler, 2003, p. 10)

While we firmly believe in creating optimal environments for young children, we encourage you to join us in becoming curious about the investment argument that you will hear a lot in early childhood policy discussions. Where does this argument put our focus, and what does it ignore?

WHAT ARE THE COMPONENTS OF EARLY CHILDHOOD EDUCATION?

We have looked at some of the reasons why ECE has become increasingly important in today's society, as one aspect of supporting young children and their families. But *early childhood education* is a broad term and includes a variety of approaches and types of programs. We will now examine some of the ways in which this term is used and some of the classifications into which programs can be grouped. We will start by briefly discussing the main patrons of early care and education, young children.

Young Children

When we think about early childhood education, we often think about care and education provided to children in the years leading up to kindergarten. However, both the NAEYC and developmental scientists have long defined the period of "early childhood" as ages birth through 8. This age range is further broken up into the following categories: infants and toddlers (0–3), preschoolers (3–5), and school-age children (5–8).

Infants and Toddlers

The first period of the life span following birth is the infant and toddler stage. Infants and toddlers are young children from birth to age 3. This age group can be further sorted as infants (birth to age 1), toddlers (age 1 to 2), and twos (age 2 to 3). As we have discussed in a previous section, the employment rate for mothers of infants has risen dramatically, such that in 2019, 64% of mothers with children under the age of 1 were employed (Herbst, 2022). Early care and education providers, therefore, are needed to serve this age group. Infants and toddlers are served in a variety of settings, including ECE centers, homes, and with relatives. In 2019, a full 42% of infants and 55% of toddlers and twos were in a nonparental care arrangement in a typical week (National Center for Education Statistics, 2021). Most infants in nonparental care (58%) received care from relatives, followed by centers (32%) and nonrelatives (26%). Toddlers and twos, on the other hand, received care from centers (47%), relatives (44%), and nonrelatives (25%). The use of center-based care increases across the infant/toddler age range. For parents of infants and toddlers who do not use a nonparental child care arrangement, a variety of grant-funded home visiting programs exist, most of which are designed to serve a specific population. For example, Early Head Start has a home-based program option to serve families with infants and toddlers whose incomes fall under the federal poverty threshold and who do not need center-based child care.

Preschoolers

Young children ages 3 and 4 are often referred to as "preschoolers." In 2018, 39% of 3-year-olds and 67% of 4-year-olds were served in a formal, center-based child care program (Herbst, 2022). Further, the average preschooler spends between 23 and 27 hours per week in center-based care. As we will see in the next section, center-based programs vary widely in their funding sources, hours of operation, and quality. We will examine the specific components of DAP for preschoolers in later chapters.

School-Age Young Children

From ages 5 to 8, young children are offered free, public education in the United States. Children of this age range are served in kindergarten through second grade. Although most 5-year-olds enroll in kindergarten and the rate of participation has maintained at about 90% from 2010 through 2019, enrollment rates dropped by 6 percentage points between 2019 and 2020, due to the beginning of the COVID-19 pandemic (National Center for Education Statistics, 2023). Although kindergarten is provided in most public schools throughout the country, only 19 states and the District of Columbia require that children enroll in kindergarten (Fischer et al., 2023). In the rest of the states, the age at which compulsory education begins varies. Nonetheless, most children of kindergarten age do attend, whether or not it is mandatory. Indeed, many parents who had been paying for the care and education of their children up to age 5 look forward to the availability of public education to provide some budgetary relief for at least part of the day. Because the early childhood period extends into the early years of public schooling, so do DAP principles. Yet, "most public schools are not set up to meet the unique developmental needs of young children and their families" (Sachs & Bucco, 2022, p. 305). The K–12 system of education in the United States has a completely different history and is influenced by different theoretical frameworks than the birth-to-5 systems that support young children and their families. Thus, there is often a disconnect between the two. Over the past decade, leaders and policymakers have introduced a framework that bridges these two systems of care and education, and initiatives are underway across the country to implement it. The National P-3 Center (https://nationalp-3center.org) provides leadership in this space.

DAP for this age group, just as for earlier ages, involves an integrated, contextually rich, hands-on approach to curriculum. **Integrated curriculum** acknowledges the importance of all aspects of human development—social and emotional, physical and motor, cognitive, and linguistic, as well as approaches to learning—rather than focusing primarily on the cognitive. An integrated approach acknowledges that "children learn in an integrated fashion," and this interdisciplinary approach considers multiple academic disciplines together rather than discretely (NAEYC, 2022, p. xxxv). Learning experiences should promote all aspects of development in meaningful and engaging ways, and play is the central teaching practice (NAEYC, 2022). Through the use of learning centers (to be discussed in Chapter 8) and projects or themes (Chapter 9), academic subjects such as math and reading are integrated to match how children learn (NAEYC, 2022). In addition, the focus of educators should include planning curricula that "build on the funds of knowledge of each child, family, and community in order to offer culturally and linguistically sustaining learning experiences" (NAEYC, 2022, p. xlvii).

In addition to care and education provided within the K–3 school day, which is often about 6 hours long for full-day programs, school-age children may also need before- and/or after-school care, as well as care during school breaks, to align with parents' work schedules. Such programs generally focus on recreation rather than education, particularly self-directed and self-initiated activities, since the children spend the bulk of their day in school (Bumgarner & Haughey, 2016).

While many young children are enrolled in such programs, millions of others, labeled "**children in self-care**," return to an empty home after school. Concerns about the safety, vulnerability, and lack of judgment of young school-age children have prompted an increase in before- and after-school programs. Only 14 states have known age restrictions regarding at what age children can legally be left alone (World Population Review, 2024), and these restrictions vary widely, from age 6 in Kansas to age 14 in Illinois. Safe Kids Worldwide notes that most children are capable of being left alone safely at age 12 or 13, well beyond the period of early childhood that is the focus of this book (https://www.safekids.org/frequently-asked-questions).

Program Settings

While the primary goal of all early childhood education programs is to provide safe and nurturing care and education in a developmentally appropriate environment for young children, there are different program settings that deliver this care. Programs for young children can be divided into home-based and center- or school-based settings.

Home-Based Settings

The home-based sector of nonparental child care includes a variety of arrangements, including care in the provider's home (often referred to as a "family child care home") and "private household care," or care provided in the child's home. Private household care is often an informal arrangement, with either relatives or nannies/babysitters providing the care for compensation or for free. This type of care is not subject to state or federal regulations, so quality varies widely. For our purposes, "home-based care" from here forward will refer to care in the provider's home. Home-based care includes several subtypes of arrangements. For example, a home-based provider may be licensed, regulated, and paid; non-licensed and paid; or non-licensed and unpaid. These latter two types of arrangements are called "family, friend, and neighbor care" or FFN care. Of all home-based providers, the vast majority are non-licensed and unpaid (2.7 million providers in 2016), followed by non-licensed and paid (919,000) and licensed and paid (118,000) (National Survey of Early Care and Education Project Team, 2016).

Licensed **family child care homes** make up a substantial proportion of early care and education providers and are regulated by the state within which they operate. Family child care providers usually operate as small, independent businesses (Herbst, 2022). Because they provide a flexible, home-based care arrangement, this type of care is convenient for parents of all age groups of young children and may be the only type of arrangement available for families in rural communities or who work nontraditional hours (Office of Child Care, 2019). In most states, licensing regulations allow for up to six children to be cared for in a licensed family child care home, although there is some variation. Family child care providers are often middle-age cisgender women (ages 30–60) who are married and living with a partner (National Survey of Early Care and Education Project Team, 2016). They provide care for about as many preschool-aged children as infants and toddlers. Research has found that quality tends to be lower in family child care homes than in center-based care (Coley et al., 2016), but a more recent comparison in the Netherlands found some components of quality were higher in family child care settings (Sluiter et al., 2023).

Although non-licensed home-based care, either paid or unpaid, represents most home-based care settings used by parents, less is known about this type of home-based care. It is difficult to get accurate information about non-licensed providers because unlicensed homes operate under the radar of state licensing agencies. However, unlicensed home-based paid providers tend to be younger than either licensed or unpaid home-based providers (National Survey of Early Care and Education Project Team, 2016). Both paid (28%) and unpaid (48%) non-licensed home-based providers tend to have other sources of income in addition to child care. Both groups are also less educated than licensed home-based providers and are less likely to participate in professional learning opportunities.

Many young children are cared for in family child care homes rather than in center-based care facilities. Typically, family child care homes have children of various ages, spanning infancy through the preschool and primary years.

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Center-Based Settings

Center-based programs are typically regulated and licensed and provide services to young children in a stand-alone building or one shared with another entity (Herbst, 2022). Center-based programs can be for-profit businesses (locally owned or chains) or can be run by nonprofit entities like churches,

public universities, and community-based organizations. Some center-based programs, like Head Start, Early Head Start, and publicly funded pre-K, are offered free to families who qualify. Most, however, collect fees from parents to operate the center. Fee-based programs use parent tuition to pay the educators and any administrative staff, equip the classrooms with materials, and furnish the indoor and outdoor environments, along with paying rent, utilities, and the like. Center-based programs often serve more children than home-based programs and typically divide children into classrooms by age group. Some center-based programs require lead educators to have degrees, while others do not. Each state has a child care licensing agency responsible for making sure that programs abide by health and safety regulations required for licensure. Licensing regulations vary widely by state and typically provide baseline requirements focused on health and safety rather than education or high-quality standards. Licensing and quality initiatives will be discussed in greater detail later in this chapter and in Chapter 5.

Center-based infant and toddler programs are among the fastest-growing segment of child care programs today.

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Center-based programs have seen the greatest increase among the types of settings offered in the United States. In the late 1960s, only about 9% of young preschool-aged children were cared for in centers, while in 2018, 67% of 4-year-olds were participating in center-based care (Herbst, 2022). The number of children in center-based care increases by age, with 32% of infants, 47% of toddlers, and 83% of preschoolers enrolled in nonparental care served in center-based settings (National Center for Education Statistics, 2021).

For center-based programs that are supported by parent fees, for-profit programs keep any revenue after expenses are paid and nonprofit programs invest any revenue back into the program. Running a high-quality child care center tends not to be lucrative as a business venture, because it is highly expensive and staff-intensive when the center pays staff a livable wage, keeps ratios in line with quality standards, and the like. Infant and toddler rooms, for example, need two full-time educators for just eight infants to maintain a high-quality ratio of educators to children. The true cost of care for infants cannot be passed on to families, because they are already paying a high price. The cost of center-based child care has risen in recent years. In 2005, for example, the average family allocated 6.6% of their total income to pay for child care. This increased to 8.7% by 2019, a 32% increase over this 14-year period. Also of note, families making $40,000 or less per year allocate almost a quarter (22%) of their annual income to child care expenses, compared to 7% for families making over $75,000 per year (Herbst, 2022). This fact has led policymakers to propose more public support for early care and education.

A sizable group of center-based programs is linked to higher education, although the number of such centers declined from 2002 to 2013 (Gault et al., 2014). The institution in which you are enrolled may, in fact, have such a program. Whereas some programs are specifically laboratory or training focused, supporting student practicums and research opportunities, others serve primarily as campus child care centers for the young children of students, staff, and faculty. Most campus programs today serve both purposes. Because

There are many not-for-profit programs, which are sponsored by entities such as churches, city recreation departments, hospitals, colleges and universities, and child and family-related organizations. The fact that the sponsor does not operate for-profit gives child care centers sponsored by such groups not-for-profit status.

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of the involvement of professional educators, campus programs are generally of high quality, incorporating what has been learned about young children and early childhood programs through research, theory, and professional practice. In 2013, 46% of public, 2-year institutions of higher education and 51% of public 4-year institutions had child care on campus, a 6 percentage-point decline since the early 2000s (Gault et al., 2014). This decline has come at a time when more parents are attending higher education institutions and worsened during the COVID-19 pandemic (Mader, 2021).

Now that we have discussed the settings in which young children are served, we will move next to discussing the publicly supported options available to young children and families in the United States today.

Publicly Supported Programs and Subsidies

A significant supporter of early childhood programs is the public sector, whether it is federal government, state, or local agencies. However, looking at government spending on education across childhood is both striking and sobering. "Government education spending in 2019 was less than $500 per child during the first three years of life, about $2,800 per child for children ages three and four, and $12,800 for elementary-age children" (Herbst, 2022). While publicly supported programs exist in the United States, most parents bear a heavy financial burden and are expected to fund child care out of their family budgets. Of public support available, Head Start and Early Head Start are probably the best-known federally supported programs. In addition, Child Care and Development Fund block grants allow states to provide child care subsidies for low-income working families. There are also federally subsidized early childhood programs on numerous U.S. military bases around the world. We will discuss Head Start, public pre-K, and military child care in more detail.

STORIES FROM THE FIELD

Being An Inclusive Educator

I used to think that being a teacher meant helping students achieve their next milestone, that I held the key to success, and through time and practice each student would pass to their next stage of development. I have been working in the early childhood education field for 5 years and recently, I have transitioned into a pre-K paraeducator role working with children who are diagnosed with moderate to severe autism spectrum disorder. What I have learned throughout my time in the classroom is that I am not a gatekeeper of knowledge, I am a learner. I am there to change and evolve with each of my students.

What brought me to early childhood education is my degree in human development and family science. What keeps me motivated to stay in early childhood education is my passion for lifelong learning alongside my students and my commitment to create safe learning spaces. In this career field, we are constantly attending trainings, reading books and articles, listening to podcasts, developing curriculum, teaching, speaking with

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parents, and so many other forms of learning as a requirement of the profession. However, the world has brought awareness to disparities in learning outcomes for marginalized students, so it is powerful to see the shift in education that acknowledges beyond academic learning profiles. With attention to diversity, equity, inclusion, and justice, we really get to see the student as an individual and that is beautiful.

Working in an integrated classroom has allowed me to see first-hand the importance of creating inclusive learning environments. Like most new things, I think people resist change because there is a fear of doing or saying the wrong thing. We don't recognize we're doing the wrong thing by not doing or saying something! I feel very fortunate to have access to materials and resources that gave me opportunities for exposure and communication skills. Exposure is where I learned to have conversations about topics that we typically shy away from (racism, sexism, ableism, etc.), and that is what helped transform the way I see my students and experience their presence in the classroom. I make it a point to talk to each of my students, not just about learning materials but about their day, their family members, their dance class, dinner, holidays, what stuffed animal they chose at bedtime. The possibilities to talk are endless, and through talking I am building connections to their world that allows me to have access to their identity in an age-appropriate manner. I don't need to specifically ask how my students identify—that defeats the purpose of safe learning environments. Instead, I get to be curious while they build confidence in their self as an individual. I also use this information to find similarities with their peers, giving them reasons to bond and trust in one another.

Bringing social and emotional development into the classroom model is neat to explore with students. You'd be surprised how easy it is for kids to understand differences and still enjoy being in the classroom together. For example, with nonverbal students, they are always included in conversations. I use a variety of tools such as pictures on the walls, iPads, toys, or nonverbal body cues to communicate. When needed, I provide additional support and language, so all students understand that words are not the only way to communicate. I invite students to try, and they are excited to participate. It is my goal to provide and practice ways to be inclusive so that my students continue to be curious and engaged with themselves and others.

Identity is so important in the classroom. For a long time, it was missing from my own childhood experiences, and it was hard to find myself and "fit in" when there was nothing for me to fit into. There is this expectation that it is the child's responsibility to make good choices and be a good person, but how can they unless we as teachers model the behaviors we want to see? I believe it is my responsibility to make good choices and be a good person, and education is the key. Learn how to connect with all students and learning will happen simultaneously. It is my job to prepare students for both inside and outside of the classroom. The understanding of human development is constantly shifting, and I want to make sure that I am giving my students the best chance to be successful. So, I recognize them, I talk to them, I value them. That is how I connect and help build confident lifelong learners.

Head Start

In 1965, in response to a growing concern about the perceived disadvantage at which many children from low-income families entered elementary school, Project Head Start was initiated. The goal of Head Start is to provide supports to strengthen the capacity of children and families who live on incomes below the federal poverty threshold. Head Start services include education, nutrition, health, social, and other supports to promote children's school readiness (Head Start Program, 2022). Today, there are Head Start programs serving preschool children in every state and territory and in rural and urban sectors; Early Head Start programs serving infants, toddlers, and pregnant women; services to families through American Indian and Alaska Native programs; and services to families who are migrant and seasonal workers. In 2022, Head Start as a whole was funded to serve close to 1 million children and pregnant women (Head Start Program, 2022); it is estimated that this figure represents only a small portion of eligible young children due to funding constraints. Altogether, Head Start has enrolled more than 37 million children since its inception in 1965 (Head Start Program, 2022). The total number of children served by Head Start declined in the 10-year period from 2011 to 2021, with over 1.1 million children and families served in 2011 and just over 700,000 served in 2021 (Kids Count Data Center, 2022). The most precipitous decline occurred between 2019 and 2021, another unfortunate result of the COVID-19 pandemic. Head Start programs across the country are currently

undertaking actions to increase the numbers of children served to pre-pandemic levels. This has been challenging due to a nationwide staffing shortage.

Although Head Start programs are aimed at providing a high-quality early childhood experience for children from birth to 5 years of age, Head Start contains several other components. An important element is the provision of health care through medical, dental, nutritional, and mental health services for all of its children, recognizing that children who are hungry or ill cannot learn. All children receive medical and dental examinations, immunizations, a minimum of one hot meal and a snack each day, and the services of an infant/early childhood mental health specialist if needed.

Family partnership is also an integral element of Head Start. Many parents have found employment through the program because it gives them priority for any available Head Start jobs for which they qualify. Another component involves social services for families to provide information about community resources, referrals, and crisis intervention. Finally, Head Start programs are mandated to serve children with disabilities, no matter the family's income. Ten percent of program enrollment is reserved for children with disabilities (Head Start Early Childhood Learning and Knowledge Center [ECLK], 2017).

Since 1994, Head Start has served children under the age of 3 in Early Head Start. The Early Head Start program provides child development and family services to pregnant women and families with infants and toddlers who live on incomes below the federal poverty threshold. Early Head Start was developed in response to the growing recognition of the importance of the earliest years of children's lives and in acknowledgment of the woeful lack of infant and toddler care in most communities. About 31% of infants and toddlers enrolled in Early Head Start are served through the home-based option and 63% are served in the center-based option (Head Start Program, 2022). The goals of the program, whether home- or center-based, are to enhance children's development (including health, social competence, cognitive and language ability, and resilience); support family development (including parenting, economic self-sufficiency, and family stability); support staff development (e.g., by providing training and educational opportunities); and support community development. Early Head Start, like Head Start, mandates continuing staff training and education. Educational requirements for Head Start educators will be discussed in more detail in Chapter 4.

Close to 1 million children are served every year through Head Start programs, but it is estimated that this program serves less than half of eligible children.

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Publicly Funded Pre-K

Current funding for prekindergarten programs comes from a wider range of sources than ever before, including federal, state, and local governments. Federal funding mostly comes in the form of Head Start funding, although occasional competitive grant funding is sometimes available (e.g., the Preschool Development Grant). At the state level, most states allocate funding out of their general fund budgets for early childhood programs, some issue block grants to provide funding to specific areas of that state serving children who are deemed to have high needs, and nine states fund pre-K programs through their K–12 funding formula (Parker et al., 2018). In recent years, local governments have begun creating pre-K programs at the district, city, or county level; these programs are often funded through dedicated tax revenues (Parker et al., 2018). Two states and the District of Columbia have been able to offer universal pre-K through innovative uses of revenue, providing free pre-K to all children in the state, while seven additional states offer mostly universal pre-K (Parker et al., 2018). Non-universal state-funded pre-K exists in most other states, although 5 states currently offer no state funding for prekindergarten programs (Montana, Idaho, Wyoming, North Dakota, and South Dakota). Non-universal

programs require that children meet some eligibility criteria in order to enroll; most often, eligibility is based on family income. "Funding pre-K programs is a tangled web comprising different levels of government, various funding sources and competing state priorities. While states have increased funding for pre-K in recent years, multiple variations still exist from state to state on access, equity and quality" (Parker et al., 2018, p. 6).

State-funded pre-K programs are offered either within public school systems or through a combination of public and private settings. Public schools have, of course, always been the providers of education to young children enrolled in kindergarten, first grade, and second grade. Many states now provide pre-K through these public schools. Public school sponsorship of early childhood programs is subject to the same limited supply of money that constrains other publicly supported programs. Typically, therefore, existing programs serve a limited number of children for a limited portion of the day. Some states provide programs for 3- and 4-year-olds, although the majority are structured to serve only 4-year-olds. Educators, however, are calling for a broader constituency in public pre-K programs—one that includes all children rather than only a limited group.

Child Care on Military Bases

The U.S. Department of Defense oversees 800 child development centers on military bases around the world and offers both center-based and home-based options for its families (Bushatz, 2018). Military child care is the largest employer-operated child care system in the country, serving 200,000 children and employing 23,000 educators (Congressional Research Service, 2020). In total, approximately $1.2 billion in appropriated funds were devoted to military child care programs in 2020. Department of Defense child development centers are heralded as exemplary because they have high-quality standards and are delivered at scale. As such, they are often used as an example of how the federal government could support current child care program offerings. The military child care system promotes high-quality care with a certification and inspection system that ensures that programs maintain basic standards, a program accreditation requirement that moves programs to a higher level of quality, and caregiver training and wages that improve staff quality and stability. In addition, a sliding fee scale is used to set parent fees that is based on service members' annual income, ranging from a low of $60 per week for those in the lowest income bracket to $150 per week for those making over $138,000 per year (Congressional Research Service, 2020). Even at the highest rate, the cost is much lower than the market rate of care in most communities and is not differentiated by age of the child in care.

DEFINING QUALITY IN EARLY CHILDHOOD PROGRAMS

Up to this point, we have discussed early childhood programs in fairly concrete, descriptive terms, looking at characteristics by which programs can be grouped. Programs can and should also be examined in terms of how they best meet the needs and consider the well-being of children. Such considerations are related to quality.

Current early learning scholars, in fact, focus on identifying factors that create effective early childhood programming for young children. The old questions about whether child care is good or bad for children or what type of setting is best are now obsolete; today's research questions seek to find out how to make child care better for young children, providing empirical support for the factors commonly cited as indicators of good programs. The emerging picture tells us that quality in child care is not dependent on single, separable factors but is a result of the presence of and interaction among a variety of complex elements (Burchinal, 2018; Essa & Burnham, 2001). The research about high-quality early childhood care is also reflected in some important documents that guide the field, for instance *Developmentally Appropriate Practice in Early Childhood Programs Serving Children From Birth Through Age 8* (4th edition) (NAEYC, 2022) and the Professional Standards and Competencies for Early Childhood Educators (NAEYC, 2020), both of which were introduced earlier in this chapter. The NAEYC's Early Learning Program Accreditation Standards detail 10 areas of quality that programs seeking accreditation must meet. These are detailed in Table 1.2.

TABLE 1.2 ■ The NAEYC Early Learning Program Accreditation Standards (NAEYC, 2019)	
Standard	**Brief Description**
1: Relationships	Positive relationships among children and adults are centered, respecting children's identities and sense of belonging.
2: Curriculum	The curriculum guides activities and approaches and promotes learning across social, emotional, physical, language, and cognitive domains.
3: Teaching	Teaching methods are developmentally, culturally, and linguistically sustaining, as well as individualized to help children learn.
4: Assessment of Child Progress	Systematic, culturally informed child and programmatic assessments guide learning experiences and program decisions.
5: Health	Nutrition and health are centered to prevent children's and adults' injury and illness
6: Staff Competencies, Preparation, and Support	Educators have the qualifications, knowledge, and professional commitment to promote children's learning and development.
7: Families	Collaborative, reciprocal, culturally sustaining relationships with families are centered.
8: Community Relationships	Relationships with community agencies and institutions are used as resources to support the program's goals.
9: Physical Environment	Indoor and outdoor environments are safe, healthy, maintained, and developmentally appropriate.
10: Leadership and Management	Policies, procedures, and systems are effectively implemented to promote effective program management.

How Do We Measure Quality?

Research on child care quality examines the impact of a variety of factors on child outcomes; in other words, do children score better on various developmental measures if they have been enrolled in a program with identified characteristics of quality than in a program without such features? Many features of quality are addressed in NAEYC's Early Learning Program Accreditation Standards (NAEYC, 2019). In various studies of child care quality, factors have been divided into two categories: structural and process (Burchinal, 2018). **Structural quality** includes characteristics that are directly measurable, such as the adult-to-child ratio, group size, and adults' education. **Process quality**, on the other hand, is dynamic, including the interactions between children and adults in the early childhood setting, both in relation to the emotional support that adults provide children and the purposeful, intentional nature of their teaching. A large body of research has shown that process variables are directly related to children's outcomes while structural elements are more indirectly related. Furthermore, Burchinal (2018) notes that structural quality contributes to but, by itself, is not sufficient for identifying a program as having high quality; process elements are a necessary component.

Structural Quality Elements

Structural quality includes program characteristics that do not rely on interactions but features that tend to be more static and more easily measured. We will examine three of these structural elements in a bit more detail.

Child–Adult Ratio

It is generally assumed that when educators are responsible for many children, the quality of care is adversely affected. **Child–adult ratio** has been widely studied over several decades. Several early studies found the ratio of adults to children significantly affects children's behavior and child–adult interaction (Helburn & Howes, 1996; Howes, 1997). Furthermore, there is more verbal interaction between adults and children when ratios are low. Educators are not able to provide the individualized attention young children need when there is a higher ratio of children to adults.

What is an appropriate child–adult ratio? There is no definitive answer, but NAEYC program accreditation standards suggest the following guidelines, which are based on research and in line with DAP: a ratio of 4 to 1 for infants up to 15 months, 6 to 1 for toddlers (12–36 months), 10 to 1 for preschoolers (age 3–5), 12 to 1 for kindergartners, and 15 to 1 for the primary grades (NAEYC, 2019).

Group Size

In the late 1970s, the large-scale National Day Care Study (Roupp et al., 1979) indicated that group size was one of two consistently important variables that define quality of care for young children. In smaller groups, adults and children interacted more; children were more cooperative, innovative, and verbal; and children earned better scores on cognitive and language tests. Clarke-Stewart (1987) and Howes (1983) further found that children had greater social com-

An optimal ratio of adults to children is one indicator of quality in early childhood programs. A low ratio facilitates interaction and allows for more individualized attention to each child. According to research and the advice of experts, what is an inappropriate ratio for young children? What other factors are important in determining an appropriate ratio?

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petence and adults were more responsive when group size was moderate. Research in the 21st century has generally supported this early evidence. A recent analysis of many studies from 1968 to 2019 found some evidence that group sizes and ratios have a moderate impact on measures of process quality (Dalgaard et al., 2022).

Maximum group sizes have been recommended by NAEYC for accredited programs (NAEYC, 2019). For infants, 8 is the maximum group size recommended; for toddlers, it's 12. Preschoolers can be in groups of 20, kindergartners in groups of 24, and primary grades should not exceed groups of 30.

Educator Qualifications

In the previous paragraph, we noted that the National Day Care Study (Roupp et al., 1979) found group size to be one of two important variables that define high-quality early childhood programs. The second factor from this study was the importance of educators with specific training in early childhood education and development. Such educators engaged in more interactions with the children, and the children showed greater social and cognitive abilities, as compared with educators who lacked such training. In addition, educators with early childhood training were rated as more positive and less punitive, using a less authoritarian style of interaction with the children (Arnett, 1987). More recent research suggests that teacher education levels are not sufficient on their own to impact children's outcomes (e.g., Early et al., 2007). However, early childhood educators with increasing levels of education do have a better understanding of child development (Beisly & Lake, 2021). Presumably, this understanding could impact educators' ability to provide developmentally appropriate interactions with children.

Process Quality Elements

Process quality includes such educator characteristics as sensitivity and responsiveness; intentional teaching, including setting of appropriate goals; using a curriculum for teaching; keeping track of children's progress and using this information to plan appropriate activities to match each child's ability level; and developing strong relationships with families (NAEYC, 2022). The quality of early childhood programs is very much dependent on the quality of the interactions between educators and children (Burchinal, 2018; Pianta et al., 2020). In high-quality programs, educators support children's social and emotional development and engage in intentional, developmentally appropriate teaching. A large body of research supports such characteristics as being related to quality in early childhood programs.

Warm, responsive interaction among adults and children is an important element in defining quality in early childhood programs.

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In response to this research and supported by child development theories (which we will discuss in much more detail in Chapter 5), researchers developed a system to measure process quality (Center for Advanced Study of Teaching and Learning, 2018). The **Classroom Assessment Scoring System (CLASS)** assesses the quality of educator–child interactions in programs serving infants and toddlers through 12th grade. CLASS examines elements of teaching that predict children's learning and development. "CLASS™ is the only observational teacher-assessment tool that captures teacher behaviors linked to students' gains and that has been proven to work in tens of thousands of classrooms, from preschool to high school and beyond" (Center for Advanced Study of Teaching and Learning, 2018).

The dimensions of the CLASS provide an effective list of features that define programs with high-quality adult–child interactions. The domains assessed change slightly with age. The focus for infants is responsive caregiving, and for toddlers, two domains are assessed: emotional and behavioral support and engaged support for learning. Starting with the preschool tool, these characteristics are divided into three domains: emotional support, classroom organization, and instructional support. Within each of these broad domains are more descriptive dimensions that are observable and measurable. Let's consider each of these three in more detail so you can gain a better awareness of what "quality" means.

Emotional Support

The relationships and connections among children and educators are highly important. Strong early educator–child relationships have been found to predict both academic and behavioral outcomes in children up to 8 years later (Hamre & Pianta, 2001). In pre-K, the CLASS tool examines four dimensions under the emotional support domain: positive climate, negative climate, teacher sensitivity, and regard for student perspectives. A positive classroom climate is reflected by children and adults who are enthusiastic and enjoy their interactions and activities. Educators avoid sarcasm and harsh tones in their interactions with children. Educators are sensitive, responding consistently to the children's needs, questions, and ideas. Educators are aware of the abilities of individual children and provide appropriate levels of support for all children. Educators also value children's ideas and viewpoints and help them value each other's thoughts as well. The level of emotional support provided by educators in pre-K is related to children's school readiness (Hatfield et al., 2016).

Classroom Organization

A well-managed and organized classroom is an indicator of a competent educator who supports development of self-regulation skills in the children. In pre-K, the CLASS tool examines three dimensions under the classroom organization domain: behavior management, productivity, and instructional learning formats. Rules and expectations are clear and consistent, and behavior management relies on positive techniques such as redirection and prevention. Children understand what behaviors are expected because they are explicitly taught and regularly reviewed. Another characteristic of a high-quality classroom is the productivity that can be seen in its well-defined activities. Children are provided opportunities to engage with content. Expectations are clear, and materials are prepared ahead and ready for each activity. In addition, the educator uses effective strategies to engage the children. Instructions for activities are present in a variety of modalities, such as visual, oral, and kinesthetic. Such strategies are evident in large group, small group, and one-on-one activities. Classrooms high in classroom organization relate to children's school readiness skills in pre-K (Hatfield et al., 2016).

Instructional Support

Educators in high-quality classrooms use a variety of strategies to help children understand the facts, concepts, and principles of relevant subject areas. The instructional support domain contains three dimensions in pre-K: concept development, quality of feedback, and language modeling. Teaching strategies are engaging and do not rely merely on memorization but on deeper understanding. Learning experiences provide children the opportunity to reason, integrate, test hypotheses, and develop other higher order thinking skills. In other words, the educator does not merely present information to the children but supports strategies that allow the children themselves to discover and internalize information as they learn about the topic. Effective educators also build new knowledge and understanding on what the children already know and incorporate opportunities for children to practice new skills. In addition, children are given frequent feedback, which focuses on the process of learning rather than on getting the correct answer. Finally, effective educators incorporate more complex verbal communication into their teaching. They do this by encouraging and responding to children's verbal explanations, expanding on what children say, introducing new vocabulary, and asking thoughtful, open-ended follow-up questions. The level of instructional support provided in a classroom relates to children's learning, with stronger outcomes when children experience 2 consecutive years of high instructional support (Cash et al., 2019).

As you have seen, an effective educator is at the core of a high-quality program. Such an educator provides a classroom environment that is emotionally and physically safe and nurturing, allowing the children to focus on learning. The classroom is also well organized and well managed. Children understand classroom guidelines, which are logical and reasonable. Activities for each day are thoughtfully planned and prepared ahead of time. The effective educator also provides ways for children to utilize various thinking skills that do not involve simple rote memorization but instead involve reasoning and integration. If you were to walk into a classroom led by an educator such as the one described here, you would find yourself in a welcoming place where learning is exciting and joyful and where participants are engaged and excited about their involvement. These characteristics are at the core of developmentally appropriate practice and provide the foundation for program accreditation.

A physical environment that is child-centered, organized, and stimulating is integral to the overall quality of a program.

kate_sept2004/E+/Getty Images

Quality as a Combination of Factors

For presentation purposes, we have isolated factors associated with high-quality early childhood programs into discrete items and further classified them as either structural or process quality. It is important to keep in mind, however, that quality can best be understood and studied as a combination of components. Researchers now agree that there is no single measure of quality that consistently shows a positive impact on child outcomes. Rather, a "package" of elements of quality is likely the most impactful (Pianta et al., 2020)—particularly when the package includes the quality of adult–child interactions in the classroom. As you gain further understanding and knowledge of the field of early childhood education, remember that quality is not defined by a single factor but depends on the complex interaction of a variety of elements in which you, as an early childhood professional, play a key role.

It is also important to note that some early childhood scholars have moved away from the concept of quality with its certitudes of inputs and outputs (e.g., Bruno & Iruka, 2022; Dahlberg et al., 2013; Moss, 2018; Nagasawa et al., 2018; Tesar & Arndt, 2018). Taking a step back and zooming out, one can see the underlying assumptions of the approach to measuring quality we have just discussed. It assumes that there are universal, objective components that make up "quality" and that these can

be measured, along with the child outcomes they predict. This is a regulatory view that, according to Moss (2019), leads to increased management and control and supports a neoliberal, human capital argument about inputs and outputs rather than focusing on the rich contexts of diverse settings. Focusing on "quality" also forces our gaze to the program level rather than overarching societal structures that create the conditions within which programs and the humans within them operate. The assumption of universality of quality components is problematic because "universal" implies "culturally neutral" (Bruno & Iruka, 2022). Bruno and Iruka (2022) note that "how care giving behaviors might promote children's outcomes must be considered within the broader contexts in which they occur" (p. 172). So, while the history of the ECE field often relies on these quality measures to prove its importance and impact, we must keep in mind that what matters most is not the constellation of measurable components but the experiences of the humans in ECE settings. And we must continue to herald the call for equitable societal contexts that support children, families, and educators. Programs cannot do it alone.

THE FUTURE OF EARLY CHILDHOOD EDUCATION

Up to this point, we have examined social changes that have helped to shape the field of early childhood education, looked at the multifaceted descriptors that define the field today, and examined aspects of programs for young children, including their quality. But what lies ahead? Are there more changes in store? Following are some predictors, based on a variety of indicators and trends.

Growth of ECE

From all economic and social indications, it is reasonable to expect that a high percentage of families will continue to need early care and education for their young children. Although the COVID-19 pandemic led to the first decline in maternal employment in decades, it will likely bounce back when the child care industry fully recovers. Thus, employment opportunities in early childhood education will continue to increase. The U.S. Bureau of Labor Statistics (2022) projects that the need for preschool educators will increase by 3% between 2022 and 2032, while the kindergarten and elementary educator workforce is projected to increase by 1% over this same time period. Although the number of available positions for early childhood professionals will continue to increase, there are nevertheless grave concerns about the stability of the early childhood workforce. In no other industry is there such a high turnover of employees as in child care. Subsidies supporting professional salaries and benefits will likely be one solution to the instability of the workforce.

Funding of the Child Care Industry

Federal and state funding for programs such as Head Start and local and state allocations to serve some children, along with programs and job opportunities for educators of young children, have experienced moderate increases over the years. The COVID-19 pandemic revealed the urgency of support for early care and education, as parents can't work if they don't have access to care for their children. Infusions of funding into the industry occurred, with many states offering emergency relief funds to the workforce directly and to child care providers to keep their doors open. These infusions of funds continued into 2022 but have since expired.

There is also more policy conversation happening at the federal level in the United States, focused on increasing the supply and reducing the cost of child care for families. In fact, President Biden's Build Back Better legislation in 2022 included an enormous infusion of funding to stabilize and improve the availability and affordability of child care. Although this legislation did not pass, several legislators continue to advocate for more federal funding and universal prekindergarten. A recent article in the *New York Times* focused on the rare bipartisan agreement that the child care industry needs federal support (Miller, 2022). Thus, it seems likely that some degree of federal support is on its way. Any federal legislation will need to focus on all three aspects that tug on the industry today: affordability for families, quality for children, and compensation for professionals.

It is becoming more and more apparent that our country lacks a cohesive and consolidated social policy within which to consider child and family matters. For instance, a wide variety of agencies initiate, license, administer, and evaluate varying programs for children and families, often relying on disparate philosophies, approaches, and regulations and often administered by different federal and state departments and agencies mixed with for-profit entities. But, at the same time, because of increased public attention, there also seems to be greater willingness to address such issues with more depth, integration, and forethought.

Focusing on Families

Publicly funded programs for young children, including many Head Start, Early Head Start, pre-K, and kindergarten programs, often are operated only on a part-day, part-year, and sometimes part-week basis. Such scheduling is problematic for working parents who need full-day care for their children. Despite limited funding, efforts will need to be made to deliver more wraparound services that provide extended hours for children who participate in a part-day program.

Within the early childhood profession, there is a continued focus on the pluralistic nature of our society and the shrinking world in which children are growing up. Many early childhood programs can be expected to focus more than ever on anti-racist curriculum and practices and the inclusion of children and families from different cultural, ethnic, linguistic, economic, and religious backgrounds, as well as children with disabilities. We will explore this topic in more detail in Chapter 13.

<div style="background-color:teal;color:white;text-align:center;padding:8px;">**SUMMARY**</div>

NAEYC's Four Core Position Statements

Learning Objective 1.1 Describe the four core position statements of the National Association for the Education of Young Children (NAEYC).

The four core position statements are: Advancing Equity in Early Childhood Education, Code of Ethical Conduct and Statement of Commitment, Developmentally Appropriate Practice, and the Professional Standards and Competencies for Early Childhood Educators. These statements provide the core principles of the field from its largest organization, NAEYC.

The Growth of Early Childhood Education

Learning Objective 1.2 Outline the factors that have contributed to the growth of early childhood education programs over the past few decades.

A number of social factors have contributed to the expansion of early childhood programs and have brought early childhood education into the public consciousness. These factors include the following:

1. Changes in family life such as an increased number of two-earner families and single parents

2. Growing evidence of the benefits of early education for children living in poverty, children with disabilities, and other children labeled at risk

3. Child advocacy, which has helped bring the needs of young children and their families to public and legislative prominence

What Are the Components of Early Childhood Education?

Learning Objective 1.3 Discuss the components of early childhood education, including the age groups of children, the settings, and the funding sources.

There is considerable diversity in the types of early childhood programs; programs vary according to the following factors:

1. Ages of the children

2. Program settings

3. Sources of funding support

Defining Quality in Early Childhood Programs

Learning Objective 1.4 Analyze the factors that define high-quality early childhood education.

Program quality is one of the most important factors to consider regarding early childhood programs. The following elements intersect to contribute to the quality of early childhood programs:

1. Child–adult ratio

2. Group size

3. Staff qualifications

4. Educators' social and emotional support

5. Educators' organizational and management support

6. Educators' instructional support

7. Quality as a combination of factors

The Future of Early Childhood Education

Learning Objective 1.5 Summarize the key issues related to early childhood education that will impact its future.

There are several trends that suggest what the future holds for early childhood education. First, the field is necessary and expected to grow. Second, funding of programs will be a focus, as families cannot continue to bear the full burden of the cost of quality. Third, funded programs will need to focus on providing care that works for families (e.g., hours and months of operation).

<div style="text-align:center; background:#1a9e8f; color:white;">KEY TERMS</div>

center-based programs	extended family
child–adult ratio	family child care homes
child advocacy	integrated curriculum
children in self-care	nuclear family
Classroom Assessment Scoring System (CLASS)	process quality
developmentally appropriate practice (DAP)	structural quality
early childhood education	

<div style="text-align:center; background:#1a9e8f; color:white;">APPLICATION</div>

1. If you were given three wishes to bring about changes for young children and their families, what would they be? Share these with others in your class. From a combined list, develop several child and family issues that you think child advocates might address.

2. Do some research on early childhood programs available in your community. Classify the programs according to their characteristics: for instance, setting, hours of operation, ages of children served, and source of support. Does your community have a variety of programs? Which types of programs predominate? What family needs are met by these programs?

3. Visit a local Head Start program. What benefits do you see for the children? Talk to a staff member and find out what services are provided for the children and their families.

4. Suppose you were asked by the parent of a young child, "How do I find a good child care program?" What would you answer? How can you help a parent recognize quality indicators?

5. Projections for the future, as we have discussed, indicate an increased need for high-quality early childhood programs. What changes do you think are needed to bring about improvements for children and for early childhood educators?

ADDITIONAL RESOURCES

Here are select additional publications on topics discussed in Chapter 1.

Annie E. Casey Foundation Kids Count Data Center. https://datacenter.aecf.org

Children's Defense Fund. *The state of America's children*. Annually published yearbooks. www.childrensdefense.org

Grieshaber, S., & Hunkin, E. (2023). Complexifying quality: Educator examples. *Frontiers in Education, 8*. https://doi.org/10.3389/feduc.2023.1161107

Nxumalo, F., & Brown, C. P. (Eds.). (2020). *Disrupting and countering deficits in early childhood education*. Routledge.

Zero to Three. *State of babies yearbook*. Annually published yearbooks. https://stateofbabies.org

THE WHO OF EARLY CHILDHOOD EDUCATION

Early childhood education involves different people. In Part II, we will explore the *who* of this field by examining the characteristics of and special considerations for three groups—children, families, and educators.

2 THE CHILDREN

NAEYC Standards and Competencies Considered in Chapter 2

See the Standards and Competencies Correlation Matrix in the Appendix.

- *Standard 1a:* Understand the developmental period of early childhood from birth through age 8 across physical, cognitive, social and emotional, and linguistic domains, including bilingual/multilingual development.
- *Standard 1b:* Understand and value each child as an individual with unique developmental variations, experiences, strengths, interests, abilities, challenges, approaches to learning, and with the capacity to make choices.
- *Standard 1c:* Understand the ways that child development and the learning process occur in multiple contexts, including family, culture, language, community, and early learning setting, as well as in a larger societal context that includes structural inequities.

Developmentally appropriate practice requires early childhood educators to seek out and gain knowledge and understanding using three core considerations: commonality in children's development and learning, individuality reflecting each child's unique characteristics and experiences, and the context in which development and learning occur. These core considerations apply to all aspects of educators' decision-making in their work to foster each child's optimal development and learning. (NAEYC, 2022, p. xxx)

At the heart of early childhood education is young children. All the topics we will discuss in ensuing chapters are aimed at gaining a better understanding of children and how, together with their families, we can best facilitate their learning and development. As the preceding quote illustrates, it is not sufficient to understand general principles of child development and learning; rather, educators also must understand individual differences among children as well as the contexts within which they are developing. We will discuss all three components in this chapter. We will take a closer look at children and consider how they should be seen as part of their community and cultural contexts, which shape much of their identity. Children have many age-related commonalities, but they also have uniquenesses that differentiate them from everyone else. Consider, for example, a 4-year-old from a minoritized community growing up in a large, urban environment versus a 4-year-old from a minoritized community growing up in a rural setting. Or, a 3-year-old who is blind or has behavioral challenges compared to a 3-year-old who is sighted or easily adapts to new environments. These differences in identities and contexts play an important role in child development.

Children are wonderfully engaging, in part because everything is new to them, and they approach new learning with fresh eyes. Children who have learned from their early experiences that the world and the people in it are trustworthy, in turn, possess a sense of trust that the world and the people in it are friendly and kind. They embrace that world with joy and enthusiasm. And, regardless of early experiences, children are born motivated to learn. The amount of information that children learn in the first few years of life is unparalleled in later life. Young children do not need to be coerced into learning; they approach the acquisition of skills and knowledge with zest, liveliness, and perseverance. Consider the infant just learning how to crawl, the 1-year-old discovering a rainbow, the 3-year-old learning a new song, or the 6-year-old learning how to read. With little encouragement, these children are motivated to learn.

Our task as early childhood educators is to provide an engaging environment and facilitation of learning that nurtures and sustains children's enthusiasm rather than subduing it. Unfortunately, when children are not in nurturing and stimulating environments, they could well lose that sense of freshness and enjoyment of learning. This is why we will continue to emphasize the importance of engaging in developmentally appropriate practice (DAP). Young children are eager to learn, but such eagerness can be discouraged if they are frequently overwhelmed by developmentally inappropriate experiences. This is an awesome responsibility for early childhood educators, and it can be met through careful and sensitive study and understanding of the characteristics of young children.

This chapter will explore the three core considerations of developmentally appropriate practice—commonality, individuality, and context—through the lens of the nine principles of child development and learning put forth in the position statement.

PRINCIPLES OF CHILD DEVELOPMENT AND LEARNING

Although each child is unique, children nonetheless have much in common. All children must have their basic needs met to develop into adults that are functional members of the society in which they are raised. These basic needs include nurturance and protection (Bornstein, 2015). Historically, child development theories and research have been based on norms developed using a Western scientific and cultural model, centered on white, middle-class, monolingual English-speaking children (NAEYC, 2022). The field now recognizes that differences from these norms are not deficits, and that all child development and learning are "embedded within and affected by social and cultural contexts" (NAEYC, 2022, p. xxxi). In fact, when children's differences from norms that were developed by examining a limited population of children are viewed as deficits, this viewpoint perpetuates "systems of power and privilege and . . . maintain(s) structural inequities" (NAEYC, 2022, pp. xxx-xxxi). It is, thus, essential when we discuss commonalities that we recognize the ever-present social and cultural contexts influencing the child.

Some current research literature, particularly that coming from the field of pediatrics, still discusses child development norms, noting that during typical development, children reared in Western traditions reach developmental motor milestones in a fairly predictable sequence and time range (Sheldrick et al., 2019). Other research has revealed that these motor milestones are not universal—individual and cultural variations do exist (Adolph & Hoch, 2019; Karasik & Robinson, 2022). For example, an infant raised in Tajikistan spends many hours per day swaddled in a "gahvora" cradle for the first 12 to 24 months and, although these infants show "delays" when compared to common milestone charts, there are no long-term deficits in their motor skills (Karasik & Robinson, 2022). And,

Children's enthusiasm and eagerness to learn must be nurtured through a supportive environment and by sensitive educators who understand their development.

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individual infants use a wide array of strategies to achieve initial mobility, not just the traditional hand-and-arm coordinated crawl (e.g., by belly crawling, log rolling, bum-shuffling, or crawl-sitting; Adolph & Hoch, 2019). Thus, even though we have charts for motor milestones that many Western parents and early childhood educators use to track children's development, it is important to keep in mind both individual and cultural variations. When we discuss "universal" skills, it's important for us to ask for whom and in which contexts.

Rather than describing typical child development by age (and thus perpetuating the idea that all children of certain ages share a common set of developmental attributes), this section of the chapter will examine the common principles of child development and learning that are put forth in the position statement on Developmentally Appropriate Practice (NAEYC, 2022).

Principle 1: Development and Learning Are Dynamic Processes

Development and learning are dynamic processes that reflect the complex interplay between a child's biological characteristics and the environment, each shaping the other as well as future patterns of growth. (NAEYC, 2022, p. xxxii)

This principle highlights the fact that child development is complex. Some early theories of child development proposed that development simply unfolds during a process of maturation. The environment was present, of course, but not all that important in shaping development. We now know from decades of research that all aspects of child development interact with the environment in complex ways. In some cases, certain inputs from the environment are essential for a development to occur. In early prenatal development of the nervous system, for example, the nutrient folate (vitamin B9) is essential for the developing spinal column to fully fuse. If folate is not present in the pregnant person's bloodstream, a malformation of the central nervous system will occur, known as spina bifida. This is an example of the environment (in this case, a particular nutrient) having a direct impact on development during a particular time (in this case, when the spinal column is being constructed). These time periods are known as "critical periods" in development and generally exist only for environmental inputs that all humans are expected to experience. Another example of the environment influencing development is with the experience of **toxic stress** in childhood. A growing body of research has shown that children who grow up with adversity and a high level of stress experience adverse long-term health outcomes (Shonkoff et al., 2021).

While these negative environmental influences are impactful, the good news is that supportive environments can also impact development. Even in the context of adversity and toxic stress, for example, there is a buffering impact of sensitive, responsive, consistent caregiving (Hambrick et al., 2021). This is excellent news for early childhood education, as educators can provide such buffering experiences and promote children's relational health. Positive experiences in early childhood classrooms, birth to age 8, can positively influence the outcomes of children who have experienced adversity.

Principle 2: All Domains of Child Development Are Important

All domains of child development—physical development, cognitive development, social and emotional development, and linguistic development (including bilingual or multilingual development), as well as approaches to learning—are important; each domain both supports and is supported by the others. (NAEYC, 2022, p. xxxii)

Developmental scientists categorize humans into different areas of functioning, or "domains" of development. These domains are broad groupings of like characteristics. Physical and motor development includes things such as height and weight, in addition to developments in the use of the small and large muscles. Cognitive development examines changes in thinking, learning, and the mind. Social and emotional development refer to skills and abilities in such areas as the development of identity, emotions, and getting along with others. Linguistic development refers to the development of communication skills and language. Finally, approaches to learning are a set of dispositions that assist in learning across domains, such as persistence, curiosity, initiative, and creativity (Epstein, 2014).

The DAP position statement highlights the importance of educators understanding each domain of development so they can effectively support children's development across all domains (NAEYC, 2022).

Early childhood educators are not just to teach children new facts; they should be supporting children's physical and motor development, their social competence and development of identity, their language development, and their development of emotion regulation. They do this in settings that encourage children's dispositions toward learning new things. This principle also highlights the interconnected nature of the domains. While it's useful to look at the development of motor skills independently, for example, it's important to remember that developments in one domain both influence and are influenced by developments in the others. A specific example may help. When an infant begins to walk, their whole world changes, both literally and metaphorically. Now upright, new perceptual abilities are possible and new learning opportunities unfold. In addition, the walking infant elicits different types of social interaction. "Walking facilitates carrying (objects), carrying promotes new types of social interactions, and these social interactions shape infants' language input" (Adolph & Hoch, 2019). In summary, knowledge of all domains of child development and how they overlap and intersect is essential for early childhood educators so they can support and facilitate such development and so that their expectations of a child are aligned with the child's developmental capacities.

Principle 3: Play Promotes Joyful Learning

Play promotes joyful learning that fosters self-regulation, language, cognitive and social competencies as well as content knowledge across disciplines. Play is essential for all children, birth through age 8. (NAEYC, 2022, p. xxxiii)

If there is one universal truth, it is that children play. No matter what culture or context, with store-bought toys or the boxes they come in, purchased or found items, if children are safe, they play (Yogman et al., 2018). Play enhances all domains of child development and is the vehicle through which learning occurs in early childhood. It is by no means a trivial activity. Three main characteristics separate play from other activities: choice, wonder, and delight (NAEYC, 2022). Play is also nuanced and can be viewed on a spectrum, from free play on one end, where children engage in self-selected and directed play activities with no adult-initiated learning goal, to games with rules, which have a specific focus (Zosh et al., 2022). In between these two extremes is guided play, where adults scaffold and assist in structuring the activity based on a learning goal, but children are actively engaged in directing the activity (Zosh et al., 2018). While all types of play are important, guided play most aligns with the principles of the science of learning because it is active, engaged, meaningful, and socially interactive (Zosh et al., 2018).

Early child development research focused on a set of universal stages in the development of play. While decades of research have confirmed some trends in play at different stages of development, there is no universal, lock-step sequence in the development of play (Zosh et al., 2022). Play is influenced by context and culture; infants engage in social play and preschoolers engage in solitary play activities. Nonetheless, certain types of play emerge as children develop in other domains. For example, as children mature cognitively, they begin to engage in pretend play. Observe a group of 3- or 4-year-old children and you will inevitably see sociodramatic play scenarios emerging. A group of 12-month-old infants will not engage in such sociodramatic play because they do not yet think symbolically. It is useful to examine the different types of social play that exist in young children as different varieties rather than as stages. Because you will come across these categories of social play in early childhood settings, Parten's (1932) types of social play are presented in Table 2.1.

Another type of play, **rough-and-tumble play**, is often mistaken for fighting. While very physical and vigorous, this kind of play is natural and can be distinguished from fighting by children's laughter and relaxed muscle tone (Carlson, 2011). Rough-and-tumble play allows children the opportunity for risk-taking in a safe environment and has been shown to foster "the acquisition of skills needed for communication, negotiation, and emotional balance and encourages the development of emotional intelligence" (Yogman et al., 2018). It fosters empathy as educators guide children and allow opportunities for such physical play. Providing a supportive environment, establishing rules, and supervising are some strategies that help children engage in such play and develop the skills to do so without inflicting harm on others.

TABLE 2.1 ■ Parten's Types of Play		
Types of Play	**Definition**	**Example**
Unoccupied behavior	The child moves about the classroom going from one area to another, observing but not getting involved.	*Sebastian wanders to the blocks and watches several children work together on a structure. After a few seconds, he looks around and then walks over to the art table, where he looks at the fingerpainting materials briefly but does not indicate a desire to paint. He continues to wander, going from area to area, watching but not participating.*
Solitary play	The child plays alone, uninvolved with other children nearby. Children at all ages engage in this type of play, although older children's solitary play is more complex.	*Lorraine works diligently at building a sand mountain, not looking at or speaking with the children who are involved in other activities around her.*
Onlooker play	Quite common among 2-year-olds, a child stands nearby, watching others at play without joining in.	*Rajeef stands just outside the dramatic play area and watches a group of children participate in doctor play, using various medical props.*
Parallel play	Children use similar materials or toys in similar ways but do not interact with each other.	*Kalie alternates red and blue Legos on a board while Terrance, sitting next to her, uses Legos to build a tall structure. They seem influenced by each other's activity but do not talk to each other or suggest joining materials.*
Associative play	Increasingly evident as preschoolers get older, children interact and even share some of their materials, but they are not engaged in a common activity.	*Several children are in the block area working on a common structure. Jolynne runs a car through an arch she has built at one side of the structure; Arlen keeps adding blocks to the top, saying, "This is the lookout tower," while Akira surrounds the structure with a "fence."*
Cooperative play	Typical of older preschoolers, this is the most social form of play and involves children playing together in a shared activity.	*On arriving at school one day, the children find an empty appliance box in their classroom. At first they climb in and out of the box, but then a few of them start talking about what it might be used for. Jointly, they decide to make it into a house, and their discussion turns to how this could be accomplished. While continuing to discuss the project, they also begin the task of transforming the box, cutting, painting, and decorating to reach their common goal. It takes several days, but the children together create a house.*

These girls are engaged in similar activities, but each is engrossed in her own painting, and there is little interaction between them. This is typical of parallel play.

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The apparent common goal of these two children suggests that they are engaged in cooperative play.

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TAKE A CLOSER LOOK

Play and Learning

There always has been recognition that play is a highly important part of childhood, central in children's lives. Yet, play is often set apart from learning, as if learning does not or cannot occur during playful experiences. This is nonsense. As Zosh and colleagues (2022) point out, "play versus learning represents a false dichotomy in education" (p. 82). Instead, play is viewed as a conduit for learning and the two mutually reinforce each other. There is no reason that learning must be educator-directed and rigid. In fact, the science of learning shows us that playful learning—that which is active, meaningful, socially interactive, and enjoyable—is congruent with how humans learn best (Darling-Hammond et al., 2020). Viewing play as a teaching practice is central to early childhood education. Play is not time away from "real" learning; rather, it is a vehicle for learning.

Zosh and colleagues (2022) point out that play should be viewed on a spectrum, with free (also called self-directed) play at one end, guided play in the middle, and games at the other end. These categories of play differ in who initiates the activity, who directs the activity, and whether there is an explicit learning goal. Free play is initiated and directed by the child with no explicit learning goal. Guided play is initiative by the adult, directed by the child, and has an explicit learning goal. Games are initiated by the adult, directed by the child, and often have an explicit learning goal. Play across this spectrum can and does lead to learning. "Whether solitary, dramatic, parallel, social, cooperative, onlooker, fantasy, physical, constructive, or games with rules—play, in all its forms, is a teaching practice that optimally facilitates young children's development and learning" (Zosh et al., 2022, p. 82).

Free play, where children decide what to do in an environment filled with choices, facilitates children's problem solving, independence, initiative, physical competence, symbolic thinking, social and emotional development, and language and literacy (Zosh et al., 2022). Free play is often not enough, however, to facilitate learning when there is an explicit learning goal. In these instances, educators are encouraged to use guided play, where children's play can be scaffolded in a way to support outcomes-based goals. Just as builders use scaffolding to temporarily support a crew while a building is under construction, **scaffolding** is a metaphor for the supports provided to a child in learning something new (Wood et al., 1976). For example, an educator might scaffold learning in a child-directed play experience by asking intentional questions, curating specific materials, or setting up the environment to guide learning. Zosh and colleagues (2022) liken guided play to bumper bowling. The educator provides the bumpers, which make a particular learning outcome more likely to occur. Guided play facilitates children's learning across content areas—language and literacy, mathematics, spatial learning, and the like—and is more effective than both free play and direct instruction in impacting learning (Zosh et al., 2022). Finally, games can also support learning by providing built-in scaffolding. A board game has been shown to improve children's understanding of number, and a rhyming game has been shown to support early literacy skills (Zosh et al., 2022).

Play across the continuum, from free play to games, supports children's learning by tapping into the six pillars of the science of learning (Zosh et al., 2022):

- Active, "minds-on"
- Engaged
- Meaningful
- Socially interactive
- Iterative
- Joyful

Despite these benefits of play as a medium for active and joyful learning and the fact that the United Nations Convention on the Rights of the Child (1989) positions play as a right, not a privilege, not all young children have equal opportunities for play. In some cases, play is minimized in early learning settings because it is viewed as counterproductive to "real," standards-focused learning. In other cases, disparities in play experiences occur between private and publicly funded programs, making it more likely for children served by public programs to experience more direct instruction and the learning of academic skills separated from their context (Jordan, 2022). Jordan discusses her experiences visiting programs across the United States, finding disparities in play opportunities based on the racial and socioeconomic status of the children served. Educational reforms have added more assessments and regulations for accountability purposes, and the result is more discrete tasks and educator direction in early learning programs funded by public dollars. Unfortunately, the children served in public programs are children from low-income communities, children of color, and Native American children. Yet, as Jordan points out, *all* children deserve to have play at the center of their learning experiences. It is the most effective way to learn, not the antithesis of learning.

Principle 4: General Progressions of Development and Learning

> **Although general progressions of development and learning can be identified, variations due to cultural contexts, experiences, and individual differences must also be considered. (NAEYC, 2022, p. xxxiv)**

When scientists first started researching child development, many focused on the commonalities that children share at different ages. In fact, many researchers still focus on these commonalities, and you will come across lists of developmental milestones from such organizations as the American Academy of Pediatrics, the Centers for Disease Control and Prevention, and the World Health Organization. While progressions of development are useful, particularly when determining when a child may need an intervention to encourage development back "on course," they do not tell the whole story of child development. As we have discussed previously, many of these "normative" progressions of development were based on limited samples of children growing up in Western, middle-class contexts. Focusing on commonalities between children of various ages without acknowledging individual differences or cultural and contextual influences limits our view of children. In this section, we will focus on what many children throughout the early childhood age range are like and capable of, keeping in mind individual variation, culture, and context. The DAP position statement indicates that the idea of "stages" of development is less useful than conceptualizing development as occurring in waves (NAEYC, 2022). If you've ever seen an ocean, you know that waves are not uniform across a given beach, and they result in momentary regressions as well as forward progress. The same is true for development.

The developmental progressions occurring from birth to age 8 are astounding. These first 8 years establish the foundation for all domains of development and learning. Humans progress from being completely dependent on adults to becoming more independent, from communicating through cries, sounds, and nonverbal cues to communicating through the language(s) or communication systems they have learned, and from relying on others to get from one place to another to becoming independent ambulators. These general progressions, however, ignore some important realities. For example, even newborns are well-equipped to get what they need by eliciting care from others in their environment, capably communicating distress or contentment, and recognizing the sound and smell of their primary caregivers. They are certainly not helpless or incompetent. Further, not every child has fully functional systems. The child who is born without the ability to hear may learn to communicate using

systems other than verbal language. This difference doesn't make them any less capable or "on track"; it simply illustrates the importance of considering individual differences when discussing the progression in the capacity to communicate.

Even when discussing developmental progressions, it is useful to keep in mind that children are perfectly equipped with what they need at their given age and level of development. Focusing on children's strengths at each age helps the educator to keep a perspective of delight in witnessing children's capabilities. Rather than keeping an eye on children's readiness for the next stage of development, take time to recognize the capacities and strengths that each child possesses at each point in development.

Infants and Toddlers (Birth to Age 3)

Infants and toddlers face a daunting quest—to survive and learn foundational skills important in their context and culture. Survival is not just about food and shelter, however. A growing body of research illustrates that the need for human connection is just as important. One of the challenges that babies face is establishing close relationships with people who care deeply about them. Infants use a variety of developing skills to gain information about their worlds. Using their senses, relationships, and burgeoning motor abilities, infants and toddlers learn about and make sense of the environments they experience. As their abilities develop across domains, infants and toddlers' functioning and play become increasingly complex.

Two-year-olds, in transition from babyhood to childhood, are just beginning to master many skills. They need ample opportunity to practice these in a nurturing and safe environment.

Satoshi-K/E+/Getty Images

Educators of infants and toddlers must be sensitive and responsive to their individual characteristics in a consistent, nurturing, respectful manner. Infants and toddlers can and do develop attachment relationships to consistent people in their lives, including early childhood educators (Ahnert, 2021). It is important, then, that educators provide sensitive, responsive, reciprocal care, which fosters the development of secure attachment. Daily routines for infants are tailored to each child's individual rhythm and needs for care, food, sleep, play, and social interaction. As children's motor skills develop, appropriate space and materials are provided for practice. Most toddlers are striving to develop their identity and independence; thus, experiences (and patience) are necessary to support them. Educators support infant and toddler development by engaging with them in play, using a language-rich environment, and following their lead in explorations of the environment and its materials. A supportive, consistent, safe environment provides opportunities for practice and mastery of new skills.

Preschoolers (Age 3 to Age 5)

Once they have mastered the beginning skills in all domains of development attained in the first 3 years, preschoolers are ready to engage in rich environments that continue to support their learning and development. Children ages 3 and 4 continue to explore and find interest in new experiences. They also engage in complex dramatic play with peers when provided access to materials and opportunities to do so. Preschoolers are enthusiastic about learning new things and can become deeply invested in exploration of topics of interest to them. With supportive adults providing engaging experiences, supports and scaffolds, and opportunities to learn, preschoolers thrive. Their attention span is increasing; for example, they may enjoy picture books from start to finish when read in an engaging manner. Preschoolers are gaining skills in self-regulation and persistence; they are also increasingly aware of themselves as both distinct individuals and related to others. Preschoolers ask a lot of questions now that they have basic communicative abilities mastered. Peers often take on a new level of importance during these years.

Children in the preschool years benefit from educators who provide engaging environments and experiences and who understand their need for adult support in learning new skills across all domains

and content areas. A sensitive educator will provide opportunities for children to learn about emotions, friendship, and persistence in the face of a difficult task in addition to learning emerging knowledge in content areas such as literacy, mathematics, science, and social studies. While it's true that preschoolers are no longer babies, their need for a consistent, supportive, understanding adult nevertheless persists.

Three-year-olds' budding skills allow them to enjoy an ever-widening array of activities and peer interactions.

Laura Dwight/Alamy Stock Photo

Four-year-olds need a stimulating environment into which to channel their abundant energy and curiosity.

Hero Images/Getty Images

Kindergartners (Five-Year-Olds)

Five-year-old children often have more self-control than preschoolers, with many replacing some of their earlier exuberant behaviors with a calmer approach to peers and adults. Their motor skills, while still developing, become more precise. Fives who have had the opportunity to work on fine motor control are capable of accurate cutting, drawing, and beginning writing. Those with a lot of practice with at least one language have vocabularies that contain thousands of words, complex sentence structures, variety and accuracy in grammatical forms, and good articulation. The social sphere of 5-year-olds revolves around special friendships, and they are becoming more adept at sharing toys, taking turns, and playing cooperatively. Their group play is usually elaborate and imaginative, and it can take up long periods of time (Marotz & Allen, 2015).

Educators of kindergartners who provide a stimulating learning environment and set reasonable limits, can expect this age group to take on considerable responsibility for maintaining and regulating a smoothly functioning program. Fives need to be given many opportunities to explore their world in depth and assimilate what they learn through multiple experiences. One way in which children can discuss, plan, and carry out ideas stimulated by their experiences and interests is through in-depth projects and inquiry-based experiences (Bresson & King, 2022; Helm & Katz, 2016).

These 5-year-olds had a product in mind when they began working with the blocks.

kate_sept2004/E+/Getty Images

Children in the Primary Grades (Six- to Eight-Year-Olds)

Young children in the primary grades continue to develop in all domains and learn across content areas and developmental domains. They make connections between new and existing knowledge, discover new interests, build friendships, and continue to develop their identities (Zosh et al., 2022). Children in the primary grades engage in critical thinking, share their perspectives, listen to the views of others, and negotiate shared strategies and goals to solve problems (Masterson, 2022). When provided opportunities to do so, 6- to 8-year-olds can exercise considerable

independence, shown through their ability to follow rules without the need for constant monitoring and their ability to initiate and carry out organized play.

School-age children enjoy the camaraderie and close friendship of peers.

FatCamera/E+/Getty Images

Educators in the primary grades must continue to provide a safe, nurturing, welcoming classroom climate. They should provide materials appropriate for the expanding interests of this group and allow children enough independence to pursue these in their own way. The need for active, hands-on, playful learning opportunities continues into the primary grades (Masterson, 2022). Effective, developmentally appropriate educators provide opportunities for collaborative learning, encourage reflection, integrate areas of the curriculum, foster exploration and investigation, and provide language-rich interactions and meaningful choices in the primary grades (Masterson, 2022). Although many primary educators focus on "teaching," a more accurate descriptor of a developmentally appropriate primary grade educator would be a "facilitator of learning." This different perspective is also aligned with principles of the science of learning (Zosh et al., 2018).

Principle 5: Children Are Active Learners

Children are active learners from birth, constantly taking in and organizing information to create meaning through their relationships, their interactions with their environment, and their overall experiences. (NAEYC, 2022, p. xxxiv)

This principle highlights the nature of learning itself. While, as adults, we can cram for a test and memorize vocabulary words, deep learning occurs when it is active, regardless of age. Active learning comes from interactions with others, active exploration, and play (NAEYC, 2022). In addition, this principle declares that children are active learners from birth. For infants, there are several "privileged domains" of learning—what that means is that infants are particularly attuned to learn certain concepts (Bransford et al., 2000). These privileged domains include learning related to physical and biological concepts, causality, early number concepts, and language. "Young children show positive biases to learn types of information readily and early in life" (Bransford et al., 2000, p. 81).

Active learning, with its emphasis on hands-on, relational interactions with others, experiences, and environments, follows principles of the science of learning (Cantor et al., 2019). In brief, the science of learning brings together research from a wide range of disciplines and proposes that strong relationships and engaging, hands-on experiences lead to the most effective learning of the important outcomes we seek (Darling-Hammond et al., 2020). Fortunately, for early childhood educators, children come to us equipped with a curiosity about the world and a motivation to learn. Educators support these dispositions by providing a "rich, play-based learning environment that encourages the development of knowledge (including vocabulary) and skills across all domains" (NAEYC, 2022, p. xxxiv). Such an environment will promote active learning throughout the full age range of the early childhood period, including the primary grades.

Children's active learning is also expressed through active observation and learning through this observation. One example is that children are learning "powerful lessons about social dynamics as they observe the interactions that educators have with them and other children" (NAEYC, 2022, p. xxxv). Observing these interactions helps children to develop an understanding of their own and others' social identities, which can include awareness of and biases regarding race and gender (NAEYC, 2022). It is thus essential that educators are mindful of their learning environments and their own implicit biases (which may be expressed through their behaviors and interactions with others) to avoid privileging one

identity group over others (NAEYC, 2022). Active learning of social identity is supported with positive depictions of others in children's identity groups and consistent interactions and communications that are not tainted with implicit bias.

Principle 6: Children's Motivation to Learn

> **Children's motivation to learn is increased when their learning environment fosters their sense of belonging, purpose, and agency. Curricula and teaching methods build on each child's assets by connecting their experiences in the school or learning environment to their home and community settings. (NAEYC, 2022, p. xxxv)**

This principle focuses on children's motivation to learn and the factors associated with this motivation. As mentioned in the discussion of Principle 5, motivation to learn is an integral piece of the science of learning. Without this motivation, the ability to learn is compromised. Motivation is "a condition that activates and sustains behavior toward a goal" (National Academies of Sciences, Engineering, and Medicine, 2018). If you have ever observed a toddler learning to walk, you know that toddlers are highly motivated to master this skill. It is rarely necessary to coax a toddler to practice walking; they have **intrinsic motivation** to learn this motor skill. The DAP position statement proposes that children's motivation to learn is enhanced in environments that foster belonging, purpose, and agency (NAEYC, 2022). We will discuss each of these.

A sense of belonging promotes **self-efficacy**, which is an important driver of motivation (National Academies, 2018). To feel a sense of belonging, a person must feel both psychologically and physically safe (NAEYC, 2022). Physical safety is promoted when educators help children to feel protected; children must feel that the educator is present to keep them from harm. A physically safe environment follows guidelines for basic health and safety standards for child care settings (see, e.g., the Caring for Our Children standards). Educators also promote physical safety when they respond to children's accidents with sensitivity and care. Psychological safety, on the other hand, refers to children's sense that their identities are valued in this setting. Educators promote psychological safety when they provide experiences that connect to children's communities and homes, when they include children's home languages as part of the learning environment, and when learning opportunities are culturally and linguistically affirming (NAEYC, 2022). Psychological safety is also promoted when children "see people who look like them across levels of authority" (NAEYC, 2022, p. xxxv).

Children are more likely to be motivated to learn if they have a sense of purpose as well. When children feel that a learning activity is purposeful, they are likely to be motivated to participate. In the case of our toddler just learning to walk, there are multiple purposes likely playing a role. For example, the toddler can see a larger landscape when upright, can reach items previously out of reach, and can get places faster once they are capable of walking. For college students, a sense of purpose comes with alignment of your goals. If your goal is to become an early childhood educator, you are motivated to learn as much as you can that will assist with meeting this goal. When learning has purpose and meaning, the learner, regardless of age, is more likely to be motivated to participate. Educators support this sense of purpose by planning meaningful learning activities that are aligned with the learner's interests and abilities.

Finally, a sense of agency is important in supporting motivation. Agency refers to children's ability to make and act on choices in their learning (NAEYC, 2022). A child with a sense of agency will have multiple options from which to choose, will make a choice, and then will participate in the learning activity. They are also more likely to take on challenges and persist with a learning activity they have chosen (National Academies, 2018). What fosters this sense of agency in children is an environment that centers choice. Effective early childhood educators plan a variety of meaningful learning activities in an environment rich with engagement opportunities and provide children the ability to make their own decisions on where to engage and what to engage in during large blocks of time during the day. Of course, not everything can be a choice, but where choice is possible, offering it will support children's agency and, in turn, their motivation to learn.

Principle 7: Children Learn in an Integrated Fashion

Children learn in an integrated fashion that cuts across academic disciplines or subject areas. Because the foundations of subject area knowledge are established in early childhood, educators need subject area knowledge, an understanding of the learning progressions within each subject area, and pedagogical knowledge about teaching each subject area's content effectively. (NAEYC, 2022, p. xxxv)

In early learning settings, educators recognize the integrated nature of learning content and developmental skills. A developmentally appropriate educator does not separate the day into time blocks associated with separate content areas (literacy, mathematics, science, social/emotional learning, etc.). Rather, educators take an interdisciplinary approach to learning, recognizing that children learn best when content is meaningful, embedded, and interconnected. Educators who teach using project or inquiry approaches know this very well. In any given long-term project, children are provided opportunities to engage in multiple learning experiences that cross academic content areas and developmental domains. For example, a project focused on the exploration of friendship in a preschool classroom could provide opportunities in all content areas and domains and great chances for integration of content areas and domains. A visual arts activity in which children are invited to draw each other's emotional expressions, for example, touches the areas of social and emotional development, communication and language, and fine motor skills. If children are asked to write their names, symbols, or first initial on their drawing page, the educator has also integrated emergent writing. If children are drawing from photographs that they have taken of their friends expressing different emotions, the educator has also integrated meaningful use of technology.

Regardless of the curricular approach that an educator takes, it is important to remember that content areas and developmental domains are interconnected. Further, "all subject matter can be taught in ways that are meaningful and engaging for each child" (NAEYC, 2022, p. xxxvi). As with all other principles of child development and learning, this principle crosses the entire age span from infants through children in the primary grades. An effective educator, regardless of the age of children, knows the content areas and developmental domains well enough to support their integration within the curriculum.

Principle 8: Development and Learning Advance When Children Are Challenged

Development and learning advance when children are challenged to achieve at a level just beyond their current mastery and when they have many opportunities to reflect on and practice newly acquired skills. (NAEYC, 2022, p. xxxvi)

This principle introduces the concept of scaffolding. Educators work to challenge children just beyond their current capabilities. The key phrase here is "just beyond." A learning challenge is not so far beyond children's current capabilities that it becomes frustrating, like teaching formal arithmetic to a 1-year-old. And it's not so easy that most children have already mastered it, like teaching the names of primary colors to a 4-year-old. The science of learning refers to this way of teaching as "teaching and scaffolding in the zone of proximal development" (Darling-Hammond et al., 2020, p. 111). The *zone of proximal development* (ZPD) is a term first coined by the Russian developmental theorist, Lev Vygotsky, and refers to the "learning space between what a child can do in a particular area on his or her own and what he or she can do with some assistance from more capable peers, teachers, or others" (Darling-Hammond, 2020, p. 111). Working within each child's ZPD, an effective educator provides experiences and opportunities that are challenging just beyond what they are capable of understanding and then provides the scaffolds needed for the child to succeed (NAEYC, 2022).

What this means is that to teach effectively, educators need to have a strong understanding of each child's current capacities and understandings. Educators "also recognize the potential for implicit bias to lead to lowered expectations, especially for children of color, and actively work to avoid such bias" (NAEYC, 2022, p. xxxvi). Truly understanding each child's level of development, understanding, and cultural assets comes from close observations of children and discussions with families about children's interests, skills, and abilities (NAEYC, 2022). This principle also points to the importance of providing children opportunities for reflection on their learning and many opportunities for practice. The focus on scaffolding for each child recognizes and respects each child's unique set of skills and abilities, regardless of diagnosed disability or extra supports.

Principle 9: Technology and Interactive Media

Used responsibly and intentionally, technology and interactive media can be valuable tools for supporting children's development and learning. (NAEYC, 2022, p. xxxvii)

The final principle acknowledges that children can benefit from intentional integration of technology into the classroom. In the example presented in the discussion of Principle 7, children used technology to take digital photographs of their friends' faces expressing different emotions, using the resulting photographs to draw their own representation of the emotional expression. This is an example of responsible, intentional use of technology. It is seamlessly integrated into the learning and is purposeful. While there are concerns about passive time spent in front of screens and technology used by children under 2 years of age, active use of technology can be beneficial to young children, who live in a highly digital era (NAEYC, 2022). This principle focuses on the importance of technology and interactive media being active, hands-on, and engaging to be considered developmentally appropriate. Technology can be used to facilitate communication with families, for documentation of learning experiences, to support comprehension and communication in multilingual children, and to provide adaptations for children with disabilities (NAEYC, 2022).

Summary

We have spent a considerable amount of time in this chapter discussing these nine principles of child development and learning. Throughout the discussion, we have emphasized the three core tenets of developmentally appropriate practice: an understanding of children's commonalities, differences, and cultural contexts. We hope that you have gained a clear understanding that a simplistic view of child development, as the unfolding of in-born maturation creating commonalities that can be easily defined for each age group, is not possible. Children cannot be understood by knowing their age; it is essential that we understand and respect their cultural contexts and the characteristics that make each child unique.

CHILDREN'S UNIQUENESSES

As we discussed in Principle 4, children in particular age groups tend to share some general characteristics, and waves of developmental progressions exist. Also, there are many variations among children. If we were to create "profiles" of young children we know, we may well find many common characteristics of these ages, but no one profile will exactly describe any one child. Even while falling within the typical range of development, each child possesses a unique blend of attributes that makes them one of a kind. Children are influenced by, and influence, several factors that contribute to their development in unique ways. We will examine three of these factors: brain development, temperament, and disabilities.

Brain Development

As children learn and develop, brain changes occur. Every time something is learned, the brain is changed. Even at birth, there are individual differences in the brains of newborns because each brain has been built in a unique intrauterine environment with unique experiences. (You might be asking yourself now about twins. Yes, even twins experience a unique environment with possibilities for uniquenesses in how their brains were formed.) Once born, each child has different experiences and thus their brains will look different from one another. While there are some general commonalities among brains and how they operate during development, the unique experiences of each individual have created vast differences. This is possible because of the brain's **plasticity**. It's helpful to think of plasticity as malleability or adaptability. The brain is remarkably adaptable.

The rapid development of **neurons**, synapses, and myelinated axons; the evidence on both experience and genes playing a role in brain development; and the potentially lasting effects of adverse experiences on brain development have all helped to underscore just how important the early years

are (National Academies, 2018). Brain development begins in the prenatal period and continues well into a person's third decade of life, but the early childhood years are certainly a sensitive period for many aspects of brain development. First to develop are structures responsible for regulating vital and autonomic functions (such as breathing, heart rate, and digestion); then cognitive, motor, sensory, and perceptual structures; followed by structures responsible for executive functioning and planning (National Academies, 2018). The brain's size increases fourfold during the preschool years and is at 90% of adult size by the age of 6 years (National Academies, 2018). The brain increases in size mainly due to the development of synapses, or connections between neurons, and myelination of these neurons. Myelination is responsible for increasing the speed of connections between neurons, leading to more advanced and smoother functioning of the person in the environment. Brains overconnect in early development and the connections that are not used are pruned away. This pruning process is nothing to fear; it's completely normal and results in more efficient brain function (National Academies, 2018). Children's experiences lead to both synaptogenesis and pruning. In other words, the environment a child experiences helps to develop connections between brain cells and determines which connections are not needed. The connections that are not strengthened by the environment will be eliminated. Again, this process is completely normal. Our brains would be much less efficient if every connection were maintained! Every new skill we see in a child is due to developments in the brain.

We have mentioned before that brains have critical periods for certain functions, where certain environmental input is necessary for appropriate functioning. The brain "expects" these experiences to occur, so critical periods exist only for brain development involving environmental input that every human in the history of humans will have experienced. For example, typical development of the visual system of the brain depends on visual experience during a particular time period (National Academies, 2018). Without visual input, the brain will be incapable of processing sight. The good news is that critical periods exist only for those environmental inputs that every human is expected to experience. Other essential functions have "sensitive periods," that is, a much longer time frame in which they must be experienced for typical brain function to occur. Sensitive periods exist for developing early relationships with caregivers and exposure to language (National Academies, 2018). These sensitive periods tell us a lot about what brains need. The experience of a loving, communicative caregiver within the first few years of life is essential.

The brain also changes due to specific learning that occurs. Each time something new is learned, new synapses and networks are created or strengthened (National Academies, 2018). This process, dependent on the specific skills and abilities learned, occurs throughout life. If you're learning something in the class that is using this textbook, you are changing your brain. However, no learned skill or fact uses only one part of the brain. The brain is all about connection among areas. Further, just like with child development in general, context matters. In fact, "the brain both shapes and is shaped by experience, including opportunities the individual has for cognitive development and social interaction" (National Academies, 2018, p. 59). In these ways, the brain develops differently based on individual experiences, culture, and interpretations (National Academies, 2018).

BRAIN SCIENCE

Neural Development

Just 2 to 3 weeks after conception, the beginnings of the central nervous system are developing in the embryo. The first neurons appear between 5 and 25 weeks, with glial cells developing later in the prenatal period. Both are important in brain structure and function, with neurons playing a starring role because they are the specialized brain cells responsible for brain function. However, glia provide the support and structure for neurons to thrive, so they're important too. We used to think that infants were born with all the neurons they will ever have. Recent advances in neuroscience, however, have demonstrated that new neurons continue to be "born" in certain areas of the brain throughout life, albeit at a much-reduced pace (Moreno-Jiménez et al., 2021). Neurons have three main components: a cell body, dendrites (tree-like branches projecting from the cell body),

and a long projection called an axon. Communication between neurons occurs as one neuron sends a signal through its axon to the dendrites of a receiving neuron. The small space between the axon of one neuron and the dendrites of its partner is called a synapse. Communication between neurons occurs through the release of neurotransmitters at the synapse. In the prenatal period, neurons are generated at a rate as high as 250,000 per minute (Institute of Medicine & National Research Council [IoM & NRC], 2015). Soon after their birth, neurons begin to connect with one another, creating synapses. This process of synapse creation (known as synaptogenesis) begins prenatally and continues well into early childhood. As noted in the main text, synapses are overproduced, with neurons haphazardly connecting with each other at first. This overproduction is followed by a process of pruning that continues through adolescence. Pruning of synapses occurs into adolescence, with neurons dumping connections that are not used. This pruning is necessary for typical intellectual and socioemotional development to take place (IoM & NRC, 2015).

Adult brains work very quickly, and part of the reason for this speed and efficiency is the presence of **myelin**. Myelin is a white, fatty substance that insulates axons and speeds up the rate at which nerve impulses are transmitted from one cell to another (IoM & NRC, 2015). When people refer to *white matter* in the brain, they are talking about myelinated areas. (When you hear the term *gray matter*, it is referring to the dendrites and cell bodies of the neuron.) **Myelination** begins in the prenatal period and extends into emerging adulthood. Different regions of the brain become myelinated at different rates. Brain regions responsible for motor and sensory function are myelinated first, followed by higher level cognitive regions of the brain (Grotheer et al., 2022). As neurons in different regions of the brain become myelinated, sensorimotor, cognitive, and language developments occur (Kaller et al., 2017). When you see an infant, for example, move from jerky, uncoordinated reaching to smoother reaching movements, myelination is likely the reason behind it.

As noted earlier, a sensitive period exists for the development of a relationship with a loving adult. Developing a special bond with at least one significant adult who is positive, responsive, and predictable is important for survival and for healthy brain development. Through experiences with important adults, very young children develop a picture of the world, and most important, they build attachment—that special bond that is intimately linked to safety (George, 2014). When young children do not have such experiences, particularly consistent and predictable care, the template for relationships is impacted. They may never feel fully safe, because they have not developed a strong, trusting relationship with someone on whom they can totally rely. Lack of a strong, secure attachment to at least one caring adult can result in a child living in an uneasy or stressful state because their brain's need for connection early in life was not met (Perry & Szalavitz, 2007).

Early adverse experiences, particularly those that are not tempered by a caring adult, are particularly problematic for the developing brain. Because all brain systems are under construction in the early years, the experience of adverse events, particularly those that lead to strong, frequent, or prolonged activation of the stress response system, can have enduring effects (Shonkoff et al., 2021). Toxic stress experienced early in life leads to "enduring modifications in brain structure and function with lifelong consequences" (Shonkoff et al., 2021, p. 117). Because brains are built from the bottom up and there are complex interconnections between "lower" brain areas and the cortex, adverse experiences occurring prenatally or early in development can have major impacts on an individual throughout life (IoM & NRC, 2015). Thankfully, more is being learned about the buffering effects of a positive relationship, showing that strong relational health despite the experience of adverse events, positively influences children's outcomes (Hambrick et al., 2021). Even when a child's primary caregiver is the source of toxic stress, a strong relationship with another caring adult, such as an early childhood educator, can have a positive impact on child outcomes.

Temperament

Children's unique temperaments are another source of individual variation among children. **Temperament** is thought to be a relatively stable set of characteristics that is at least partly inborn. Temperament is comprised of variations in "attention, motor skill, emotional reactivity, and self-regulation" (Bornstein et al., 2019). Despite being biologically based, temperament is impacted by experience and open to influence. For example, a child who is highly reactive but has parents who are sensitive and warm will show less

reactivity over time; conversely, parents who exhibit harsh and controlling practices have children with increased negative reactivity (Bornstein et al., 2019). Thus, although research shows that temperament is quite stable across early childhood, it can be influenced by the environment (Brophy-Herb et al., 2019; Dalimonte-Merckling & Brophy-Herb, 2019). Temperament is conceptualized in a variety of ways, with some researchers identifying groups of characteristics and others focusing on individual components. A classic study identified three different groupings of temperament, "easy," "difficult," and "slow-to-warm-up" (Thomas & Chess, 1977). Children with an easy temperament have a moderate activity level, predictable schedule of sleeping and eating, and a positive attitude toward and curiosity in new experiences. Children with difficult temperaments are more irritable, unpredictable, and difficult to soothe. Finally, children who are slow-to-warm up are wary of new situations and people (Thomas & Chess, 1977).

Temperament influences children's capacity for self-regulation and their behavior in group settings such as school and child care (Séguin & MacDonald, 2018). Children with difficult temperaments have trouble with emotion regulation and struggle with positive peer relationships (Séguin & MacDonald, 2018). It is essential that educators help children learn prosocial skills through explicit emotion socialization practices, as children experiencing such practices have more optimal self-regulation, regardless of temperament (Brophy-Herb et al., 2019). An intervention study designed to help educators become more emotionally available and capable of interacting appropriately with children with different temperaments found that such training had a positive impact on children's ability to focus their attention and to suppress inappropriate behavior (Harkoma et al., 2021). Educators prepared to assist children by offering co-regulation strategies help children develop strategies to manage stress. Finally, another recent study found that a combination of both free play and educator-scaffolded ("guided") play in preschool led to fewer externalizing behaviors in school for children who were emotionally reactive (Wilhelmsen et al., 2021). All this research on temperament suggests that educators who understand the principles of child development and learning and develop aligned developmentally appropriate practices will effectively support children with varying temperaments.

Disabilities

The principles of child development and learning in NAEYC's (2022) position statement on developmentally appropriate practice apply to all children. Children are met where they are, and educators design learning experiences that challenge just beyond the child's existing abilities, focusing on each child's funds of knowledge and cultural assets. In short, developmentally appropriate practice supports the rights of all children to effective and engaging learning environments. Some children have disabilities or developmental delays, and these differences are but one component of the rich diversity that children bring to early childhood programs. When educators focus on the strengths of each child and design learning experiences appropriate to their current level, all children benefit.

When children have a disability, they have the legal right to accommodations that support their ability to participate as an active member of the learning community. These accommodations may be related to communication, behavior, physical supports, and many other possibilities. Educators will work with early childhood special educators, early interventionists, and other professionals to implement supportive accommodations. For example, a child who is **neurodiverse** may need the support of flexible seating and the ability to move to learn most effectively. These accommodations are provided for the child and may also benefit children who are neurotypical, so early childhood educators make available many different types of seats from which children can choose rather than having one special seat for one child. Sometimes children have specialized equipment that cannot be shared in the learning environment. In this case, effective educators discuss this equipment with the children in a matter-of-fact way. "Leticia uses crutches to move around. They help her to move her body" or "Daniel uses a computer to help him communicate. Without that computer, we would have a harder time understanding what he wants to say." When children see diversity in abilities as difference rather than as a deficiency, an equitable learning community is created.

Laws Supporting the Rights of Children With Disabilities

Not long ago, children with disabilities were not provided access to education, or if they were, it was education separate from "typically developing" children. After years of advocacy by parents, laws were

passed in the United States that support the rights of children with disabilities to an equal educational experience. In 1975, Public Law 94-142 (Education for All Handicapped Children Act) was passed to ensure a "free and appropriate public education" for all children with disabilities between the ages of 3 and 21. As part of this law, programs are required to seek the input and involvement of parents, in part articulated through an **Individualized Education Program (IEP)**. The IEP is developed by a team that includes educators, specialized professionals, and the parents.

A decade later, in 1986, Public Law 99-457 (the Education of the Handicapped Act Amendments) added provisions for children from birth to age 3. Specifically, what was referred to as Part H of this law addresses the needs of infants and toddlers with disabilities. It calls for services for children under 3 who are experiencing or are at risk for **developmental delays** and requires an **Individualized Family Service Plan (IFSP)** for the child and family, developed by a transdisciplinary team. Public Law 101-476, the Individuals with Disabilities Education Act (IDEA), was passed in 1990, reauthorizing the earlier laws but reflecting a change in philosophy away from labeling children as "handicapped" and referring to them instead as "individuals with disabilities." In 1997, this law was further amended to provide comprehensive services for infants and toddlers (Part C) and preschoolers (Part B).

Finally, Public Law 101-336, the Americans with Disabilities Act (ADA), was passed in 1990, assuring all individuals with disabilities, including children, full civil rights, including appropriate accommodations in child care and preschool programs (Cook et al., 2015). These laws came into being because of the commitment, dedication, and hard work of parents and professionals whose advocacy eventually led to legal rights of children with disabilities who, too often, were excluded from the educational system (Deiner, 2010).

Inclusion

One of the provisions of Public Law 94-142 is that children with disabilities be served in the **least restrictive environment**. This means they should be placed in programs that are as close as possible to settings designed for children without disabilities while remaining appropriate for their unique needs (Allen & Cowdery, 2014; Cook et al., 2015; Winter, 2007). "Inclusion is not merely a place, or an instructional strategy, or a curriculum; it is about belonging, being valued, and having choices" (Allen & Cowdery, 2014, p. 3). This concept has led to the expansion of inclusion—the integration of children with disabilities into programs serving children without disabilities. Inclusion is certainly not new, having informally been part of many early childhood programs throughout the past century and more formally incorporated over the past several decades into Head Start programs (Cook et al., 2015).

An inclusive program is founded on the premise that young children, both those with and those without a disability, are much more similar than they are different. Children with disabilities benefit from a good inclusion program by experiencing success in a variety of developmentally appropriate activities, through contact with age-mates who can be both models and friends, and by exposure to the many opportunities for informal incidental learning that take place in all early childhood programs (Deiner, 2010). At the same time, children without disabilities benefit from inclusion by learning that children who are in some way different from them nonetheless share far more commonalities than differences. An increasing number of young children with disabilities are enrolled in early childhood programs (Cook et al., 2015).

Although inclusion has many potential benefits, the benefits do not happen automatically. In other words, inclusion does not simply mean enrolling children with disabilities in an early childhood program. Careful planning, preparation, modification, evaluation, and support are necessary for successful inclusion. Early childhood educators, because they know a great deal about children and how best to work with them, have the skills needed for working with children with disabilities. Learning some additional skills and working with allied professionals may be necessary. Educators with an equity

Many children with disabilities are effectively included in early childhood programs. The educator may work individually with the child in some activities, but the child is a part of the group in most or all aspects of the program.

kali9/E+/Getty Images

lens recognize that individualized planning for full inclusion of all children supports children's rights and may need to work through any doubts they have about their own abilities to support each and every child's learning.

Children with a variety of disabilities are part of inclusive early childhood programs.

Ariel Skelley/Photodisc/Getty Images

One of the keys to successful inclusion is to view each and every child as an individual with unique characteristics and strengths. This involves an attitude that sees a child, not a child with Down syndrome or a child who is blind or a child who stutters. For example, Ted may have Down syndrome, but he loves to paint, enjoys listening to stories at group time, and gives terrific hugs. Similarly, Noni's visual impairment does not diminish her enjoyment of the sand table, her budding friendship with Carlos, or her ability to make others laugh through her language play. And Manuel, while often tripping over words, can throw and catch a ball accurately. Many times, he is the one who notices a colorful butterfly passing or the first buds of spring, and he has a totally winning smile. Working with a group of children means recognizing, encouraging, and building on each child's strengths.

STORIES FROM THE FIELD

Educator and Researcher

Growing up with two working parents meant that I spent a significant amount of time in child care centers during my formative years. My time spent in child care centers would later ignite my passion for education and my dreams of becoming a teacher. I remember in fourth grade declaring my career path and maintaining this vision throughout high school. My goals, values, and beliefs that brought me to early childhood education and human development and family science in my collegiate role, began to expand in ways unimagined.

I became enamored with the learning that went on in the early childhood developmental stage. From a developmental science perspective, I concluded that early childhood education was just as essential as elementary schooling. After becoming an early childhood teacher, it quickly became clear that developmental outcomes were not at the forefront of for-profit child care goals and standards. This realization propelled me into research and program exploration. I found that, although important to me, local regulations do not require experience, background, or education in the field. To address this gap in practice and policy, I have continued my education in a doctoral program that allows me to examine informed and attentive system models and child developmental outcomes.

Tawni Parrish, Human Development & Family Science Ph.D. Student, ECE Researcher

What is known in the research is that, more often than not, adults and policymakers want what is best for a child. A lot of great research aims to respond to the gap between practice and policy to provide direction for the field to advance. As educators, how do we do that? We begin to accept the child as an individual with unique needs, understandings, and abilities to learn. This is one of the main principles of child development that I find important in early childhood education. Although it is one principle, it is multifaceted in that multiple areas of development exist, including physical, socioemotional, cognitive, and the concept of self.

Infants and children are not passive, moldable lumps that adults shape and form. Children are active explorers and have a bidirectional relationship with their environment, through which they manipulate, learn, and explore the environments and people around them. Children are also social learners, and modeling and scaffolding are essential parts of being an early childhood teacher. Additionally, we know that consistent interactions and conversations with infants promote both attachment bonds as well as language and cognitive development, so I ensure I am always at the child's level and engaging and narrating activities and play.

It is also important for me to recognize cultural considerations for infants and children as identity development is at the forefront of growth. I prioritize cultural sensitivity through the classroom environment, curriculum-planned activities, and consistent interactions with families. A classroom should have materials and activities that represent all students in the classroom. I ensure that there are culturally diverse books, toys, and materials (e.g., art supplies) that are representative of different groups and experiences, including accounting for my current class makeup. I engage in developmentally appropriate discussions about racial and cultural topics, and children are encouraged to ask natural questions that emerge. Addressing race and culture, rather than shutting down inquisitions that are natural at the early childhood level, sets a precedent for future racial socialization in that we can help shape early perceptions of race in a culturally aware way.

Teaching and shaping young minds is much more than "watching" children and developing lesson plans. Early childhood educators have the potential to supplement and aid cognitive, social, and emotional development, and they hold a unique role in that many children are at a stage where the effects of external factors or experiences can be mitigated. Educators can provide a safe space where children can learn and experience sensitive, safe care from trustworthy adults. This mindset allows challenging behaviors or helping children to regulate and address their emotions to become opportunities for connection and growth.

I hope that my work in academia and my work with children set a foundation for the children to build upon. I know that my research aims to reduce harm, and my presence in the classroom is an experience that provides appropriate, safe, effective learning, and positive relationship-building for each of my students. I use science and research to back up a lot of my practices and expectations to make developmental science more accessible to other providers and professionals, as well as families.

WORKING WITH FAMILIES OF YOUNG CHILDREN

All families need support, understanding, and reassurance. Parenting can be an incredibly challenging job, and many families have serious questions about their children's development. They may well share their fears about some aspect of their child's abilities or behavior, questioning whether it is "normal." Families may also use their opportunity to see other children in the early childhood environment as a basis for comparison to their own child's abilities, wondering why some of the children in the class have mastered a specific developmental task while their child has not yet reached that milestone. Early childhood educators, who have a good grasp of child development principles and the unique developmental trajectory of each child, are in a good position to calm the family's fears or, if appropriate, to refer the family to a community professional for further assessment.

Effective educators recognize that a family with a child with disabilities must make adjustments that could change the family dramatically. They also recognize that each family reacts differently to having a child with a disability. Many variables influence the family's adjustment, including personal characteristics of all family members, coping skills of the family members, extra demands placed on the family, added expenses of medical treatment, crises associated with the child's disability, fatigue, and many others. Educators help families adjust when they focus on each child's individual strengths and support all children's development and learning. They also serve as advocates for the child by knowing the laws that provide specific rights to parents and individualized interventions to children.

In addition to such legally mandated involvement of families of children with disabilities, families should be included and supported in many other ways. Exchange of relevant information between educators and families will help both to better understand and work with the child. The program's philosophy of focusing on commonalities rather than on differences among children should also provide support for families. By recognizing the unique strengths of each family, educators can be the best

possible resource by listening sensitively and openly, offering practical recommendations and support, and helping to maximize each child's potential (NAEYC, 2022).

Working with families regarding their children is a challenging aspect of being an early childhood educator and can be even more challenging when educators and families have different cultural backgrounds and other aspects of social identity. Learning about each individual family is essential so that educators can develop "reciprocal, respectful relationships that foster linguistic and cultural knowledge and support diversity in all forms" (Reyes et al., 2021, p. 70). We will discuss the importance of developing partnerships with families in Chapter 3. For now, keep in mind that, when talking with families about children, it is important to focus on strengths and use **asset-based** rather than deficit-based language. An asset-based approach acknowledges families' strengths. For example, linguistic diversity is a strength that should be supported rather than viewed as a deficit. It is easy to become judgmental of families and their home practices, as early childhood educators have a rich knowledge base about child development and may think they know best what a particular child needs. While it is fine to share this knowledge and advice when it is solicited, it is essential that we maintain the perspective that families know their child best and have rich linguistic and cultural practices steeped in history. Rather than judgment, families should be met with curiosity and a listening stance.

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SUMMARY

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Principles of Child Development and Learning

Learning Objective 2.1 Summarize each of the nine principles of child development and learning and recognize examples of each principle.

The nine principles of child development and learning are as follows:

1. Development and learning are dynamic processes.

2. All domains of child development are important.

3. Play promotes joyful learning.

4. Variations due to cultural contexts, experiences, and individual differences matter.

5. Children are active learners.

6. Children's motivation to learn improves when the environment fosters belonging, purpose, and agency.

7. Children learn in an integrated fashion across subject areas.

8. Development and learning advance when educators provide scaffolding.

9. Technology and interactive media can be valuable tools to support development and learning when used appropriately.

Children's Uniquenesses

Learning Objective 2.2 Explain the three factors that contribute to children's uniquenesses.

There are many factors that contribute to the wonderful diversity among children, including brain development, temperament, and disabilities. Specific legislation exists to ensure the rights of young children with disabilities to be supported and to participate in educational settings that are minimally restrictive.

Working With Families of Young Children

Learning Objective 2.3 Describe what factors early childhood educators should consider in their interactions with families.

All families of young children appreciate the feedback and reassurance they receive from early childhood educators. Families with children who have special challenges in particular benefit from

the support of knowledgeable early childhood educators. It is essential to maintain an asset-based approach when working with families.

KEY TERMS

asset-based approach

developmental delay

Individualized Education Program (IEP)

Individualized Family Service Plan (IFSP)

intrinsic motivation

least restrictive environment

myelin

myelination

neurons

neurodiverse

plasticity

rough-and-tumble play

scaffolding

self-efficacy

temperament

toxic stress

APPLICATION

1. Observe several children of the same age. These might be children you work with and know well or children that you are observing for the first time. What characteristics do they share? How are they similar? Can you draw any inferences about children of that age?

2. As you observe children, pay close attention to the differences they exhibit. What characteristics make them unique? How are they different? What might an educator need to do to support each child's strengths?

3. Observe a group of young children at play. Look for examples of the various types of play discussed in this chapter. Do you see examples of free play, guided play, and games?

ADDITIONAL RESOURCES

Here are select additional books and articles on topics discussed in Chapter 2.

Darling-Hammond, L., Flook, L., Cook-Harvey, C., Barron, B., & Osher, D. (2020). Implications for educational practice of the science of learning and development. Applied *Developmental Science, 24*(2), 97–140. https://doi.org/10.1080/10888691.2018.1537791

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