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REVIEW ARTICLE

CHILDREN'S EDUCATION IN THE CONTEXT OF SOCIAL CHANGE

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ABSTRACT

Early childhood education has developed a specialised discourse to allow individuals within the profession to communicate effectively about all matters associated with the design and implementation of learning programs for children from birth to eight years. Early childhood education is changing rapidly due to the dynamic nature of positive and negative trends affecting the profession. This paper describes the early childhood education in the context of swiftly changing societal and global developments, Responding to the trend of increasing cultural and linguistic diversity in early childhood programs, not only in the Lombok-West Nusa Tenggara-Indonesia but in societies worldwide, requires teacher preparation programs to revise their content to reflect a culturally-sustaining mindset and provide practicum and field placements in a range of diverse settings. Early childhood teachers and administrators increasingly need the dispositions and skills-sets that encompass those of social workers to better respond to family diversity.

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INTRODUCTION

The belief that strong family-early childhood/school linkages are necessary and important for optimizing child development and academic performance has roots running deep in the history of educational practices. The number of recent position statements that have articulated the desired relations between families and educational institutions highlights the importance of family-school relations (Lawson and Briar-Lawson, 1997). These position statements emphasize a philosophy and an approach for working with families that aim to support and strengthen parents' abilities to provide their children with experiences and opportunities that have development-enhancing qualities, and they place a specific emphasis and concern on how this occurs (Bronfenbrenner, 1992; Dunst, 1997). Driven by positive and negative trends. Positive drivers of change can include increased understanding of child development, professionalization of the early childhood workforce, research exposing deficiencies in existing educational systems, public and private funding, improved policy-making and wide-spread advocacy, among others. Negative drivers of change challenge core pedagogical principles and knowledge about best-practices.

An over-emphasis on skill-based literacy and math standards can exclude balanced approaches to child development (National Association for the Education of Young Children 2015). The commodification of early childhood programming can place profit above child (Smith *et al.* 2016). Inadequate professional development and university and community college coursework often neglect important topics like social and emotional development and professionalism (Buettner *et al.* 2016). Valuable expansions to the curriculum, such as increased science opportunities in preschool, may experience lack of support due to uneven prioritization by parents themselves (Saçkes 2014). Restricted learning expectations and teaching methods adopted for expediency or efficiency undermine the child's right to explore and express (Nicolopoulou 2010; Tobin 2013). The concern that assessments may not match the ways children learn, and are often misused. Furthermore, neglecting children's mental health, physical health and moral development persists in the absence of holistic standards or accountability systems and measures that equally value each area of development. Holistic learning standards and the adoption of child-centered pedagogical standards are needed to counteract the loss of exploratory learning and arts education as a result of accountability systems that remain too narrowly focused. A holistic focus implies continued improvement in meeting young children's nutritional needs, regularly assessing social-

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emotional outcomes and explicitly planning for their enhancement, and ensuring that the gift of the scientific method, via inquiry and curricular integration, is given to all children through exploratory approaches such as play-based and project-based learning.

Children's social environment: The diverse types of family, economic, cultural, and linguistic circumstances that children experience have significant implications for their development. As the number of early childhood programs available to families increases and the number of children attending early childhood programs increases, the diverse environs from which these children come becomes increasingly significant. This ultimately is due to the a) increasing number of diverse influences on development and learning potentials that children experience. b), Experiential diversity stems from children who have vastly different kinds of experiences outside of school that either affect school readiness or their performance once in school. Cultural and linguistic diversity is one of the primary reasons why children may be experientially diverse. Socioeconomic status is another factor. Children who reside in poverty are more likely to experience inadequate health care, inconsistent childcare, stressed caregivers and unreliable or inadequate housing (National Education Association 2016). Consequently, children who reside in poverty usually begin school significantly behind their higher income peers. These academic and developmental gaps are often maintained without comprehensive intervention focused on the whole family. c), Research has shown that children living with no biological parents or in a single-parent home are less likely to exhibit self-control and are more likely to experience aggravated parenting (Manning and Lamb 2003). The importance placed on parenting in early childhood is evidenced by the increases in opportunities provided for parents in the form of educational opportunities, intervention, home visits, and parent training (Weiss *et al.* 2006).

Adhering to pedagogy that aligns with children's developmental needs and abilities is indispensable. Play has been understood as a pedagogy facilitating holistic child development by increasing social skills, emotional awareness and regulation, attention to behavioral norms, spatial reasoning, motor development, and more. "Awareness of self and others" has been valued as a key outcome of early childhood education. Graue *et al.* (2015, p. 13) summarize the traditional kindergarten: "The paint and clay, blocks and dramatic play, and naps all reflected a perspective that was more focused on social learning than academic outcomes." Learning is observed as a joyful experience when its methods align with children's natural curiosities by providing them with autonomy through choices, guided explorations and multiple forms of expression. The necessity to perform more abstract cognitive tasks associated with numeracy and literacy was traditionally expected at older ages (such as age 7 and above). Younger children were understood as learning to love the process of learning itself by exploring diverse facets of human experience and expression rather than primarily being expected to demonstrate discrete academic skills. Exploring communication, friendship, moral norms, health and nutritional needs, movement, thinking and reasoning, as well as one's community and the natural environment, have been foundations guiding integrative curriculum, pedagogy and daily interactions. Holistic and broad exploration of the social and natural environment was understood as providing children with the background knowledge necessary to understand and

have an interest in later academic concepts. For example, learning to love nature by caring for class pets, regularly planting flowers and exploring the outdoors would create an intuitive and practical understanding of ecology, sustaining motivation to persist in learning about related subjects later on, such as biology, chemistry and physics. Furthermore, the role of the early childhood teacher has been conceived as allowing children to discover themselves, their surroundings and their world, guiding children to form friendships, to find joy in diversity, to explore possibilities and take safe risks, with the assumption that this combination of child-centered and meaningful activities would cross over into an adult who is a self-assured, balanced and contributive. Working memory and attention are both improved through warm and nurturing social and emotional experiences (Epstein 2009). Brain research has also demonstrated the harm inflicted by experiences of toxic stress, such as sustained early separation between mother and child, persistent living conditions lacking in basic necessities, and abuse or neglect (Empson 2015). In a study of young children's brain development, Luby *et al.* (2013, pp. 1135-1136) found that poverty was associated with "smaller white and cortical gray matter and hippocampal and amygdala volumes...involved in stress regulation and emotion processing" but effects were mediated by the degree of support or hostility provided by the caregiver and the degree of stressful life events. A lack of stimulation, such as an environment where adults do not regularly talk with or around their children in a warm and ongoing manner, significantly slows brain development. The implications of this research all point to the brain's need for active, warm and purposeful stimulation and experiences that cause neural connections to form and strengthen.

The medical and health community is undergoing a significant change in perspective related to early childhood as well, with implications for many people, from pediatricians to school lunch providers. Drawing on the "converging, multidisciplinary science of human development," Shonkoff (2012), along with a number of committees and physicians, present an ecobio developmental framework with extensive evidence for the relationship between early childhood experiences, brain architecture and long-term health, particularly the lifelong effects of adversity and toxic stress experienced during early childhood. In an extensively cited technical report, they state that "many adult diseases should be viewed as developmental disorders that begin early in life" with the "alleviation of toxic stress in childhood" as a primary goal of the health community, calling on pediatric practice to become "front-line guardians of healthy child development" and "strategically positioned community leaders" informing strategies for the prevention of such stress (Shonkoff *et al.* 2012, p. e232). Of course, adequate nutrition from conception onwards is also necessary because micronutrients like iron, iodine, zinc and B-vitamins underpin health, allowing the child to interact with the environment more fully and therefore benefit from further stimulation that optimizes brain development (Prado and Dewey 2014). Changing the types of food served to young children, from snacks in preschool to school lunches, is an emerging positive trend responding to this research.

Social exploration in children's learning: A trend influencing of early childhood is that arts and exploratory learning are being gradually displaced by academic preparation as literacy and numeracy standards are emphasized. Access to

teachers with specialized training in art, music, and physical education has declined as education budgets have tightened. Despite evidence demonstrating that the arts when integrated into the early education curriculum can have long lasting, positive effects on children's academic achievement and overall success, there has been a continual decline in arts education in the early years of schooling (National Endowment for the Arts 2011). National art education surveys define art instruction as "music, visual arts, dance or drama/theatre and the process of producing such creative works" (Parsad and Spiegelman 2012). Children from low-income households perform better in high-school academics, college attendance rates, college grades and maintaining adult employment when they were actively involved in arts learning (Catterall 2009). Causal connections between music training in childhood and cognitive and neural functions for older people have been explored. For example, four or more years of music training is associated with increased neural processing of speech in older age (White-Schwoch *et al.* 2013). In early childhood, important concepts and moral values are learned through social experiences and corresponding bodily movement, both of which are facilitated by arts education and cooperative games that employ song, rhythm and dance (Bresler 2013). Educators' understanding that learning is optimized through participation of the "mind-body" as an inseparable whole, described by John Dewey (1928), continues to be overturned through a trend to reduce active movement in preschools (Tobin 2013) underpinned by a mind versus body dichotomy that has persisted in Western thought for millennia (Bresler 2013). The trend to reduce movement in preschool will be more effectively countered by sharing the findings from robust studies showing that social skills and other outcomes are associated with pre-school physical education (Tsangaridou *et al.* 2014).

Play-based, exploratory and project-based approaches follow their own pedagogies and require teacher preparation and training. Facilitating high-quality exploratory learning, by mastering the project-based learning cycle for example, is a skill needing several years of careful cultivation and assistance among a collaborative team of teachers. These approaches allow for playful initiative and expression across the curriculum. Yet discovery-based environments have been difficult to maintain among in-service teachers because the schedule has become stratified by subject, hindering integrated approaches and often leading to a reliance on direct instruction, which evidence suggests is less effective than discovery-based methods (Dean and Kuhn 2007). Research and product development conducted by science and industry is increasingly interdisciplinary, relying on broad knowledge synthesis to address complex problems (Jürgens 2013). Educational systems need to be coherent with reality by facilitating curriculum based on integrated and experiential reasoning. People who are able to integrate various branches of knowledge can address complex social problems as citizens and create the economy's new services and products. The integrative, flexible mind has long sat at the top of the creative-economic hierarchy. We quickly add, however, that without a moral foundation supported by attention to character development (broadly defined) and community-building, such individuals may become economically prosperous yet lack concern for social justice, exacerbating the divide between rich and poor, as they pursue individual interests in adulthood without regard for public welfare. Clearly, holistic education aims at the vision of a harmonious and equitable society as

much as it includes advancing a prosperous economy for all and one's place in it. A moral vision is needed to guide education to focus on both individual and community well-being and preparation for citizenship in a democracy that upholds social justice and protects the common good. Loss of the moral vision that has long supported the values of citizenship and democracy as a primary purpose of education appears to be an ongoing trend influencing curriculum and instruction across the educational spectrum (Ravitch 2016). When young children participate in an integrated curriculum, that is genuinely holistic and ethically guided, they more naturally make connections between and across subject matter, triggering heightened creativity, becoming better skilled at reasoning in a multidisciplinary and integrative manner, and are more likely to think beyond the constraints of a discipline and focus instead on wider purposes for learning.

Children's learning orientation: Constructivist theory is the foundation of the guidelines for developmentally appropriate practices in early childhood education, as described by the National Association for the Education of Young Children (Bredenkamp and Copple, 1997). Curricula for young children with and without disabilities have been based on a constructivist theoretical framework (e.g., Haywood, Brookes, and Burns, 1992). Major contributions of this perspective are an understanding of the content of children's development, an appreciation of the importance of children's self-initiated actions on and interactions with the environment, and recognition of the critical role adults play as mediators of children's learning. Although some *early childhood special education* professionals distance themselves from the early psychoanalytic work of Freud, Adler, and Jung, current developmental psychodynamic theory contributes to practice in *early childhood special education* (Emde and Robinson, 2000). Difficulties in attachment formation have long been noted for some infants with disabilities and their caregivers (Emde and Brown, 1978; Fraiberg, 1975). The emphasis on building relationships with caregivers has guided practice in many infant programs (Bromwich, 1997), is also found as a central feature in some programs for preschool-age children with disabilities (Greenspan and Wieder, 1999), and is of importance for all programs in *early childhood special education*. The major contributions of this theory are the emphases on establishing and strengthening relationships with primary caregivers and on young children's social-emotional development.

Ecological theory also influences practice in *early childhood special education*. Several useful ecological theories exist, but Bronfenbrenner's (1979) is the most prominent and influential. His ecological systems theory underlies understanding of the many factors influencing *early childhood special education* services (Odom, 2001) as well as how services are provided for families and children. Ecological psychology (Barker, 1968), in combination with applied behavior analysis (Morris and Midgley, 1990), serves as the foundation of ecobehavioral assessment, which has been used to identify influential elements of classrooms (Ager and Shapiro, 1995; Odom, Favazza, Brown, and Horn, 2000). The major contributions of ecological theories are (a) its emphasis on factors within the immediate setting (e.g., home, classroom); (b) the interrelating influences of different settings in which a child participates (e.g., communication between parents and teachers); and (c) the influences of the broader ecology (e.g., state policies, cultural values). Available evidence about family-school

relations has indicated that family-allied approaches dominate the ways in which parents are involved in their children's education (Carey, Lewis, Farris, and Burns, 1998; Epstein and Lee, 1995), except in instances where family resource programs (Romualdi and Sandoval, 1997), school-linked services (Lawson and Briar-Lawson, 1997), or full-service school models (Dryfoos, 1997) are used to promote parent participation in schools. In the latter cases, practices are characterized by features that primarily align them with a family-allied or family-focused approach. Although policymakers, advocates, teachers, and researchers alike recognize the value and importance of family-centered practices (Lawson and Briar-Lawson, 1997; Melville, Blank, and Asayesh, 1993). Research on the attitudes and behaviors that school personnel use to engage families indicated an appreciation for the relational components of help-giving but an almost complete lack of concern for or use of participatory help-giving practices. Both direct and corroborating evidence has indicated that school personnel attitudes toward families (especially attitudes pertaining to parenting competence and the capacity to become competent), teacher interpersonal behavior (including but not limited to effective communication styles), and school personnel compassion and welcoming behaviors contribute to positive, productive family-school relations (Baumgartner, Bryan, Donahue, and Nelson, 1993; Michael, Arnold, Magliocca, and Miller, 1992).

Another source of evidence permitting inferences about the family-centeredness of early intervention and preschool programs comes from findings of studies using family-oriented rating scales for measuring program practices (Bailey, 1990; Murphy, Lee, Turnbull, and Turbiville, 1995). The findings from these studies have indicated that the numbers and percentages of parents experiencing family-centered practices, or practices showing a presumption toward family-centeredness, are lower than would be expected or desired (Mahoney *et al.*, 1990; Thompson *et al.*, 1997). Mahoney *et al.* (1990), for example, found that only 45% of the items on the Family-Focused Intervention Services Scale were rated as always or almost always experienced by parents of children in early intervention programs, and only 30% of parents of children in preschool programs rated the practices as always or almost always experienced. Ernest, Sexton, Stricklin, Thompson, and Jardine (1997) also found that families of children in pre-school special education programs rated practices they experienced as less family-entered compared with families of children in early intervention programs. Similarly, Burton (1992) found that Head Start programs were the most family-centered and public school prekindergarten and kindergarten programs were the least family-centered. The fact that early intervention and preschool programs are not as family-centered as is often claimed is illustrated with data from a study by Dunst and Brookfield (1998), in which parents completed the family-centered subscale of the Family-Oriented Practices Scale (Dunst and Trivette, 1995).

Children learn through actions and observations: In many cultures adults and children learn by observation. In Rogoff's (1990:129) meta-analysis of the cross-cultural literature in this area, she stated: the method of learning to use the foot loom in a weaving factory in Guatemala is for the learner (an adult) to sit beside a skilled weaver for some weeks, simply observing, asking no questions, and receiving no explanations. The learner may fetch a spool of thread from time to time for the weaver, but does not begin to weave until after weeks of

observation, the learner feels competent to begin. At that point, the apprentice has become a skilled weaver simply by watching and by attending to whatever demonstration the experienced weaver has provided. Like the descendants of the Sasak Lombok tribe, West Nusa Tenggara-Indonesia, whose daily lives follow their parents who diligently weave, of course, after their teenagers, can weave like their parents, as a result of diligently helping their parents, in weaving since childhood. The families had videotaped observational learning and discussed their documented video-recording as evidence of its importance, noting that 'doing' was more important than 'telling'. Rogoff (1990:126) suggests that 'Westerners' view observation without explanation as a passive activity: Mainstream middle-class researchers, who rely less on observation, tend to think of it as passive. However, it is clear that children and skilled adult observers are very active in attending to what they watch.

In the guided participation of children in cultures that stress children's responsibility for learning, children may have the opportunity to observe and participate when ready in the skills of the community and may develop impressive skills in observation, with less explicit child-centred interaction to integrate the children into the activities of society. (p. 129). Marilyn Fler 70 Since children are embedded within the community, they have numerous opportunities to observe real-world activities that are important in that community. As observers of ongoing and frequent community activities, they have plenty of time to watch. They have many opportunities to participate in aspects of community activity, and they have many family and community members on hand to support their efforts. The full performance of the community activity and the repetition of these performances provides time and space for children to observe and develop observational skills (Collier, 1988; Briggs, 1991; Lipka, 1991; Stairs, 1991; Chavajay and Rogoff, 1999; Fler and Williams-Kennedy, 2002). In this way it is possible to see how observation is not necessarily a passive and therefore less useful approach to learning for young children.

For some children, learning by observation is very important in their culture. To foreground active exploration through activity and adult narration would mean some children's modes of learning are not catered for in early childhood education-in effect they are silenced: Understanding variations in cultural patterns for learning through observation may be particularly important in improving the ability of schools to serve children whose family and community backgrounds emphasize observational learning. (Mejia-Arauz and Rogoff, 2001, p. 10). At present there is a disjunction between children and communities who value observation as a vehicle for learning, and the beliefs and practices in early childhood education in many Western and Indonesia communities. Many factors influence children's learning and development, including their genetic makeup, the status of their central nervous system, their health and physiological functioning, and the risk and opportunity variables in their families and communities. However, since the early 1960s, an appreciation has grown for the power of proximal environments and children's experiences in shaping their own learning and development. Concomitant with these developments was a dramatic revision in the view of infants' competence. Whereas infants' and young children's learning was once seen as emerging from biological maturation or from environmental shaping, the current perspective is that infants actively adapt to, learn about,

master, control, and understand their worlds (Sameroff and Fiese, 2000). As such, their experiences-interactions with their social and physical environments-are opportunities for learning (Dunst, Hambry, Trivette, Raab, and Bruder, 2000). The active nature of young children's learning leads to infants and young children actively engage in activities and events and use materials that hold interest for them (Odom *et al.*, 2000). Such engagement leads to competence and mastery, which in turn leads to additional interests (Dunst, Herter and Shields, 2000). Thus, attending to child interests and child-initiated interactions is important. For infants and young children, contingently responsive toys, physical environments, and social interactions are positive forces in promoting learning and development (Landry, Smith, Swank, Assel, and Vellet, 2001; Wachs, 1979). For preschool children with disabilities, Schwartz, Carta, and Grant (1996) documented the relationship between engagement in effective learning opportunity. Promoting children's engagement is an essential practice in EI/ECSE classes (Wolery, 2000).

To foster positive outcomes, service providers must influence large proportions of children's experiences (McWilliam, 2000). Hobbs (1966), in describing his ecological approach to working with children with emotional difficulties, stated that "every hour in every day, is of great importance to a child, and when an hour is neglected . . . teaching and learning go on nonetheless and the child may be the loser" (p. 1109). In home-visiting programs, partial-day classes, clinic-based programs, and many inclusive classes, specialists have little contact with the child. Thus, interventions for children must be mediated through adults who often do not have formal specialized training (McWilliam, Wolery, and Odom, 2001). In those contexts, there may be a concern that instruction for the child is not specifically planned or implemented as it would be in a more specialized setting. To counter this concern, researchers have designed effective interventions that may be implemented in natural environments by staff or family members who are naturally present in the home (Rule, Losardo, Dinnebeil, Kaiser, and Rowland, 1998).

Curriculum of learning in children's education: For schools in under-resourced areas with high yearly teacher turnover, administrators may prescribe a scripted curriculum to ensure minimum attention to the embedded standards. When a prescriptive curriculum is aligned to assessments, as is often the case, the content and learning opportunities are narrowed even further as children's content knowledge that is not tested becomes expendable. The use of prescriptive and narrowed curricula tied to accountability-driven assessments often manifests itself in child dispositions of tedium, rather than joy, in the learning process. Another trend then emerges, described as "judging children against predetermined measures of 'readiness' rather than fulfilling each child's potential" and "relying on tests for evaluation rather than meaningful conversation, collaboration and assessment through reflection (Lewin-Benham 2011, pp. 6-12)." A prescriptive curriculum can serve as a helpful support for inexperienced teachers, but it also narrows learning opportunities for children and constrains experienced teachers. Like the children, teachers working under high-stakes accountability systems describe a loss of joy in their work (Rooney 2015). Ethnographic research on teachers from high-poverty urban elementary schools suggests that "a narrowed curriculum has impeded teachers' access to intrinsic rewards" causing teachers to feel that they are no longer working in children's best interests and are unable to

maintain their own "vision of good teaching" (Rooney 2015, p. 477). In a single school, repeated curricular change creates extra work for teachers, confusion for parents and inconsistency for children. The profit motive may contribute as education companies, consultants and trainers seek to sell one curriculum, approach or solution over others. As the public appreciates the necessity and importance of early education, the educational market widens further, attracting more vendors claiming evidence-based or research-supported methods in their marketing materials. The concern that education in general is fast becoming a consumer marketplace to the detriment of children and the public good has been deeply discussed (Ravitch 2016; Smith *et al.* 2016). A conflict of interest needs to be identified between publishing and other educational service companies, on the one hand, and children on the other. Accountability remains a significant concern in early childhood education for many reasons: (1) different learning outcomes are not weighed equally, valuing some developmental domains over others, (2) the consequences for poor performance disproportionately affects low-income schools, (3) resources to improve quality or performance, such as on-site coaching, may not be provided, creating a situation where requirements increase but resources fall or remain flat, (4) there is no corresponding set of enforced pedagogical standards to ensure that academic standards are implemented in developmentally appropriate ways.

The data collected in conjunction with program evaluation can be used as a roadmap to improvement. This can be accomplished by associating various program components with gains in child outcomes. Increased accountability is the potential enhancement of professional development opportunities. Accountability procedures can lead to concrete evidence that is connected to which program areas are in need of improvement. This in turn can lead to professional development opportunities that are targeted towards improving these areas (Love 2006). Increased accountability can be helpful in monitoring trends (Schultz and Kagan 2007), or for formative evaluation. Collecting systematic programmatic data will allow programs to examine outcomes of their program components over time. Increased accountability among early childhood programs has led to enhanced visibility and support for early childhood programs (Christina and Nicholson-Goodman 2005).

Children's social skills: Early childhood education is a dynamic international field. A deeper commitment to early care and development has emerged globally by targeting preschool access and quality in countries around the world. For most countries, the education goals agreed upon through the 2030 Agenda for Sustainable Development of the United Nations provides a framework to evaluate progress on particular targets and indicators related to early education. Some countries have made substantial investments in public preschool to ensure equitable participation for all children regardless of income level. However, a major trend in most countries continues to be the rapid spread of private preschool providers in the absence of significant government funding and institutional support for public preschool. Funding for research related to the benefits of high quality early education has increased. High quality and comprehensive public preschool has been associated with higher school readiness, cognitive and social skills, higher lifetime wages and reduced crime and lower teen pregnancy rates (Public Policy Forum 2009). For parents, access to quality child care has contributed to

improving parenting skills, finding and keeping work and higher wages (Public Policy Forum 2009). As advocates increasingly take a holistic view of child development and work for comprehensive child well-being as the goal, rather than limiting their efforts to single causes, a movement embracing all stakeholders consolidates. Funders must likewise realign their priorities towards comprehensive development because advocates implement restricted solutions often because of funding limitations. As funders seek not to duplicate efforts, the fragmented approach to educational improvement slows progress towards overall child well-being for the majority of lower income children. Integrative solutions are needed for positive educational change and child well-being just as much as interdisciplinary creativity is needed for economic success in the corporate sector. This principle of integration is being applied through systems-theory and collaborative approaches such as the community schools model and "promise neighborhood" programs. Unhelpful political divisions of the past will need to be put aside to set comprehensive and holistic child development as the key priority among all educators, policy-makers, researchers, advocates and funders. Divided groups advocate for or against various components necessary for holistic child development (e.g. for or against character education or play-based learning) rather than recognizing and building upon the contribution of each. Dichotomous and ideological thinking narrows priorities, preventing a comprehensive vision of child, family and community well-being from solidifying. What is needed, instead, is thinking that values the contribution of each domain of development.

The emerging field of human ecology is a good example of comprehensive systems thinking as it embraces sciences focused on the individual (psychology) while working for comprehensive human-environment solutions (integrating sociology, economics, ecology) with education seen as a bridge for both individual well-being and global human-ecological balance and prosperity. Prioritizing holistic child development requires systems thinking that is universal and integrative by nature. As such open-minded thinking spreads, comprehensive, intergenerational and community-based partnerships and approaches emerge. Stakeholders can then triangulate their efforts on a single goal: the holistic well-being of all human and ecological life (child, family, society, environment as inseparable, interdependent parts of a whole social ecology). Terms such as "ecobiodevelopmental" and "bioecological" help represent the integrative and holistic system emerging. Early childhood conditions are a key indicator of overall social-ecological health, reflecting current levels of equity and dysfunction while predicting future social-economic-ecologic problems or strengths. Prioritizing holistic child development by blending the skills of specialists and agencies in comprehensive and community-based systems will serve the needs of child, family and neighborhood and shape an expanded educational vision to leave no person behind.

Teacher in service: In service teacher preparation and development is an important part of ensuring that the experiences that children receive in early childhood programs are of high quality.

It is proposed that teacher preparation and professional development should insure individuals have: a) A strong foundation in both typical and atypical child development. An understanding of atypical development should include an awareness of the ways in which social, political, and physical

environments can affect developmental trajectories in children. b) More depth of understanding within each curriculum content area so that appropriate cross-curriculum connections can be made. This should also include an awareness and understanding of related national. c) An understanding and appreciation for the cultural, linguistic, and socioeconomic differences among children. This will increase teachers' appropriate responses to children's unique strengths. d) An understanding of the implications related to risk, resiliency, and protective factors that may influence children's learning potential. This has the potential of increasing the likelihood that teachers will recognize the abilities in each child, therefore leading to teachers having high expectations for all children. e) An expanded focus on extended field and clinical experiences that begin early and include guided observation, exploration and assisting in teaching, active participation, and student teaching that encompasses all the grade and developmental levels represented in early childhood education. By understanding how to connect families to community resources such as after-school care, health care, counseling services, enrichment opportunities and job training for parents. Traditional teacher-parent engagement models that have often emphasized parents' support of early literacy and math also need to be extended to include social-emotional learning competencies, creativity and arts involvement. Adopting the community-school model will help mitigate against over-burdening teachers and better serve diverse families.

Conclusion

The natural environment and social customs worldwide are all a state of rapid change. Preparing children for such a dynamic world requires reasserting the importance of holistic child development through play-based experiences that both encourage and teach children to take safe risks and become creative problem-solvers. Curriculum needs to emphasize multiple forms of expression and focus on guided exploration. Participation in such a diverse social milieu and economy also requires that children develop broad social skills, emotional awareness and regulation. The necessity for constant learning in adulthood, regardless of industry, ought to re-focus all stakeholders on helping young children learn to love the process of learning through a curriculum that follows their interests and does not over-emphasize academic skills. Advances in research continue at a tremendous pace, revealing to a greater extent the importance of each area of child development. This has important implications for early childhood practice, such as optimizing language development, emotional well-being, character strengths, child nutrition, early literacy and numeracy, children's experiences with nature and the arts, the necessity of a stimulating environment, executive functioning, developing resiliency, and involving children in integrated projects related to science, engineering and math, among other areas. With recent early childhood research now so broad and interdisciplinary, the need for experiential and integrative pedagogy aligned with holistic standards has been greatly reinforced as evidence mounts that the well-being of a living organism, a child, cannot be parsed and sectioned. The entire organism must be nourished, and consequences become severe when any area of development is neglected and when loving relationships are not present to ensure developmental balance is maintained across all aspects of a child's life. Teachers need a stronger foundation in child development, deeper knowledge of risk, resiliency and protective factors, more encompassing clinical experiences, and pedagogical

practice facilitating scientific inquiry alongside creative and artistic expression. Although not described in this paper, such preparation and training must also include elementary school principals and others in roles of leadership who need to understand early childhood development and best-practices.

Globally, the United Nations development agenda continues to provide a common framework for governments and civil society to support early care and education, by advocating for public preschool expansion in all countries. Worldwide, preschool is expanding via over-reliance on private providers, often excluding lower-income children. We need increased funding for public preschool, more rigorous research in support of high quality early care and education, and systems-thinking to protect holistic child development, where family and community well-being are recognized as inseparable. Promising interdisciplinary empirical frameworks for inquiry and practice such as human ecology facilitate the type of open-minded investigation that is needed to build and improve support networks for children, families and communities and inform related policy-making.

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