

Inclusion in Preschool as a Catalyst to Enhance the Quality of Comprehensive Community-Based Early Childhood Programs

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Advances in comprehensive community-based early childhood systems require sophisticated partnerships among numerous constituencies including health, education, human services, and parent groups. Considered here is the potential for early childhood inclusive practices based on a commonly shared developmental framework to facilitate those partnerships. Also discussed is the potential for this developmental framework to generate a process capable of accelerating inclusion by influencing attitudes and beliefs recognizing that, despite the extensive adaptations and adjustments often required, fundamental developmental mechanisms apply to all children. Focusing on preschool age children, a developmentally based organizational structure and collaborative process is presented designed to support family-centered interventions utilizing well-established developmental influences on child development. This process is illustrated with an example to enhance a child's peer-related social skills and interactions. Based on this framework, a model of personnel development is described. The long-term potential of developmentally-based inclusive practices to serve as a catalyst for enhancing the quality of comprehensive early childhood programs is discussed. **Key words:** *preschool inclusion, developmental systems, comprehensive community programs*

ESTABLISHING COMPREHENSIVE, community-based high-quality early childhood programs is a goal that continues to be vigorously and creatively pursued in numerous countries throughout the world. Included in this broad vision is the principle of early childhood inclusion, intended to

ensure that all children, including those at risk for, or with established developmental delays or disabilities, have opportunities to access and participate in activities in communities that support child development and family aspirations. Focusing on the United States, Public Law 99–457 provides policies, guidance, resources, and a structural

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framework designed to achieve this goal for children meeting state early childhood intervention eligibility criteria (Education of the Handicapped Act Amendments of 1986). Most fundamentally, this law and parallel laws in other countries represent the expression of ideological, developmental, legal, and legislative perspectives evolving from a vision that recognizes each community's responsibility to equitably support human development in all its complexity and richness (Brown & Guralnick, 2012; Guralnick, 1978; Hanno, Portilla, & Hsueh, 2025; Stowe & Turnbull, 2001).

Early childhood inclusion has become an important part of our lexicon and practice with innovative practices found in numerous communities throughout the world. In the United States, advances are evident with respect to improving access to inclusive programs, arranging accommodations to address individual child and family needs, ensuring optimal developmental progress for all involved utilizing evidence-based strategies, and promoting social integration with peers as well as creating a sense of belongingness (Guralnick & Bruder, 2016; Hanline, Eldridge, & Robbins, 2024). Yet, as indicated in the most recent joint policy statement examining early childhood inclusion issued by the United States government (U.S. Department of Health & Human Services and the U.S. Department of Education, 2023), much remains to be accomplished. Of primary concern, as this policy statement indicated, not only are a substantial proportion of children (approximately 50%) still receiving early intervention services in separate settings, but this situation has remained stable over many decades. Recommendations discussed in this government report include administrative and policy strategies primarily at the state level, encouraging and supporting innovative initiatives, providing guidance and resources to implement standards, improving data collection that allows better program decision-making, and

expanding training and technical assistance for all those involved in inclusive programs.

Recognized as well, is that progress in these and other areas that impact inclusion requires the formation of meaningful, effective, and enduring partnerships. In view of the diverse partner constituencies in early childhood communities, especially health, education, human services, and parent groups, this remains an extraordinarily complex but critical task. Of importance, these partnerships would benefit substantially from achieving agreement with respect to a common framework, knowledge base, and linked practices that can best support the development of all children (Guralnick, 2019a; National Research Council, 2015). Key features of developmental systems can be organized to provide such a common framework.

DEVELOPMENTAL SCIENCE AND DEVELOPMENTAL SYSTEMS

As elegantly articulated well over two decades ago, developmental science is embedded in a systems framework that includes components that serve as core or proximal developmental processes influencing child development (Bronfenbrenner & Evans, 2000). As part of an evolving and more comprehensive bioecological model, these developmental processes, that is, those achieving a direct and ongoing impact on child development, have been recognized as "...the engines of development" (p. 118). Identifying, defining, and measuring components that constitute these core developmental processes and their interactions throughout development by developmental scientists, including those related to parent-child transactions, child experiences orchestrated by the family, and the family's efforts to ensure their child's health and safety, have resulted in both a better appreciation of the complexities of developmental systems and a recognition of the potentially vital role a common knowledge base can play in community support of children's development. Moreover, a shared

developmental framework seems ideally suited for partnership formation encompassing diverse groups as well as enabling essential data collection to support a corresponding intervention system for all involved. Indeed, the components that constitute these core developmental processes of the system do not distinguish between arbitrary categories based on children's developmental status or family circumstances (see Guralnick, 2019a). Rather, development follows a highly interactive system of influences involving the same developmental processes for all children. This is the case despite the considerable range of highly individualized adjustments, supports, and adaptations required for these processes to optimize children's development.

DEVELOPMENTAL SYSTEMS APPROACH

The early childhood intervention framework provided by the Developmental Systems Approach (DSA) and the sequence

of events designed to organize early childhood intervention systems within a developmental framework are illustrated in Figure 1. Described in detail elsewhere (Guralnick, 2011, 2019a), this evolving system is intended to guide communities to ensure that all children with developmental concerns enter an evidence-based and family-centered early intervention system; one that fully supports inclusion. It builds upon the systems perspectives of the bioecological model (Bronfenbrenner, 2005), applications and modifications of other systems frameworks for groups experiencing developmental concerns (Cicchetti, 2006; Sameroff, 2010), and reconceptualization of connections between culture and core developmental processes (Vélez-Agosto, Soto-Crespo, Vizcarrondo-Oppenhimer, Vega-Molina, & Garcia Coll, 2017). Established in the context of early childhood intervention programs, the DSA was designed to integrate developmental, intervention, and implementation science compatible with a practice model that relies

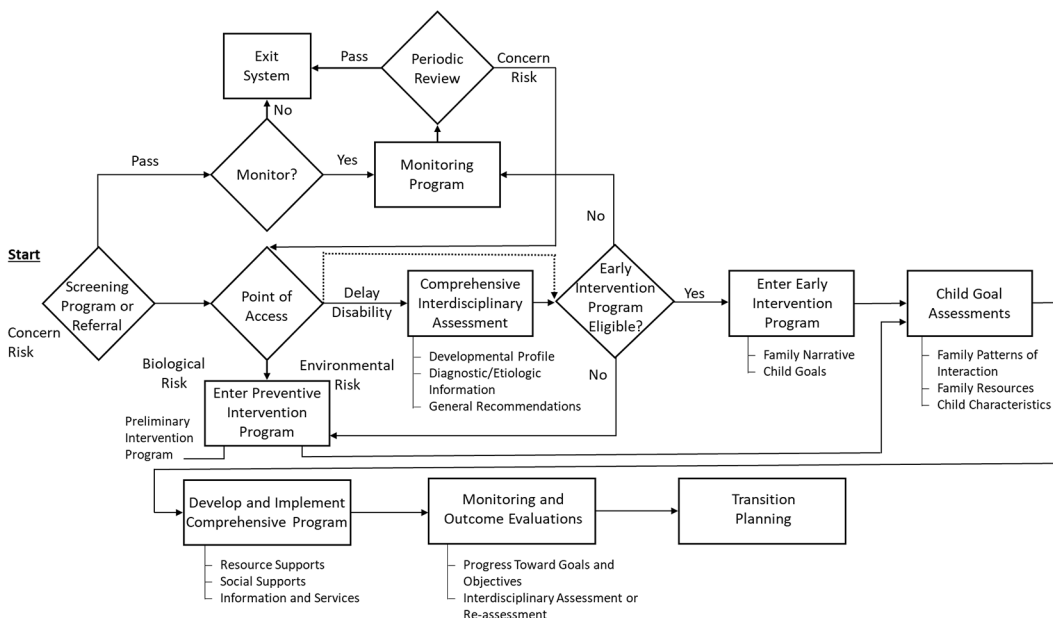


Figure 1. *The Developmental Systems Approach for early intervention in a sequential organizational framework.* Adapted from “A Developmental Systems Model for Early Intervention,” by M. J. Guralnick, 2001, *Infants & Young Children*, 14(2), pp. 1-18. Reprinted with permission.

on the principles of relationships, comprehensiveness, and continuity.

As seen in the figure, this requires a point of access and a monitoring process, followed by a comprehensive interdisciplinary assessment if warranted. For those who qualify for services and enter an early intervention program, the DSA is designed to encourage the identification of a family's goals for their child that directly connect with areas essential to children's development. To facilitate this process, a developmentally organized Family Narrative provides guidance for generating these family identified child goals (Guralnick, 2020). To support goal setting, the team engages in a structured conversation with the family to elicit their knowledge about the child's interests, characteristics, and needs, all organized in a context designed to generate short-term goals (see Guralnick, 2023). The Family Narrative also provides guidance for additional assessments discussed in a later section of core environmental influences that may impact the child's development. As noted in Figure 1, these environmental influences are referred to as Family Patterns of Interaction (FPI). The information that emerges from the Family Narrative and the subsequent discussions that occur between the family and the team in the context of FPI ultimately result in intervention goals in the form of a highly Individualized Education Plan (IEP) (Guralnick, 2023). Issues related to the child's need for accommodations and modifications to support development in the home, preschool, and community are also discussed at this time.

Essential to this process are discussions and evaluations related to what is referred to as family resources (FR). These FR, such as parent mental health, social support, or financial resources, exert major influences on intervention plans, with issues likely to emerge when the details of the IEP become apparent. By incorporating FR in a formal sense, interventions can be adjusted accordingly, along with suggestions about how to obtain community resources that can assist the family.

Connections with community resources such as human services or health provide crucial opportunities to both gather data on the need for additional community resources, and directly address the family needs through the IEP. In the most fundamental sense, FR constitute a rationale for strengthening the link with needed community services through specific child and family goals. These goals are incorporated into an intervention plan and directly address child and family needs.

The assessment and goal-setting phases of the DSA ultimately inform the development and implementation of a comprehensive early childhood intervention program consisting of resource supports, social supports, information, and services. Issues related to the child that require general accommodations and modifications typically arise at the initial meeting as part of the review and assessment information obtained from all sources. This information is then discussed in the context of setting appropriate and realistic child goals related to those FPI components that are likely to effectively influence the child goal being addressed. As illustrated in Figure 1, this sequence of service delivery components is designed to maintain the integrity and effectiveness of the DSA.

Inclusion and partnerships: DSA as an ECI practice framework

Features of the DSA outlined in Figure 1 can form the foundation for the implementation of inclusive practices and programs in early childhood. These features also provide the basis for collaborative partnerships among intervention team members, including parents and caregivers, for a practice model based on the DSA with its emphasis on contemporary developmental science. Moreover, the process of inclusion within these commonly shared and understood developmental influences has the potential to serve as a catalyst for the long-term goal to facilitate the establishment and refinement of a comprehensive and fully inclusive community-based early childhood system.

Accordingly, in the context of the DSA framework, this article provides an overview of the DSA and its components as applied to inclusion for preschool-age children qualifying for early childhood special education (ECSE) services under IDEA. A discussion of FPI within the broad context of the DSA and systems influences on child development is first presented. This is followed by a description of the responsibilities of the ECSE teacher who would serve as a specialist responsible for facilitating an understanding of the DSA, supporting corresponding interventions, and enhancing the partnership process with early childhood programs. An example focusing on children's peer interactions demonstrates how this process could function within the context of community-based early intervention programs. A description of personnel training and professional development needed to support the DSA is then presented. The final sections of this article consider the feasibility of this framework and its ability to establish or strengthen partnerships to support comprehensive and inclusive community-based early childhood development systems.

Family patterns of interaction

FPI (see Figure 2) consists of components within defined contexts of interrelated and relationship-based events and activities within which interactions take place that have established implications for child development. In many respects, the quality of FPI depends on adjustments and adaptations that are made to child and family characteristics, to child behavioral patterns, and to the challenges that inevitably arise. More specifically as introduced earlier, FPI consist of a distinct but overlapping set of Parent-Child Interactions (with components referred to as a discourse framework, an instructional partnership, and socioemotional connectedness), a set of Family Orchestrated Child Experiences (with components that

include the parents' social network, the child's peer network, the child care setting, and community activities), and components capable of supporting the child's Health and Safety Provided by the Family (e.g., protection from violence, ensuring preventive health practices, avoidance of environmental hazards) (see Guralnick, 2011).

The 13 components of FPI are influenced by two major sources. The first (Level of the Child) consists of children's characteristics as their developmental resources (cognition, language, motor, social-emotional, and sensory-perceptual) and organizational processes (executive function, metacognition, social cognition, motivation, and emotion regulation) operate to generate and support their goals and functional adaptive behaviors. In addition to influences occurring at the Level of the Child, FPI are influenced by an array of FR noted earlier including the personal characteristics of the parents (e.g., mental and physical health, problem-solving style, attitudes and cognitive readiness, coping style, and perceived confidence and competence), as well as material resources available (financial resources, social support). As such, the influences of family services within this framework are consistent with key features of two-generation approaches to early childhood intervention and supports (Sommer, Franchett, Yoshikawa, & Lombardi, 2024). Together, these influences on FPI exerted by the Level of the Child and the Level of FR reflect the highly interactive nature of developmental systems that must be considered as intervention plans are developed for children with delays in development or disabilities.

Through extensive studies in developmental science, each of the 13 components of FPI organized as Parent-Child Interactions, Family Orchestrated Child Experiences, and Health and Safety Provided by the Family have well established independent associations with child outcomes at virtually every stage of development (Guralnick, 2019a). This suggests the potential value of well-defined FPI components as constituting

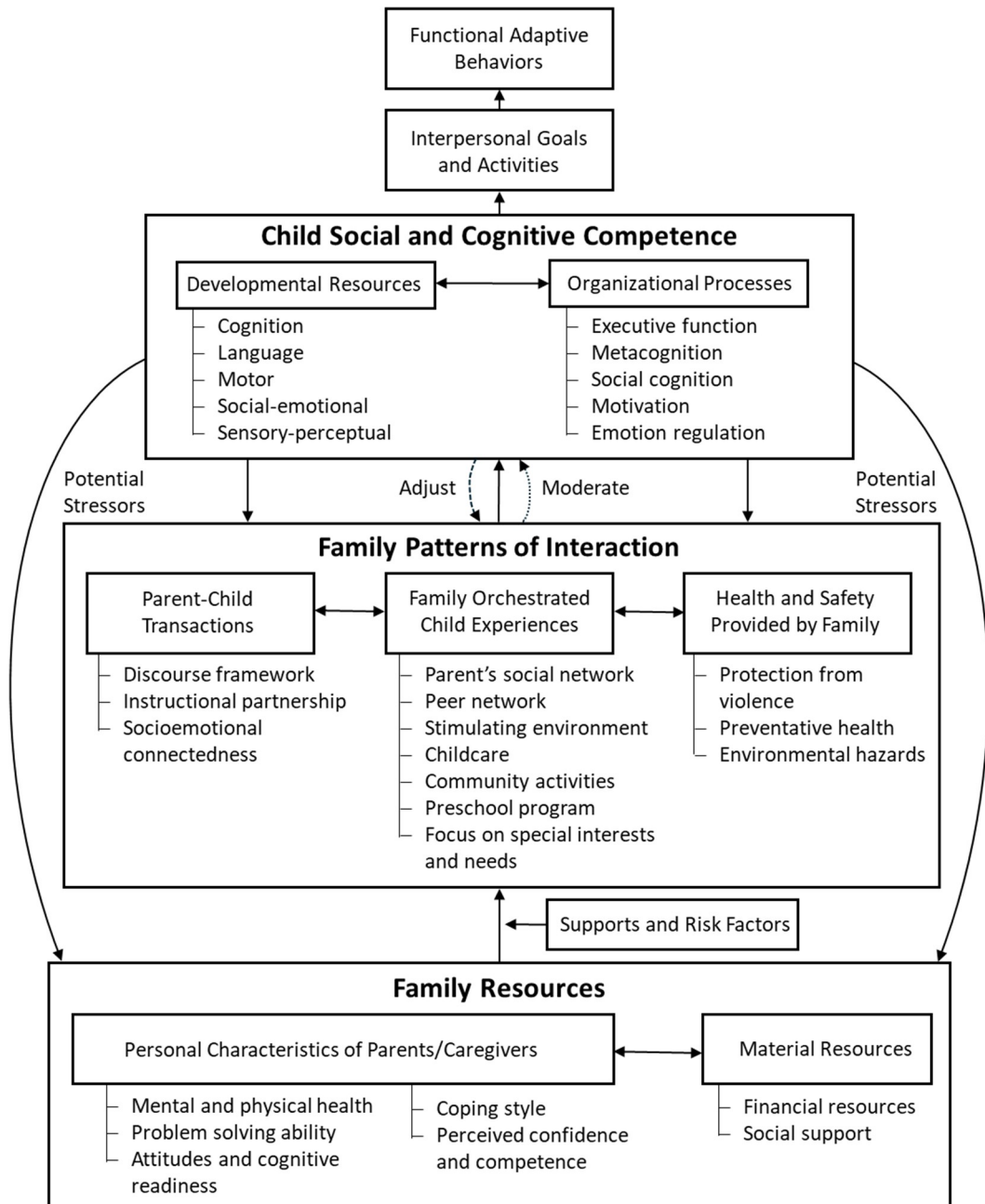


Figure 2. *The Developmental Systems Approach illustrating the three interacting levels and components supporting children's development.* Adapted from "Why Early Intervention Works: A Systems Perspective," by M. J. Guralnick, 2011, *Infants & Young Children*, 24(1), pp. 6-28. Reprinted with permission.

dynamic interaction contexts providing an environment for crucial developmentally supportive activities for all children.

A prime example of such a dynamic interactional series of activities and events that are part of the discourse framework

component is establishing joint attention (Adamson, Deckner, & Bakerman, 2009; Carpenter, Nagell, Tomasello, Butterworth, & Moore, 1998). Indeed, association studies related to joint attention have provided the impetus for organizing interventions in this domain, and curricula and well-defined and focused strategies have resulted in detailed evaluations of their effectiveness as a component of FPI. Child outcomes associated with joint attention and other domains have been measured at various levels. These include children's developmental resources, organizational processes, and overall social and cognitive competence, as well as through longer-term assessments of children's interpersonal goals and activities and their functional adaptive behaviors. Based on investigations of the associations between the specific characteristics of FPI components and child outcomes, extensive translational research and corresponding intervention studies including those related to joint attention (Shih, Shire, Chang, & Kasari, 2021) have revealed the causal connections that exist for the components of FPI as reflected in various child outcome measures (Guralnick, 2019a, 2019b). Together, association studies and intervention trials have generated a sophisticated developmental approach that contributes to a framework for the FPI-based components of an early intervention system that is evidence-based.

Accordingly, confidence exists that the FPI components noted above, generally operating in combination with one another, form a system capable of influencing child outcomes and family well-being. From a practice perspective, extensive, well-designed, and rigorously tested curricula and intervention strategies are available and constitute outstanding accomplishments in the field of early intervention. Many of these evidence-based interventions can be readily conceptualized and organized as relevant to one

or more of the 13 components of FPI, thereby providing the basis for a collaborative practice approach designed to support an inclusive and ultimately comprehensive developmental system in the field of early childhood intervention (Guralnick, 2019a). Unquestionably, a long-term process would be required to establish a system supporting these extensive collaborations including specialized personnel trained and committed to this developmental approach.

The ECI process and the ECSE specialist

For this process to be effective, especially as part of a broad developmental framework, an ECSE Specialist team member is critical. The ECSE is the designated leader in an early childhood intervention program under IDEA. As discussed in a later section of this article, this professional would be developmentally oriented, maintain a family-centered philosophy, and have considerable expertise specific to young children with delays or disabilities. The ECSE Specialist could serve in a supportive teaching role, but their knowledge would be extensive and include assessment and intervention content relevant to all the components of the DSA, as well collaborative consultation skills to facilitate partnerships with families, team members, and community early childhood programs.

The quality of the initial interaction with the family of the preschool-age child by the ECSE Specialist constitutes a vital element in the general ECI process. Depending on the history of family involvement with the service community, introductory or supplementary discussions about service experiences and options, community resources, and other vital information for families occur at this stage with the ECSE Specialist including summaries of evaluations and a history of adjustments and accommodations in different settings that have occurred (see Figure 1). This experience further provides opportunities for building a relationship with family members as they begin to orient themselves with respect

to a plan for comprehensive and developmentally based early intervention.

The family-centered nature and developmental orientation of this initial DSA-based process become evident as the ECSE Specialist implements the Family Narrative to obtain family priorities in the context of child goals that are fundamental to child development (Guralnick, 2020). This structured conversation relies on parent or caregiver knowledge of the child's interests as well as needs and is organized in the context of children's short-term goals. In particular, the Family Narrative focuses on the fundamental areas of child development that are listed in Table 1 (see Guralnick, 2023). It is the specifics that emerge from the Family Narrative discussion of child goals at this early stage that will generate connections between the IEP team's overall plans and children's interpersonal goals and their functional adaptive behaviors (Guralnick, 2023; McWilliam, 2010). Of importance, this family-oriented process immediately places discussions within a developmental context.

With essential background information obtained, including a comprehensive interdisciplinary assessment along with family-generated child goals identified in critical areas of development, it is at this point that the IEP team is formally established. Introduction of team members as well as reviews of evaluation information and overall child developmental assessments from diverse sources are part of this initial team process and discussion. This meeting among professionals and families as specified in P.L. 99-457 promotes connections and provides opportunities to learn more from the team about school and community programs and activities (goals, curriculum, models followed, staffing, etc.). Even at this early phase, general discussions take place with respect to the types of accommodations and adjustments that may be necessary to enable the child to most effectively participate in the formal curriculum and related activities of the preschool program. Ideas

Table 1. Child Goals

- Participating in family activities and routines
- Exploring the environment independently and gaining information
- Communicating for social purposes
- Playing independently and constructively
- Developing self-help skills
- Playing jointly with others and in a productive manner
- Communicating needs clearly
- Engaging in efforts with others to solve problems and acquire knowledge
- Responding to requests to start, stop, or modify activities

Note. Child goals derived from the Developmental Systems Approach for inclusive, community-based early intervention. Adapted from "Applying the Developmental Systems Approach to Inclusive Community-Based Early Intervention Programs: Process and Practice," by M. J. Guralnick, 2020, *Infants & Young Children*, 33(3), pp. 173-183. Reprinted with permission.

introduced at this point often form the foundation for specific goals and services for the comprehensive intervention program. Exchanges of ideas between the ECSE Specialist, the family, other key professionals on the team, and service providers from the community-based preschool provide an important introduction and orientation at this stage of the collaborative process.

The key task of the team at this point is to determine how family priorities discussed as part of child goals in the Family Narrative can potentially be incorporated into the team's early intervention program. To do so, the broad developmental framework is introduced by the ECSE Specialist to the team identifying and assessing relevant FPI as constituting the core developmental processes of interest to support the high-priority child goals identified by the family. As part of this process, the influences of the components associated with FR are also integrated into the assessment discussion as

the formal IEP and intervention plans begin to be developed. This provides a context to determine the nature and extent to which this DSA-based organizational structure is or can be adapted to existing community preschool goals, curricula, and activities linked to children's characteristics.

Discussions of child goals based on the Family Narrative also provide opportunities for team members to clarify goals if necessary and to introduce new ideas and new goals, especially those that can be integrated into the preschool curriculum. Focusing on high-priority goals, specific components of FPI that are relevant to agreed-upon priorities are then identified to serve as the context within which specific interventions can be designed to enhance the quality of FPI. This discussion (see Develop and Implement a Comprehensive Program in Figure 1), with extensive input from the ECSE Specialist, allows the team to connect to one or more of the 13 FPI and to organize intervention strategies compatible with IEP requirements within each FPI to provide evidence-based interventions within inclusive settings. More specific details of this process as part of a DSA practice model are described elsewhere (Guralnick, 2023), along with the sequence of events and team interactions essential for a successful collaborative process.

ECSE specialist responsibilities

As indicated, essential to this process is the leadership and expertise provided by the ECSE Specialist as part of the team effort. A critical function of the ECSE Specialist is to emphasize the comprehensive features of ECI in the context of child goals selected and the corresponding IEPs that are developed that will include a focus on FPI. As illustrated in the example that follows, the ECSE Specialist contributes expertise to the interventions being designed and carried out within the DSA framework that emphasizes developmental influences common to all children. Also placed in a developmental perspective are influences created by a family's resources on FPI noted earlier.

As the intervention process continues throughout the school year consideration of additional influences of FR on FPI that are relevant to the IEP will likely emerge. As this occurs, opportunities present themselves to recognize a common developmental framework capable of integrating needed health, education, and human services. The ECSE Specialist will have the responsibility for promoting the integration of the various components to support children within this framework who qualify for ECSE services, as well as their families in the context of a team-based comprehensive system. Expertise in the complex aspects of providing services through collaboration and consultation within inclusive preschool programs is essential (Forsythe & Larson, 2023).

Focusing on children who qualify for special services, however, is not intended to suggest that a separate system should exist. Rather, this ECI process adds an important level of expertise and coordination that extends and supplements the contributions of other preschool-based team members. To be sure, a long-term process will be required to meet this ambitious long-term goal of a comprehensive and inclusive developmental system. The Family Narrative can be especially useful in orienting the team to family goals for their child in a concrete manner that emphasizes core aspects of child development. Team discussions of priorities that emerge allow the ECSE Specialist to identify those FPI that are most relevant to a specific child goal. As the IEP process unfolds over the school year, the ECSE Specialist along with other team members continue to identify strategies and curricula that are both relevant to child goals and are evidence-based. In the context of the inclusion process, numerous opportunities are certain to arise among team members to consider the application, relevance, and perhaps boundaries of developmental principles and practices as relevant to all children and families.

Development, by its very nature, is comprehensive and relies upon the quality of

the diverse components of FPI and FR. A child's early intervention and ECSE components are emphasized in P.L. 99–457, but these components are clearly embedded in a highly interactive system supporting child development. Emphasizing the contributions of many FPI to child goals, as well as the reliance of FPI to FR, the comprehensive nature of the developmentally oriented supports becomes an essential part of the ongoing team discussion. As this occurs, IEP goals are more likely to require the coordinated involvement of community systems related not only to education but to health and human services as well.

Accordingly, this network of interdisciplinary early childhood intervention supports and services for children participating in inclusive programs must be considered as part of a larger community-based system of early childhood development. As the DSA framework has emphasized, what binds all of the components of the system together is a common understanding of the developmental processes that influence children's development. By explicitly articulating those components as the “engines of development” and linking them to a practice model described in the context of the DSA, the design and implementation of inclusive programs for individual children and families may well be able to serve as a catalyst for creating comprehensive community-based systems grounded in a common set of developmental principles and practices.

Provided below is an example illustrating how this collaborative process can be responsive to a priority in the Family Narrative designed to support children's interactions with their peers. Priorities and plans were identified based on the introductory meeting with the family and the ECSE Specialist discussed above and subsequent interactions.

Example: a focus on peer interactions

In this example, a 4-year-old child with developmental delays has moved to a new

community. The child has achieved considerable progress by participating in a previous inclusive early intervention program, especially with respect to their language development (see Guralnick & Bruder, 2016). Nevertheless, as revealed by the Family Narrative, “Playing jointly with others and in a productive manner” was identified as a high priority as the parents' described aspirations for their child to build relationships with peers in the inclusive preschool and in community settings. In general, only brief exchanges with peers dominated child-child interactions when they occurred. In many ways this concern is not surprising, as extensive research has revealed that the peer interactions of children with a wide range of developmental delays exhibit peer relationship problems beyond those which would be expected based on their overall developmental levels (Chen, Justice, Rhoad-Drogalis, Lin, & Sawyer, 2020; Guralnick, 2010; Soares & Serrano, 2014). As a consequence of these peer interaction difficulties, the potential benefits of relationships with peers with respect to fostering children's cognitive, communicative, emotional, and prosocial development and general social bonding would be constrained, further limiting diverse aspects of the child's development over time (Wolf & Tomasello, 2023).

To address this parent-initiated child goal, one aspect of the IEP team meeting was organized around discussions of evidence demonstrating the components of core or proximal developmental processes that are capable of influencing children's peer interactions. Discussions focused on those contexts and activities within which components of FPI relevant to children's peer interactions could be enhanced. The first component selected focused on supporting interactions occurring as part of a *discourse framework* established during parent-child interaction episodes. Considerable evidence suggests linkages between the quality of parent-child exchanges and the quality of peer relationships (Ladd & Pettit, 2002). Opportunities over time to practice social skills in play and informal

instructional home contexts with parents or other adults, especially with respect to initiating interactions, appear to transfer to child-child social interactions. For example, mildly delayed children's influence attempts with parents in these home contexts are associated with improved peer interactions over time (e.g., Guralnick, Connor, Neville, & Hammond, 2008). Consequently, activities in the home were identified within which parent-child social play and related tasks in a play-like situation could occur. Working together, an overall plan was established by the team to support this FPI to encourage the children's play initiation attempts. Translation to detailed IEP goals, objectives, and interventions, as well as evaluations, would occur as part of the subsequent IEP team process. The final written IEP included the identification of which team member would be assisting the family to address specific objectives and facilitate the interventions in the home for this component.

The second component involved the *community preschool* itself. In this FPI context, the team discussion was organized around identifying objectives and strategies to expand the child's peer contacts, with special attention given to child-child play interactions occurring within the inclusive setting. The approach taken was to focus on the child's peer-related social competence addressing skills related to peer group entry, conflict resolution, and maintaining play. These three social tasks are central to children's competence with peers, and contemporary developmental approaches identifying developmental processes are available to guide a range of curricular options. For example, intervention strategies include the application of social scripts that can be incorporated into IEPs (Guralnick, 2010), peer-mediated interventions (Reichow & Song, 2024) including those that promote joint attention (Hansen, Mowbray, Raulston, Carnett, & Tullis, 2023), different types of activity settings (Coelho, Cadima, & Pinto, 2019), comprehensive support activities (Sirin & Ahmetoglu, 2024), wearable sensor technology to inform social

group formation (Horn, Karsai, & Markova, 2024), and a variety of programs to encourage social problem-solving (Hardy, Mere-Cook, & Yang, 2024). Further advances in language for this child to support peer interactions would be expected as a consequence of participation in this inclusive setting (Justice, Logan, Lin, & Kaderavek, 2014). With this focus and intervention possibilities, an IEP objective or objectives reflecting the most appropriate intervention strategies for the child and the program would be finalized through the IEP process.

Expanding the child's peer network as part of the FPI of *community activities* was the third DSA component identified as capable of providing opportunities to enhance the child's ability to play jointly and productively with peers. Discussions relevant to this component focused on specific objectives emphasizing arranging community contacts involving peers, particularly home-based playdates. Tools are available to highlight the type of parental assistance needed to facilitate these home-based social contacts with peers. The content of these tools includes techniques to assist managing the child's emotions and conflicts that arise as well as initiating and maintaining social play (see Estes et al., 2018; Guralnick, Connor, & Johnson, 2009; Raulston, Hansen, Frantz, Machalicek, & Bhana, 2020). Providing support and strategies to parents on how to facilitate the initiation of playdates, as well as how to facilitate the quality of their child's play with peers using interventions similar to those used in the preschool program, provides important intervention opportunities. Extension of these community peer social intervention activities beyond the home constitutes additional activities to support children's peer networks. Specific IEP objectives would be developed by the team in this component, as they did in the other two components, in order to facilitate the quality of peer to peer interactions occurring in home-based play situations or other community contexts.

Enhancing the quality of FPI to address this high-priority child goal identified through the

Family Narrative must of course also consider influences at the Level of the Child and Level of FR throughout the entire process. Issues related to the child that require general accommodations and adjustments typically arise at the initial meeting as part of the review of assessment information obtained from all sources. This information is then discussed in the context of setting appropriate and realistic child goals related to those FPI components that are likely to effectively influence the child goal being addressed. An annual time frame further structures the discussion.

Moreover, because two of the FPI components identified in this example involve the home rather than the preschool itself, consideration of the domain of FR is especially important (see Guralnick, Neville, Connor, & Hammond, 2003). Accordingly, beyond adjusting the IEP, additional IEP goals at the level of FR may be needed. The ECSE Specialist or other relevant team members could serve as a liaison to connect with community services: gathering information, identifying family and community contacts, and promoting an awareness of the need for additional FR that would support IEP goals and objectives related to child-child play activities.

Preparation and professional development on the DSA for the ECSE workforce

As described in this article, the implementation of the DSA with its emphasis on FPI and FR, and the availability of inclusive early childhood intervention programs themselves are goals not yet fully realized. Both rely on the availability of a competent and qualified workforce comprised of interdisciplinary teams of professionals who can develop, deliver, and evaluate a child's intervention plan. Nonetheless, ECI programs for children with delays or disabilities continue to grow at a rapid rate as more children are identified as eligible for services under IDEA. This has created a need for personnel who are able to demonstrate the knowledge, skills, and competence necessary to meet the complex

needs of young children and their families within a comprehensive and developmentally based community program.

Unfortunately, surveys of the ECI workforce continue to suggest that personnel across disciplines do not feel adequately prepared to provide ECI (Bruder et al., 2019, 2020). For example, a total of 4,610 members of the EI/ECSE workforce responded to a national survey by the National Institute of Early Education Research (NIERR). Results found that of 15 key ECI practices representing evidence-based pedagogy, 75% of the respondents reported that they had sufficient knowledge of only two practices that they could implement with children. For the other practices, 42% to 70% of the workforce respondents reported they had some knowledge of each of the practices. All respondents identified a need for more and stronger professional development and support to be able to meet the needs of young children receiving ECI services (Friedman-Krauss, Barnett, Jost, & Garver, 2024).

As these data suggest, there is a clear need to examine both the preparation and professional development opportunities available for the ECI workforce. Recently, attention has been given to the need for more guidance in pedagogy for preservice programs who are preparing the workforce, and better systems of professional development to retain current ECI staff (Bruder, Gundler, Stayton, & Kemp, 2021). Efforts to do this have been generated by the federally funded Early Childhood Personnel Center (ECPCTA.ORG) and the Early Childhood Intervention Personnel Center (ECIPC.ORG). For example, the ECPC worked with the Division for Early Childhood, Council for Exceptional Children, to develop personnel standards in EI/ECSE to guide preservice programs of study in ECI (Bruder et al., 2021). Additionally, the ECPC facilitated the development of cross-disciplinary competencies for interdisciplinary professionals in ECI. These have been adopted by collaborating professional organizations

for the disciplines of early childhood, ECSE, occupational therapy, physical therapy, special education, and speech and language therapy (Bruder et al., 2019). These competencies have been recommended to guide both preservice preparation and professional development and are organized in the practice areas of coordination and collaboration, family-centered practice, evidence-based practice, and professionalism. However, neither the standards, nor the competencies are based on a theoretical framework, nor are they organized around a practice frame for inclusive programs.

The potential exists for the developmental framework represented by the DSA to form the foundation of ECI pedagogy. The DSA outlines a detailed practice model that combines developmental, intervention, and implementation science to establish a consistent knowledge base, set of skills, and philosophy for early childhood programs serving children with and without disabilities. This framework offers evidence-based content and methodologies that can be seamlessly integrated into ECI systems, thereby enhancing their overall effectiveness. Further, the DSA is easily translated into service delivery components applicable for programs under IDEA and provides a systematic approach for implementing developmental screening, interdisciplinary assessment, program planning (IFSP/IEP), interventions within inclusive settings, progress monitoring and evaluation, and transition. These service delivery components, together with the theoretical foundation and comprehensive developmental strategies incorporated into the DSA, provide a structured framework for the establishment of personnel standards and competencies by the interdisciplinary staff in ECI. The DSA can provide a foundation for preservice programs and ongoing professional development, and the EI/ECSE personnel standards and cross-disciplinary competencies serve as essential indicators of effective DSA-guided practice for ECI personnel in inclusive, community-based early childhood systems.

Feasibility of developmental systems based inclusive programs

All communities, despite the incredible range of differences in every characteristic imaginable, share a common goal of creating environments most supportive of children's development. For this to occur, community-based early childhood systems of support and services must be firmly grounded in developmental science. Despite advances both conceptually and practically, the integration of developmental, intervention, and implementation science to establish such a system is challenging and legitimate questions exist about the feasibility of developing and enhancing early childhood community-based programs that are comprehensive. To establish such a system, an unprecedented level of commitment by all involved will be needed to support the DSA through each component. This will require the identification of the ECSE Specialist who will facilitate the team process and assessment of both the child and the team to strengthen the design and implementation of inclusive, family-centered, and developmentally based interventions.

Identifying needed resources along with other administrative and policy changes to further support communities to construct comprehensive early childhood programs is an ongoing process (U.S. Department of Health & Human Services and the U.S. Department of Education, 2023). Leadership at all levels will be critical, especially with respect to establishing a qualified workforce described in the previous section. Structured by the developmental processes discussed in this article and supported by a well-trained team of professionals who have a common understanding of well-established developmental influences led by the ECSE Specialist, a common framework for inclusive and comprehensive programs for young children with delays or disabilities can be achieved. An important addition would be the task of identifying, cataloging, and organizing strategies

consistent with the DSA components into a relevant set of interventions. Further advances in technology to facilitate sophisticated training and consultation programs will also be required. To be sure, exemplary inclusive programs based upon developmental principles and practices exist today in numerous communities, but many emphasize child goals as guided by P.L. 99–457. As noted, an important next step is to expand those educationally oriented programs to consider the more diverse, complex, and often challenging FPI and FR components, and to more fully articulate developmental principles and practices to both encourage and guide a more comprehensive community program.

Partnerships and comprehensive early childhood community programs

As a consequence of collaborations in inclusive programs among team members for children receiving ECSE services, discussions may arise with community early childhood program staff indicating that a DSA-based framework may be relevant to the complexities they are facing with unprecedented numbers of children from marginalized and underrepresented groups (Fantuzzo, 2024). Although most children in preschool programs do not qualify for services under P.L. 99–457, the challenges to community systems seeking to support early child development for these diverse groups are extraordinary. Indeed, engaging and seeking to coordinate with health and human services generates a sense of urgency in preschool programs when these larger developmental influences related to FR are fully recognized and integrated into the team process.

The need to address these more complex developmental influences on child development, such as home-based strategies linked to FPI and supplemental supports to academically oriented preschool programs, is becoming increasingly apparent. For example, the

influence of the quality of cognitive stimulation and emotional support in the home environment with respect to later aspects of child development are evident even when other critical variables including preschool quality are accounted for (Whitaker, Yoo, Vandell, Duncan, & Burchinal, 2023). Clearly, comprehensiveness adds an important dimension to both short- and long-term benefits of core aspects of child development obtained from high-quality preschool programs provided to diverse populations (see von Suchodoletz et al., 2023). The fact that a disproportionate number of children with delays or disabilities are among those in marginalized and underrepresented communities in the United States and other countries (e.g., Han et al., 2024) further suggests that partnerships that share a common framework applicable to all children and families may well be essential to forming a truly comprehensive and fully inclusive community-based early childhood system.

Partnership formation strategies to accomplish such comprehensive community-based systems for children are underway in the United States and elsewhere, with model projects established in numerous countries. From the perspective of data collection, the Integrated Data Systems model is an excellent example of a comprehensive effort that has been applied to systems of early childhood development (Barghaus & Jenkins, 2024; Fantuzzo, Henderson, Coe, & Culhane, 2017). These data systems bring together essential partners to create a common set of child and family information useful for planning and practice. Despite unique challenges, extraordinary opportunities exist in this context to develop a partnership-based administrative structure to support high quality data systems that can be integrated into comprehensive early childhood systems. This work further illustrates the potential and value of developing a thoroughly integrated early childhood system for children to five years of age (see Bruder, 2010).

Lastly, efforts to further the understanding that all children share common developmental processes throughout the early childhood period may help to shape perspectives within emerging partnerships. This approach can foster more positive attitudes and beliefs regarding influences on child development as applied to children with delays or disabilities. Indeed, a well-designed organizational structure for partnerships may lead to open discussions about topics that include attitudes and beliefs that have previously inhibited the design and implementation of high-quality early childhood systems, potentially minimizing program segregation and expanding opportunities for all children to participate fully within community early childhood programs.

Future directions: inclusion as catalyst

The integration of developmental, intervention, and implementation science as applied to early childhood programs creates

new opportunities to advance comprehensive early childhood community systems for all children. As discussed here, inclusive programs provide one such underutilized opportunity to foster such an early childhood system. Central to this effort are strategies that encourage and support the application of a practice model for children qualifying for special services that are firmly grounded in developmental science and are seen as broadly relevant to all involved. It is in this context involving children, parents/caregivers, and other team members in which developmental processes are identified and linked to evidence-based intervention strategies. In a real sense, as the title of this article indicates, engaging in inclusive practices within this developmentally based structure has the potential to serve as a catalyst for improving partnerships and ultimately the quality of comprehensive community-based early childhood programs.

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