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# A History of Early Childhood Special Education

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The field of Early Childhood Special Education (ECSE) is relatively new. It emerged from early childhood education (ECE) and special education and has been influenced by psychology, child development, sociology, health sciences, and many other fields. A complete history of ECSE would fill many volumes. Instead of providing a complete history, the purpose of this chapter is to provide an overview of major events that have impacted services for young children with disabilities and their families including major influences from policy and legislation, the establishment and influence of the professional organization for ECSE – the Division for Early Childhood, and the application of advances in research to services for children and families.

## Early Services for Young Children

The field of ECSE today is closely linked to the field of ECE. Services for both typically developing young children and young children with disabilities, however, were relatively late to be established in our country. Among the earliest developments in ECE in the USA was the establishment of kindergartens with the goal of supporting social and emotional readiness for formal schooling. The idea of providing programs for very young children had originated in Europe before making its way to the USA. The first kindergarten in the USA was founded in Watertown, Wisconsin, in 1856, and the language spoken in this kindergarten was German (Watertown Historical Society, 2014). In 1873, the first public kindergarten was established in St. Louis. By 1883, every public school in St. Louis had a kindergarten classroom. The women's suffrage movement in the early 1900s brought other forms of ECE programs. Nursery schools were established primarily by and for middle-class families. They focused on education and social-emotional development of young children and served as informational resources for parents (Peterson, 1987).

As theories of child development advanced, efforts grew to show effective ways of teaching young children. In the 1920s, the National Association of Nursery School Educators was founded. In 1927, the National Committee on

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Nursery Schools recommended a 4-year college degree for nursery school teachers (Darragh, 2010).

In the 1930s and 1940s, the Great Depression created high unemployment and with World War II came the need for women to work outside the home to fill jobs left by men in the military. The Works Progress Administration (WPA) in 1933 supported nursery schools so that out-of-work teachers could have jobs. The federal government provided funding for childcare so that women could work in war-related industries (Bauer, Johnson, Ulrich, Denno, & Carr, 1998). Interest in ECE and the availability of ECE settings continued to evolve with the women's equity movement. The Equal Pay Act of 1963 and Titles VII and IX of the Civil Rights Act of 1964 ushered in federal equal rights for women and girls in education and employment as well as a growth in childcare opportunities (Darragh, 2010).

While ECE began to flourish, however, young children with disabilities received little attention (Peterson, 1987). We all remember stories from the middle of the twentieth century of a mother who stayed at home year after year, caring for her child who had become disabled during a difficult birth, or another mother, almost in secret, helping her child with Down syndrome learn to walk and say a few words. These parents and many others, along with their family members, often argued with their physicians and others to simply be able to keep their child in the family home rather than place their child in an institution.

During this time, almost all public schools denied an education to children with disabilities, and families were turned away from the schools even when their child turned school age. Many families didn't try to enroll their child in school because they knew the child would be refused services. Some families with babies and preschoolers, though, began to gather in private homes, church basements, empty public spaces, and sometimes in specialty clinics. What they were doing didn't have a name yet, but mothers, fathers, and a few professionals and advocates began to insist that children with disabilities be allowed to live at home rather than in an institution and that services be provided. Parents played essential roles in the creation of advocacy organizations such as United Cerebral Palsy, Easter Seals, and The Arc. The Council for Exceptional Children (CEC) was founded in 1922 as a meeting place for those interested in "special children" and to establish professional teaching standards (Kode, 2002). These organizations sponsored programs that provided services and supports to children and families while they pushed for advances in research, public policy, and access to public schools.

What did the early supports and services for the youngest children look like? Teachers and therapists learned on the job. They did what seemed to work. Over time, child development and rehabilitation research began to inform their practice. As a result of these early efforts, the last half of the twentieth century became an exciting period of advances for young children with disabilities and their families.

## Federal and State Policy

Evolving federal and state policy has improved the field of ECSE and services for young children with special needs and their families. The early objective of federal policy was the stimulation of local services and model practices to improve outcomes for children living in poverty and children with disabilities (Hebbeler, Smith, & Black, 1991). Hebbeler and colleagues described the early period (prior to 1974) as a model for "purposeful improvement of services" through federal policy (p. 105).

## Head Start

Head Start is part of the legacy of President Lyndon Johnson's War on Poverty. In October 1964, the Congress passed and President Johnson signed the Economic Opportunity Act. When R. Sargent Shriver was appointed to lead the War on Poverty, he soon recognized that an essential component of this effort must focus on young children living in poverty and their families. He convened a group of academic leaders and civil rights activists and directed them to identify the means to "break the cycle of poverty." They outlined the need for a comprehensive early education program for young children in low-income families to meet their emotional, social, health, nutritional, and psychological needs. Head Start was launched.

Head Start began as an 8-week summer program in 1965, serving over a half million children. It soon became clear that a summer program prior to kindergarten was not sufficient to achieve kindergarten readiness for the children. Head Start has grown and expanded over the years to become a school year program for 3- and 4-year-old children.

In 1972, legislation was enacted that mandated that at least 10 % of the national enrollment of Head Start consist of children with disabilities. Thus, Head Start became the major public early childhood program providing inclusive services at that time.

## Education Funds for Children with Disabilities

In 1965, in the interest of improving the lives and outcomes of young children with disabilities, the Congress, under P.L. 89-313, the 1965 amendments to the Elementary and Secondary Education Act (ESEA), provided for payments to states for educational services in state-operated programs for children with disabilities, birth through age 20.

## Handicapped Children's Early Education Program

In 1968, P.L. 90-538 established the Handicapped Children's Early Education Program (HCEEP), a momentous event for ECSE. Enacted by the Congress, it was aimed at discovering new and better approaches to working with young children with disabilities. In passing this legislation, the Congress recognized that one reason there were so few services for young children with disabilities was the shortage of effective models of programs. HCEEP was the first federal education program focused entirely on young children with disabilities. This legislation authorized the Commissioner of Education, through the Bureau for the Education of the Handicapped (BEH) in the Office of Education, to award funds for "experimental preschool and early education programs for handicapped children which show promise of promoting a comprehensive and strengthened approach to the special problems of such children" [Sec. 2 (a)].

In addition to research, the HCEEP initiative was seen as "seed money" to stimulate model programs. The US Representative Carl Perkins described the intent as "…a model demonstration program not as a service program; however, programs that show promise of providing meaningful answers for the education of handicapped children should at the appropriate time be evaluated for permanent legislative approval" (Roy Littlejohn Associates, 1982, p. 1). BEH funded the first 24 demonstration projects in 1969-1970. DeWeerd and Cole (1976) reported that by the mid-1970s, there was at least one HCEEP project in every state, and by 1975, 20,000 young children with disabilities and their families were served either directly or through collaboration. HCEEP also collaborated with the Office of Child Development in providing specialized help for children with disabilities in Head Start (DeWeerd & Cole, 1976).

Some of the early demonstration projects were the University of Washington Down Syndrome Project, the Portage Project in Wisconsin serving rural areas, and the Rutland Center at the University of Georgia at Athens serving young children with emotional disabilities. The Regional Intervention Program (RIP) in Nashville, Tennessee, first funded by HCEEP in 1969, has served families of young children with severe challenging behavior since then and continues to expand services to other states and countries. Since 1974, 27 certified RIP programs have been established in 24 communities in Tennessee, Connecticut, Ohio, Washington, Kentucky, Iowa, Canada, Brazil, and Venezuela.

The body of research, demonstration programs, scientific literature, and a national network of advocates that resulted from the HCEEP program led to (a) widespread awareness of the effects of early intervention; (b) advocacy groups that included family members, researchers, and service providers; and (c) ECSE teacher certification programs established at universities across the nation. This network of scientists, family members, university faculty, and service providers created a groundswell of interest in ECSE that resulted in a national multipronged trend toward state policies and state and local services.

## Education of the Handicapped Act

In 1970, the Congress passed P.L. 91-230, which consolidated several small programs related to educating children with disabilities into one legislative authority, the Education of the Handicapped Act (EHA). This law provided grants to states for the education of handicapped children at the preschool, elementary school, and secondary school level. Funds could be used for the identification and assessment of children under the age of 3 years. EHA continued the legacy of P.L. 89-313 in the use of federal funds to provide and expand services for young children with disabilities. EHA also provided funding for research and development in effective educational services and practices including a broad research program as well as the HCEEP program. In 1983, outreach projects were funded to disseminate the innovative models from the demonstration projects to states and localities with the goal of implementing the effective models on a large scale and with state and local resources.

## Equal Protection Court Cases

While HCEEP helped develop the knowledge base for ECSE, other important sociopolitical events were happening. By the mid-1970s, it was estimated that one million school-aged children with disabilities were not receiving an education (Weintraub & Abeson, 1976). Building on the 1954 Supreme Court ruling in *Brown vs. Board of Education* which established a right to equal education for all children regardless of race, several other court cases and policies advanced the right to education for children with disabilities (Table 1.1).

**Table 1.1** Timeline of events

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|---|---|
| 1856 | The first kindergarten in the USA opens in Watertown, Wisconsin |
| 1920s | The National Association of Nursery School Educators is founded |
| 1922 | The Council for Exceptional Children is founded |
| 1939 | Skeels and Dye demonstrate changes in the cognitive development of children as a result of a change in environment |
| 1965 | Head Start begins as an 8-week summer program for young children growing up in poverty |
| 1968 | Handicapped Children's Early Education Program (HCEEP) is established to develop experimental preschool programs for children with disabilities |
| 1971 | *Pennsylvania Association for Retarded Children vs. Commonwealth of Pennsylvania* lawsuit establishes the right to an education for all school-age children with mental retardation |
| 1972 | Head Start mandates 10 % of openings in Head Start should be for children with disabilities |
| 1973 | The Division for Early Childhood is established as a division of the Council for Exceptional Children and serves as the professional organization for Early Childhood Special Education |
| 1975 | P.L. 94-142 mandates services for all school-aged children with disabilities and is permissive for services for children with disabilities from birth |
| 1986 | P.L. 99-457 mandates services for all preschool children with disabilities and provides incentives for serving children from birth |
| 1988 | All states opt to participate in the birth-to-three option |

In 1971, the landmark *Pennsylvania Association for Retarded Children vs. Commonwealth of Pennsylvania* lawsuit established the right to an education for all school-age children with mental retardation. In 1972, in *Mills vs. Board of Education*, the court in the District of Columbia established the right to an education for all children with disabilities of school age. These court cases ruled that under the equal protection clause of the 14th Amendment to the US Constitution, if education is provided by the state to one group, it must be provided to all (Smith & Rous, 2011). Soon, through state legislation and other court cases, children with disabilities were winning the right to an education; to due process during important decisions such as assessment, diagnosis, and placement in special education; and to services provided in the "least restrictive environment."

## Education for All Handicapped Children Act of 1975

In 1975, the Congress passed the landmark federal policy for the education of children with disabilities, ages 3–21. Building on the requirements in the ESEA Amendments passed in 1974, which required states to plan for educating all children with disabilities and plan for providing education within the least restrictive environment, the EHA was amended, creating the Education for All Handicapped Children Act of 1975 (P.L. 94-142), which established a free appropriate public education (FAPE) by September 1, 1980 for all eligible 3–21-year-old children and students with disabilities. This new law was voluntary for states but required that if a state applied for and accepted funding under the law, it must ensure a free, appropriate public education to all children with disabilities, ages 6–18, in the least restrictive environment and according to a written Individualized Education Program (IEP).

However, P.L. 94-142 contained a provision limiting the "mandate" to children 3–5 and 18–21 years of age. The provision read: "except that, with respect to handicapped children aged 3–5 and 18–21, inclusive, the requirements… shall not be applied… if such requirements would be inconsistent with state law or practice, or the order of any court, respecting public education within such age groups in the state" [Sec. 612 (2) (B)].

Thus, unless state policy provided public education for children 3–5 or 18–21, the state did not have to provide it for children with disabilities in the age range. Most states did not provide public education to children 3–5. Therefore, P.L. 94-142 did not actually require states to serve very young children. However, it did provide financial incentives to states to provide preschool education to children with disabilities younger than age six through preschool incentive grants.

## State Implementation Grants

In 1976, BEH created the first grant program directed toward state planning for the expansion of services for young children with disabilities, the State Implementation Grants (SIGs). SIGs were awarded competitively to states and supported state activities such as conducting need assessments, convening planning groups, developing plans to disseminate research findings and information about effective services and models, providing personnel development, and developing program and personnel standards and guidelines and data collection (Roy Littlejohn Associates, 1982).

By 1984, 43 states and territories had received SIG awards. SIGs had several outcomes, including development of state capacity to initiate planning and creation of structure for state services. States indicated that the SIGs were crucial to this capacity building (Hebbeler et al., 1991; U.S. Department of Education, 1984).

## Research Institutes

In 1977, BEH created research institutes within HCEEP. Between 1977 and 1990, 14 research institutes on early childhood services for young children with disabilities and their families were funded. The research institute initiative provided practices and knowledge in areas such as home-based services, inclusive/typical classroom services, instructional practices, assessment practices, and methods of identifying and intervening with children at risk for disability. Also, through support of graduate students, the number of ECSE researchers in the field was increased.

In 1984, based on research findings on the efficacy of early intervention services and the social value of supporting families and children, and building on the state capacity-building work under SIGs, the Congress established a new program under HCEEP, P.L. 98-199, providing federal funds to states for planning, developing, and implementing statewide services for children with disabilities birth to 5 years. Again, this was not a mandate, but an incentive program states could apply for and thus continue expansion of state policy for comprehensive services. It also served as a notice to states that the next step in this policy evolution would likely be a requirement to serve young children with disabilities as a condition of continued federal funding under EHA. In 1984, about half of the states had public policies for providing education services to some portion of the population of young children with disabilities, ages 3–5, with ten states providing some services from birth (Smith, 1988). P.L. 94-142 had opened the possibility for publicly funded encouragement to explore ways to organize the services as well as a research base on which to base the profession and the work.

## Landmark Legislation in 1986: P.L. 99-457

In 1986, the landmark early childhood legislation for young children with disabilities and their families was passed. Building on federal and state policy efforts, and based on an accumulation of the federally funded efficacy research and development of effective practices and services under HCEEP, the Congress, under the leadership of Senator Lowell Weicker and Representative Pat Williams, passed, P.L. 99-457, the EHA Amendments of 1986.

These amendments created Part B, Section 619 for preschool-aged children with disabilities and Part H (now known as Part C) for infants and toddlers with disabilities. This law required states to lower the age from 6 to 3 for a FAPE under Part B. It also established a voluntary early intervention program of services for children with disabilities or at risk for disabilities from birth through age two under Part H.

A unique and important feature of Part H was that the state could select the "lead agency" at the state level to implement the program. Previously, all services under EHA had been delivered by state education agencies. In doing this, the Congress responded to requests from states to allow for state identification of a lead agency for services to the birth-three age group as these services had been historically provided by a variety of agencies including health and education.

Robert Silverstein, a Congressional staff person involved in the writing of P.L. 99-457, gave a speech in 1988 (Silverstein, 1989) in which he talked about how findings from the HCEEP program helped to lay a foundation for the passage of P.L. 99-457. Silverstein said: "Studies of the effectiveness of preschool education for the handicapped have demonstrated beyond doubt the economic and educational benefits of programs for young handicapped children. In addition the studies have shown the earlier intervention is started, the greater is the ultimate dollar savings and the higher is the rate of educational attainment by these handicapped children" (p. 10).

It is clear that a policy requiring states, as a condition of funding, to provide services to all eligible young children with disabilities was built upon an evolution of policies that first provided funding for research into effective services and then provided incentives to states to provide services.

## Services After P.L. 99-457

The passage of P.L. 99-457 was followed by a flurry of activity as states established systems of services for infants and toddlers and their families and expanded services to preschoolers in order to meet the requirements of the new law. In 1985, the year before the passage of P.L. 99-457, only six states were serving children with disabilities across all disability conditions from birth, one was serving children with disabilities from age two, and 11 states were serving children with disabilities from age three (U.S. Department of Education, 1985). By 1988, all states had opted to participate in the new "Part H" program (Smith, 1988).

P.L. 99-457 impacted more than just the public schools and other agencies who would be providing services to infants, toddlers, and preschoolers with disabilities. Many states had no teacher certification for the new service area of ECSE and, even more challenging, no teacher preparation programs. In addition, related service areas such as speech-language pathology, occupational therapy, and physical therapy realized a need for additional training relative to serving young children and working with families. School psychologists and social workers also needed additional training to appropriately determine eligibility and provide services. In summary, many professionals needed additional training, and many services needed to be established. Fortunately, due to programs like HCEEP, information did exist relative to effective service delivery models.

## Current Federal and State and Policy

In the decade following the passage of P.L. 99-457, attention was focused on the state policies needed to implement the new early intervention and preschool requirements. As noted earlier, in 1984 only about half of the states had any ECSE policies for children ages 3–5 with disabilities. Even fewer had policies regarding serving children birth to three (Smith, 1988).

While P.L. 99-457 was initially voluntary for states, once a state applied for funding, they had to meet all the requirements for all children birth to five. By 1988, all states had opted to participate and had applied for funding assuring that within 5 years, services would be available to all eligible infants, toddlers, and preschoolers (Smith, 1988). Since P.L. 99-457 was passed, there have been few major federal initiatives in the early intervention arena other than attempts to gain adequate funding for current initiatives. A primary exception is that Early Head Start was established in 1995 for birth to 3-year-olds and contains the same 10 % enrollment of children with disabilities requirements as the Head Start program for 3- to 5-year-old children.

In 1990, the EHA was reauthorized and renamed the Individuals with Disabilities Education Act (IDEA). Another major milestone in 1990 was the passage of the Americans with Disabilities Act (ADA). These two legislative initiatives underscored the social value that people with disabilities are "people first" and that policy should reflect this value through "people-first" language. Thus, both IDEA and ADA incorporate people-first language (e.g., "individuals with disabilities" and "Americans with disabilities" rather than "disabled individuals" or "disabled Americans"). While the ADA is not early childhood legislation, per se, it bans discrimination in public services such as childcare and other early childhood settings. Many children with disabilities have gained the right to natural settings and environments through the ADA.

HCEEP had been reauthorized by P.L. 99-457 in 1986 and renamed the Early Education Program for Children with Disabilities (EEPCD). In the mid-1990s, the Clinton administration's reinventing government initiative to reduce the budget and size of the federal government led to the repeal of several programs, one of which was EEPCD. In his speech unveiling the initiative, President Clinton said the purpose of the initiative was "to bring about greater efficiency and lower cost of Government" (Clinton, 1993). The repeal of EEPCD left the country without a federal program solely dedicated to funding ECSE research and development. Research and development has traditionally been seen as an appropriate role of the federal government as it benefits all states.

In 2002, the Education Sciences Reform Act, P.L. 107-279, was passed with the intention of strengthening research in education by creating an independent research arm of the US Department of Education (Kuenzi & Stoll, 2014). The Institute of Education Sciences (IES) was established as the source of funding for research in the Department of Education. The Education Sciences Reform Act directed IES to support research involving experimental designs using random assignment (randomized clinical trials) for efficacy studies (Snyder, 2011). Research in special education was not initially supported through IES but was added in 2004 when the National Center for Special Education Research (NCSER) was established through the reauthorization of IDEA (P.L. 108-446). Research was no longer funded under IDEA. In 2006, NCSER began funding research in early intervention and early learning for children with disabilities.

A number of amendments to IDEA have refined some of the early childhood provisions. The Congress passed the most recent amendments in December 2004, with final regulations published in August 2006 (Part B for school-aged children) and in September 2011 (Part C, for infants and toddlers) (Smith & Rous, 2011). Funding for IDEA and Head Start has increased over the years, but the federal funding for both programs remains insufficient to appropriately serve all eligible children.

## A Professional Organization

As policy supporting services for young children and their families began to move to the forefront of both federal and state government agendas, another movement that would greatly influence the field was also beginning: a professional organization for ECSE within the CEC.

The task of establishing a new division was not easy. The initial proposal to the CEC governing board to establish a division for young children was not successful; the board decided against adding another division. At the time, CEC's existing divisions represented separate categories of disability, for example, the Division of Visual Impairments and Deaf-Blindness; the Division of Physical, Health and Multiple Disabilities; and the Division of Communicative Disorders and Deafness. Rose Engel, then chairperson of CEC's Early Childhood Education Committee, believed strongly that a division for young children should be non-categorical rather than divided along categorical lines.

In spite of the fact that they had been turned down initially, the DEC founders would not give up. A group led by Eileen Allen set up a pro-DEC booth at the next CEC conference—without the authorization of CEC. The booth was staffed for 3 days by volunteers from HCEEP projects who handed out materials and lobbied conference goers about the need for a Division for Early Childhood (DEC). The exact reason behind CEC's change of heart is not clear; however, what *is* certain is that in 1973, the Board of Governors of the CEC approved a tenth division—the DEC.

The fledgling division moved quickly to establish services for its members. In 1974, the first issue of the newsletter, the *DEC Communicator*, was published. The first DEC subdivision was established in Minnesota in 1974, and the first issue of the research journal, the *Journal of the Division for Early Childhood* (later renamed the *Journal for Early Intervention*), was published in 1978 under the editorship of Merle Karnes. In 1980, DEC and the Office of Special Education Programs (OSEP) cosponsored the first annual HCEEP conference.

By 1984, HCEEP informed DEC that no more conferences would be supported with federal money. Under the leadership of Bea Gold, DEC then stepped up to the task of continuing the annual conferences and, along with CEC, cosponsored its first annual conference in Denver in 1985. By 1986, the new division had 4000 members and was one of the largest divisions in CEC.

DEC also developed political action skills. In 1982, DEC took over management of CEC's Early Childhood Political Action Network. In 1985, DEC joined CEC to make recommendations on bills to create birth to five services under the EHA, and in 1986, DEC testified before the Congress on S. 2294, the Senate bill precursor to P.L. 99-457.

When P.L. 99-457 was passed in 1986 and the need for services grew, the role of the DEC also grew. By 1987, DEC had 4578 members with 30 state subdivisions and ten more in progress. By 1989, membership had increased to more than 6000. In 1987, DEC issued a series of position papers related to P.L. 99-457 on the topics of case management, eligibility, personnel standards, program standards, family services and the IFSP, and a continuum of services. In 1990, DEC established an executive office and hired its first executive director.

As the country faced the task of preparing professionals and establishing programs to serve young children with disabilities and their families, it became clear that guidance was needed to identify quality practice. In 1991, DEC addressed its responsibility as the professional organization for ECSE to identify and disseminate guidance to the field in the form of recommended practices. This first effort to produce DEC Recommended Practices (Odom & McLean, 1996) resulted in 415 practices and was based primarily on the knowledge and wisdom of the field gathered through stakeholder focus groups. In 1999, the organization renewed this effort with financial support from the U.S. Department of Education. With grant funding, the organization was able to conduct a review of the research literature as a basis for identifying recommended practices. This review, complemented with the recommendations from stakeholder focus groups, resulted in 240 practices (Sandall, Hemmeter, Smith, & McLean, 2005). In 2012, DEC undertook another effort to identify practices associated with quality programs and positive outcomes for children and families. This process resulted in 66 Recommended Practices that were disseminated to the field in 2014 (http://www.dec-sped.org/recommendedpractices). Work continues by DEC members on updating and disseminating the newest set of recommended practices as well as many other products designed to promote and sustain quality early intervention services for young children with disabilities and their families.

## Research

Research in special education is often traced back to the French physician Jean-Marc Gaspard Itard (1775–1838) who believed that learning is affected by the environment and also by physiological stimulation, rather than being determined primarily by genetics. Itard's famous work with Victor of Aveyron was significant because of the individualized nature of the intervention Itard provided. Itard's student, Edouard Seguin (1812–1880), who later moved to the U.S., continued this work and developed a method of assessing individual strengths and weaknesses with a corresponding plan for intervention (Shonkoff & Meisels, 2000). Seguin's work prompted the establishment of residential institutions in the U.S. that were designed to focus on teaching individuals with disabilities. Unfortunately, with the growth of the eugenics movement in the early 1990s, belief in the effectiveness of intervention waned, and residential institutions became places primarily used to segregate individuals with disabilities from society.

## Nature–Nurture Debate and the Behavioral Movement

During this same time period, the nature–nurture debate was growing in the field of child development. A major champion on the nature side was Arnold Gesell, who is perhaps best known for his observational studies of child development and for gathering a large amount of normative data on early child development (Gesell, 1925; Gesell & Armatruda, 1947). Gesell believed that maturation and development in children are determined biologically and that the impact of experience on development is minimal.

Also during this time period, the behavioral movement was beginning. In contrast to the maturation perspective, the behaviorists believed that for most children, development is largely a product of the child's experience and environment (Watson, 1928). The work of the early behaviorists—Watson, Thorndike, Skinner, Hull, Spence, and others—formed the foundation of behavioral science that significantly impacted and continues to impact intervention strategies for children with disabilities (Bijou & Baer, 1961).

## Effect of Environmental Factors

As the nature–nurture debate continued, researchers began to investigate the impact of environmental factors on child development. A classic study by Skeels and Dye (1939) was one of the first to show changes in the cognitive development of children as a result of a change in environment. Skeels, a psychologist, had observed a remarkable increase in the IQ scores of two little girls who had been moved from an orphanage where they had very little adult interaction to the ward of an institution for the mentally disabled where they received much more attention from the women in the ward. As a result, Skeels and Dye arranged to move 13 children from an understimulating orphanage environment to the ward of the institution. There they were assigned to surrogate mothers and had access to toys. Skeels and Dye collected IQ data on the children who were moved and on the children who remained in the orphanage. Every child in the experimental group showed an increase in IQ points when they were tested 18–36 months later, while every child who remained in the orphanage, except one, demonstrated a decrease in IQ (Skeels & Dye, 1939). This study and others triggered more research over the next decades that demonstrated the importance of a stimulating environment to child development (Bloom, 1964; Hunt, 1961; Spitz, 1945).

## Nature and Nurture

Eventually it became clear to many that development was better explained by considering both biological and experiential influences on the young child and could not be explained by only one or the other. Piaget's theory of cognitive development (Piaget, 1950, 1960) became very prominent in the field of child development in the middle part of the twentieth century and included consideration of both biological and experiential influences on child development. Piaget's delineation of stages of cognitive development provided a framework for observing cognitive skills in the young child and highlighted the importance of providing appropriate interactions and experiences based on the child's level of cognitive development.

The importance of the environment for the development of infants and young children, including those with disabilities, became more evident and more prominent in child development research during the 1960s and 1970s. A transactional perspective of child development that views development as a result of the dynamic interaction between child behavior, adult behavior, and environmental influences gained prominence in the 1970s. As proposed by Sameroff and Chandler (1975), the "continuum of caretaking causality" identifies the importance of adult-child and environmental interactions on the development of the child. Sameroff and Chandler suggested that biology does influence child development but identified the caretaking environment as having the most influence on developmental outcomes.

The transactional model of child development co-occurred with the growing recognition in the USA that institutionalization and segregation do not support the development of children and adults with disabilities. As a result of the deinstitutionalization movement of the 1970s, services for individuals with disabilities were seen as being more appropriately provided in the community rather than in an institution. The "normalization principle" (Nirje, 1976) further suggested that individuals with disabilities should have "patterns of life and conditions of everyday living which are as close as possible to the regular circumstances and way of life of society" (p. 231).

## Ecological Model

For infants and young children with disabilities, then, caretaking environments both in home and out of home become an important focus of opportunities for intervention. The work of Bronfenbrenner (1977, 1979) broadened the transactional perspective to consider more than the immediate adult-child environment interactions. Bronfenbrenner proposed an ecological model of child development where developmental outcomes are viewed as a function of ecological systems within which the child is situated and how these systems affect each other.

Ecological systems include the formal and informal social subsystems of the child and family and are described by Bronfenbrenner as including microsystems (home, child care center, and other environments where the child spends time), mesosystems (parent-professional and professional-professional relationships), exosystems (local, state, and federal agencies, social groups, medical services, etc.), and macrosystems (agency regulations, state legislation, federal legislation, societal attitudes, etc.). The ecological model proposes that intervention must consider the interrelatedness of all systems that impact the child and caregivers rather than only considering the child and caregiving adults.

## Summarizing the Early Research

As described earlier, the federal HCEEP and other demonstration projects served as applied research laboratories that eventually led to the passage of P.L. 99-457 in 1986. Researchers, teachers, therapists, and parents demonstrated that very young children with disabilities, including children with significant disabilities, could be taught to move, communicate, take care of their needs, and solve problems. And, they could learn within their families and alongside their typical peers. Now, decades later, it is in the "history" chapter of our textbooks that we read about those remarkable findings. Very young children with Down syndrome were taught basic developmental skills and demonstrated milestones at or near expected ages (e.g., Hanson & Schwarz, 1978; Hayden & Haring, 1976). Parents learned and implemented teaching programs at home and taught their children important skills (e.g., Shearer & Shearer, 1976). Infants who were blind increased their mobility and exploration skills (e.g., Fraiberg, 1975). Team-based, comprehensive services made a difference for children with neurodevelopmental disabilities (e.g., Haynes, 1976). Researchers began demonstrating that children with disabilities made good progress when taught in "integrated" or "mainstream" classrooms, i.e., classrooms with children without disabilities (Allen, Benning, & Drummond, 1972; Bricker & Bricker, 1971; Guralnick, 1976). With increased rates of survival of premature and low birth weight babies, early intervention practices in the hospital and at home became the subject of much attention (e.g., Bennett, 1988).

Reviews of this early research (e.g., Dunst & Rheingrover, 1981; Simeonsson, Cooper, & Scheiner, 1982) documented that young children with disabilities who were enrolled in intervention programs made progress. The research was hampered by weaknesses in methodology but still provided support for real change in individual child behavior, the importance of family involvement, and helped set the stage for changes in public policy.

## Research and Development After 1986

The policy work of the 1970s and 1980s granted young children with disabilities *access* to services. The policies also provided guidance for how those services should be delivered. However, the definition and parameters of "quality services" are defined by research and professional practice. Research questions after the passage of P.L. 99-457 focused on the services, models, and specific practices that promote good child and family outcomes.

## Research in Head Start

Numerous studies document the educational, economic, and health benefits of Head Start for children and families who are at risk due to poverty. Yet there have been long-simmering debates over the long-term impact of Head Start on children's development.

The controversy began when the first evaluations of Head Start asked the global question of whether or not Head Start is effective using measures of children's intelligence to measure the effects of the program (e.g., Westinghouse Learning Corporation & Ohio University, 1969). These evaluations documented short-term positive effects; the children indeed made gains during program attendance. However, differences between those who attended Head Start and those who did not were generally not observed by third grade, at least as measured by intelligence tests. Unfortunately, reliance on intelligence measures does not capture the full range of possible outcomes from a comprehensive program of services (Zigler & Styfco, 2004).

To counter the claims that programs such as Head Start were ineffective, Lazar and Darlington (1982) reported on a consortium of well described and implemented early education programs for children from low-income homes. When researchers moved beyond the use of IQ scores, they found that such programs had long-lasting effects on school competence, abilities, children's attitudes and values, and the family.

More recent research studies have continued to document the progress that Head Start children make during and shortly after their Head Start year(s). Data show that, by the end of kindergarten, Head Start graduates are performing at national norms in early reading and writing and close to norms in early math and vocabulary (Zill, Sorongon, Kim, Clark, & Woolverton, 2006).

Recent studies also document positive outcomes on such important markers as reduced grade repetition, referral to special education, and completion of high school. Further, studies show that participation in Head Start is associated with improved health for children and families.

In the 1998 reauthorization of Head Start, the Congress mandated that the US Department of Health and Human Services determine, on a national level, the impact of Head Start on the children it serves. This unique and ambitious study involved a nationally representative sample and random assignment. It began in 2002. Overall, the impact study demonstrated that access to and participation in Head Start has positive impacts on several aspects of children's school readiness during their time in the program (Puma et al., 2010). In comparison to the control group, children in Head Start showed greater cognitive skills including language and early literacy skills. Children in Head Start demonstrated positive impacts on social-emotional measures. There was also an impact on access to dental care in the health domain and a positive impact on parenting practices.

However, the study also reports that in comparison to the non-Head Start children, by the end of first grade, many of the advantages that the Head Start children had when they began kindergarten had been lost (Puma et al., 2010). There are serious discussions as to the meanings of these findings. We know that graduates of Head Start programs are likely to enter elementary schools that are disadvantaged and under-resourced. Access to quality elementary schools, teachers, curricula, and continued support of family engagement are fundamental to school success. Continuing provision of high-quality education into the school years is essential to maintaining the gains made in the early childhood years (Gibbs, Ludwig, & Miller, 2011). Data analysis continues in order to understand the nature of the impacts of Head Start as well as to make substantive recommendations for how best to serve the nation's poorest children.

In 1995, Early Head Start began to provide services for children birth to age three and pregnant women. Early Head Start began small and incorporated a research component from the beginning. Results from the Early Head Start Research Consortium showed that children in Early Head Start showed greater gains in cognition and receptive language and some measures of social-emotional development. Positive impacts were seen with parents. Results also showed that measures of implementation were associated with better outcomes (Love et al., 2005).

In its 50-year history and enrollment of more than 27 million children, Head Start has experienced periods of expansion and retrenchment. Throughout, Head Start has not lost sight of its goals for economically disadvantaged children and families. Head Start continues in its quest to offer quality, comprehensive early education programs for children and supports for families that lead to social competence, school readiness, and successful lives.

## Second-Generation Research

In his 1997 book on the effectiveness of early intervention, Guralnick provided an answer to the question, "Does early intervention work?" by proposing that it was time to stop asking the question of global effectiveness. Guralnick argued that the passage of P.L. 99-457 which mandated services to children with disabilities from birth through age five had essentially changed the nature of research that is needed. While acknowledging challenges with the methodology of early research on the effectiveness of early intervention for children at risk for disabilities and those with established disabilities, Guralnick cites meta-analyses (Casto & Mastroprieri, 1986; Shonkoff & Hauser-Cram, 1987) and his own review of effectiveness research (Guralnick & Bennett, 1987) as supporting the finding that early intervention is effective. Rather than continuing to investigate a global question about the effectiveness of early intervention, he suggests researchers move past the "first-generation" research and instead focus on "second-generation" questions such as what works, for which children, and under what conditions. Answers to "second-generation" questions would be able to facilitate the translation of research into practice by providing guidance for intervention with individual children and families in relation to specific goals or outcomes and specific characteristics of programs.

However, the translation of research into practice has proven to require additional efforts beyond the completion of high-quality, focused research to ensure the implementation of research results on a large scale. One example of the failure to bridge the research to practice gap is the practice of serving young children with disabilities in typical ECE settings alongside their nondisabled peers. The "inclusion" conundrum is described below.

## Inclusion

For over 30 years, research has shown that providing services for young children with disabilities in settings with their typically developing peers benefits both children with disabilities and typically developing children (Barton & Smith, 2015). Similarly, federal programs such as IDEA and Head Start have encouraged educational services for children with disabilities to be delivered where those services are delivered for typically developing children. The concept of "inclusion" has been a focal point of ECSE for the past 30 years (Odom & McEvoy, 1988). One of the major implications of the inclusion movement has been to bring the fields of ECSE and ECE together not as one field but as two coordinated fields of knowledge necessary to meet the needs of all children (Smith & Bredekamp, 1998).

The two early childhood professional associations, the DEC of the CEC and the National Association for the Education of Young Children (NAEYC), have worked together since the early 1990s to establish a shared vision of inclusion and to produce personnel and program recommendations for how to teach all children together. In 1993, DEC and NAEYC issued a position statement about the importance of inclusion. Subsequently, they worked together to help early educators blend the approaches and to see the teaching strategies as a continuum of effective strategies that depend on the needs of the child. In 2009, DEC and NAEYC updated and reissued the joint statement on inclusion (DEC/NAEYC, 2009).

Three federally funded research institutes (Odom, 2005; Strain et al., 1983; Strain, Sainato, Goldstein, Kohler, & Cordisco, 1993) and numerous reviews of the literature document that inclusion is an effective early childhood practice. Belonging, participating, and forming positive social relationships are important child outcomes that may be accomplished in inclusive school and community settings (Odom, Buysse, & Soukakou, 2011). However, even with research and policy supporting early childhood inclusion, there has been very little progress in establishing inclusion in practice. According to OSEP Annual Reports to Congress on IDEA, during 1984–1985, a total of 36.8 % of children 3–5 served under IDEA nationally received their special education and related services in a regular early childhood setting (U.S. Department of Education, 1987). In 2012, a total of 42.5 % of children 3–5 served under IDEA received their special education and related services in a regular early childhood setting (U.S. Department of Education, 2014). The practice of providing special education and related services to children with disabilities aged 3–5 years old in regular early childhood settings increased by only 5.7 % in 27 years and is still utilized with fewer than 50 % of the preschool children served under IDEA (Barton & Smith, 2015).

## Evidence-Based Practice

Evidence-based practice (EBP) is a term that originated in the field of medicine in the 1990s and has been adopted in related fields including education. A medical definition provided by Sackett, Straus, Richardson, Rosenberg, and Haynes (2000) is often referenced to explain EPB: "Evidence-based medicine is the integration of best research evidence with clinical expertise and patient values" (p. 1). Sackett uses the term "best research evidence," which is an important part of the definition of EPB. Cook and Odom (2013) point out that research evidence requirements behind EPB vary across fields but typically must meet criterion related to research design, quality, and quantity. Buysee and Wesley (2006) have provided a definition of EPB for ECSE as "a decision-making process that integrates the best available research evidence with family and professional wisdom and values" (p. 12). In her extensive review of "best available research evidence," Snyder (2006) summarized her conclusion by stating, "As the science of ECE continues to evolve, the expectation is that we will thoughtfully and appropriately blend scientifically valid evidence with experiences and values to engage in EBP for the ultimate benefit of children, families and society" (p. 65).

Considerable effort has been spent and continues to be spent on identifying EBPs for ECSE. Federal legislation has supported the use of EBP. In 2001, the No Child Left Behind Act included an emphasis on scientifically based research, and in 2004, the reauthorization of IDEA, P.L. 108-448, included similar wording about the use of scientifically based research. "Scientifically based research" is typically interpreted to mean research using an experimental or quasi-experimental research design that has been obtained under controlled conditions (see chapters by Reichow and Dunst in this volume), although single-case design research is now being included. In 2002, the US Department of Education established the What Works Clearinghouse (www.ies.ed.gov/ncee/wwc/) as a resource for informed decision-making for educators. The WWC identifies and reviews studies that provide evidence of the effectiveness of a given practice, program, or policy. These reviews are available on the WWC website. While not initially included, the WWC does now include studies in the area of ECE for Children with Disabilities.

## Implementation Science

As the focus on identifying EBPs has grown, EBPs by themselves have not closed the gap between research and practice in special education (Cook & Odom, 2013). It has become clear that much more is needed than identifying practices and related research (see Boyd chapter, this volume). To address this need, researchers are currently investigating strategies from implementation science. Eccles and Mittman (2006) defined implementation science as "the scientific study of methods to promote the systematic uptake of research findings and other EBPs into routine practice" (p. 1). Implementation science focuses on strategies for facilitating the sustained implementation of EBPs by practitioners. Researchers and leaders in EI/ECSE who are working to make changes in the services provided to individual children and families will not only need to be concerned with research leading to EBPs but also with the strategies that will be most successful in assuring implementation of those practices. The reader is referred to the chapter by Duda and Blase in this text for more information on implementation science.

## Conclusion

ECSE is a relatively new field that experienced rapid growth and development in the last half of the twentieth century. A perfect storm of research, policy, and advocacy combined in the mid-1980s to create a universal system of state-delivered services. While the establishment of services in 1986 may have seemed to many as if the really hard work had been accomplished, in many ways, the work was just beginning and continues today. Services had to be established for a population of children who had previously not been served in many states. Teacher certification programs had to be established, and teachers needed to be prepared. Professionals from a number of disciplines who were responsible for delivering services needed professional development and guidance about effective practices.

The questions asked by researchers changed relatively quickly from "Is early intervention effective?" to "What works for which children and under what conditions?" Many thought that answering these "second-generation" questions would lead to improved services for children and families as the results of more focused research were identified. A term from the field of medicine, "evidence-based medicine," led to the search for "EBPs" in ECSE that would combine research evidence with family and professional experiences and values to generate practices which would lead to best outcomes for young children with disabilities. In the beginning of the twenty-first century, federal legislation mandated the use of "scientifically based research" in funded programs. More recently, it has become clear to many that the identification of EBPs will not by itself lead to the use of those practices. Knowing the best available evidence must be paired with strategies for implementing the practices that are based on that evidence.

It has now been 30 years since the passage of P.L. 99-457, and the work continues. As a field, we still need that perfect storm of research, policy, and advocacy to do our best work. The following chapters of this book provide information that will help us move forward.

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