
CRITICAL ISSUES IN EARLY CHILDHOOD EDUCATION

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DEFINITIONS

What Is Early Childhood Education?

Early childhood education generally focuses on children ages 3–8. However, early childhood programs exist that serve children starting at birth. Many features of early childhood education are distinguished from other educational contexts that will occur in a child’s lifetime. Most notably, prior to children entering kindergarten, they may attend a variety of schooling environments including home day care, center-based day care, public programs such as Head Start, or private preschools. The quality and resources of those programs differ greatly, as do the professional expertise of the teachers in the varied classrooms or early childhood settings. In most states, early childhood educators outside of public schools do not need a bachelor’s degree to teach. The field of early childhood education is fraught with some of the lowest salaries in the nation, another discouragement for young college students who aspire to be early childhood educators. Yet, what we do know about early childhood education is that it lays the foundation for all future endeavors of young children. An enormous amount of research links early childhood behaviors and early childhood environments to later academic success in school. Policy makers have discovered that early childhood education is an investment in the country’s future. Researchers have found that for each dollar spent on preschool, between \$4–\$8 is saved in later social service costs to society (Barnett, 2007;

Karoly & Bigelow, 2005). These factors must be kept in mind when examining critical issues of early childhood *gifted* education.

What We Know About Intelligence

Almost any discussion of giftedness begins with the assumption that gifted children have scored high on a measure of intelligence. Psychologists in the field of gifted education have embraced the use of intelligence testing and defined giftedness relative to an IQ score since the Terman studies in the 1920s. But today, new fields, advanced technology, and research inform our knowledge about intelligence. We know that not only are there several theories that demonstrate multiple dimensions of intelligence or multiple intelligences (Gagné, 2010, Gardner, 1993; Sternberg, 1985), but also that intelligence is malleable (Dweck, 1999). For example, brain scans actually show differences in structure between musicians and nonmusicians, demonstrating that our brains are not static organs, but rather adapt to the skills that are learned and practiced (Gaser & Schlaug, 2003). Thus, a young child's capacity to learn is not known in preschool. All children can become *more intelligent* (grow new brain connections) with practice and exposure to new skills.

Understanding that intelligence is not a static characteristic, educators in the field of gifted education are embracing a talent development model across the lifespan (Horowitz, Subotnik, & Matthews, 2009). According to Horowitz et al. (2009),

The evidence is that there is no accurate prediction across the life span as to who will be gifted or talented; there is no evidence that once a person is identified as gifted or talented such a status will necessarily endure. In theory, from a dynamical systems perspective, there is no reason to expect early identifications of gifted and talented behavior to be necessarily predictive over the long term. (p. 7)

What we do know is that prior experience matters in developing knowledge, skills, and dispositions. Subotnik, Olszewski-Kubilius, and Worrell (2011) provided a thorough discussion of the psychological science that supports the developmental view of giftedness. They argued,

Further, giftedness can be viewed as developmental in that in the beginning stages, potential is the key variable; in later stages, achievement is the measure of giftedness; and in fully developed talents, eminence is the basis on which this label is granted. Psychosocial variables play an essential role in the manifestation of giftedness at every developmental stage. Both cognitive and psychosocial variables are malleable and need to be deliberately cultivated. (p. 3)

This information emphasizes the need to nurture potential in early childhood and provide opportunities and experiences that allow children to develop their strengths and talents.

Although the Talent Development Mega-Model (Subotnik et al., 2011) has been criticized for its end goal of eminence (Borland, 2012), the principles provide a clear path for early childhood talent development. It is a path that begins by nurturing potential, and it is one that assumes that all children can develop abilities—they need opportunities and education to grow their strength areas. Whether or not they become eminent in a field may be dependent on more than individual behaviors, but their high IQ will not determine it at a young age, nor their label as gifted in elementary school. The purpose of expounding on theories of developmental trajectories is to demonstrate again that with young children, it is paramount that they have opportunities to develop their skills and expertise—their potential is unrealized.

What We Know About Early Environmental Influences: Poverty's Influence on Learning Opportunities

Access to gifted programs has been undeniably inequitable in the United States. Looking at the 1991 National Education Longitudinal Study of eighth-grade programs for gifted students by the U.S. Department of Education, Borland (2003) cited,

Data from this study indicate that students whose families' socioeconomic status places them in the top quartile of the population are about five times more likely to be in programs for gifted students than are students from families in the bottom quartile. (p. 116)

Reasons given for these inequities generally include ways in which students are identified, teachers' attitudes and beliefs about stereotypes of gifted children, lower expectations of children from low-income backgrounds or dual language learners, and students' prior experiences, including family and home life. Discrepancies in children's prior experiences have a profound impact on their schooling.

Young gifted children tend to come from relatively advantaged homes (Gottfried, Gottfried, Bathurst, & Guerin, 1994). Robinson (2008) noted these advantages included time with their parents in preliteracy activities such as reading and making up songs and rhymes, as well as enriching experiences such as vacations and visits to museums, parks, and theaters.

The focus of the Office of Head Start is to address vast differences between experiences of children coming from low-income homes as compared to their peers who start school with greater academic readiness because they come from higher income homes. The concept of children "at risk" refers to dissimilar odds for school success because of their early learning experiences. Much

research has focused specifically on how home environments differ and what interventions can be implemented to provide all children with the same odds for succeeding (and perhaps having access to gifted programs) in school.

The bodies of knowledge in the areas of school readiness, and in particular language and literacy acquisition, greatly inform our work with young children. Although too comprehensive to address with thoroughness in this chapter, the essential findings are summarized because they have implications for practice.

Vocabulary development is one of the key factors in the achievement gap between high- and low-income students. Research has shown that children from low-income homes hear an average of 8 million fewer words per year than those from wealthier families. That's more than 30 million fewer words by the time the child turns 4 (Hart & Risley, 2003). In addition to the amount of words spoken, vocabulary growth and style of interaction were well established by age 3 and clearly suggested widening gaps to come (Hart & Risley, 2003). Left without intervention, the children from the low-income homes never catch up. Suskind's (2012) project, called the "30 million word gap," provided intervention to families to increase not only the amount of words spoken in the home, but the turn taking between adult and child, engaging the child in conversation. Hart and Risley (2003) did not underestimate the power of language to predict future outcomes and improve students' life experiences. They stated, "Once children become independent and can speak for themselves, they gain access to more opportunities for experience. But the amount and diversity of children's past experience influences which new opportunities for experience they notice and choose" (Hart & Risley, 2003, p. 9).

Many studies of achievement gaps intertwine race and ethnicity with income levels, demonstrating that ethnicity does not account for differences in achievement alone. The ECLS-K sample of more than 16,000 children and families also revealed the close connections between race/ethnicity and social class; children who are Black or Hispanic are much more likely to be in the lowest SES quintile than White children. Low-SES Black and Hispanic children enter kindergarten more than half a standard deviation below the national average in math and reading achievement (.68 SD below the mean in math and .56 SD below the mean in reading for Black low-SES children; .71 SD below the mean in math and .69 SD below the mean in reading for Hispanic low-SES children), while high-SES White children scored far above the national average in math and reading (.70 SD above the mean in math and .64 above the mean in reading; Lee & Burkam, 2002, as cited in Espinosa, 2005, p. 837).

According to the National Center for Children in Poverty (Addy, Engelhardt, & Skinner, 2013), more than 13 million children in the United States live below the poverty level. Of the 24 million under age 6 in the United States, 25% or 6 million live in poor families. The number of Hispanic children living in poverty is particularly large. The National Center for Children in Poverty also reported that an overwhelming majority of poor children are of Hispanic origin. This is especially important to understand when we compare

achievement gaps between children whose first language is English and those for whom it is not. The statistics show that there is an achievement gap.

Espinosa's (2008) research and summary of best practices counters myths about dual language learning. She insisted that for young children, "the most recent evidence suggests that intensive support for the home language during the preschool years will help, not hurt, long-term attainment in English" (p. 5). The implications for teaching in early childhood environments are clear from this research. Early childhood education should support children's first language and introduce children to English. (For the complete list of recommendations for assessing children who are English language learners, see Espinosa, 2005.)

The knowledge we now have about children from low-income homes, as well as children who are English language learners, suggests that these children are no less gifted or less intelligent or have fewer aspirations to become eminent. These children simply need different and varied learning experiences to reveal their strengths and talents. In fact, research supports that these children, if given the opportunity

to work in their areas of strength, can acquire new skills and appear more competent to themselves and to others. Drawing attention to and nurturing at-risk children's areas of strength offers a promising alternative to the all too typical characterization of this population as deficient. (Chen, Krechevsky, & Viens, 1998, p. 67)

CURRICULUM AND INSTRUCTION FOR YOUNG CHILDREN— WHAT DO WE KNOW?

What Type of Early Childhood Programs Make a Difference?

There are few early childhood gifted programs in the country, and therefore, there is little research in the area of curriculum and instruction for young gifted children. Most early childhood programs are therefore inclusive where children are not yet identified as gifted. The research on best practices in early childhood education points to the need for high-quality programs and environments to meet the needs of diverse learners.

In a review of the literature about effective early childhood curriculum, the researchers analyzed characteristics of programs that increased achievement of young children (Chambers, Cheung, Slavin, Smith, & Laurenzano, 2010). Of the 27 programs that met their criteria for high-quality studies, only six showed evidence of effectiveness, and five had moderate evidence of effec-

tiveness, but not necessarily long-term gains. The authors noted, “The programs focusing on mathematics instruction generally improved mathematics achievement; those focusing on literacy and phonological awareness increased those skills” (Chambers et al., 2010, p. 37). They also reported, “At the same time, the Cognitive Developmental approach emphasizes the importance of giving children choices and fostering their autonomy and self-regulation, scaffolding children’s development by providing the foundational knowledge in an interactive, constructivist way” (Chambers et al., 2010, p. 38).

In the Cognitive Developmental model, “The teacher strikes a balance between on the one hand, standing back and allowing the child to lead the way, and, on the other hand, moving forward and providing the stimulation and direction that will guide subsequent learning” (Feinburg & Mindess, 1994, p. 97). For all early childhood education, not just for gifted education, the educator’s role is to “present children with challenges that are appropriately confounding and to present children with the opportunity to wrestle with these challenges in active meaningful ways” (Feinburg & Mindess, 1994, p. 89).

Early childhood learning environments are so important to later positive outcomes in life that federal Race to the Top money is being invested in rating the quality of early childhood programs to pursue additional research in this area. Best practice in early childhood curriculum and instruction is captured through standards set forth for accreditation criteria of the National Association for the Education of Young Children, the revised Head Start Child Development and Early Learning Framework, as well as many state standards for early learning. Consistency exists for measures of high quality, which are noted in these elements:

- Understanding broad developmental trends while planning for individual development
- Balancing instruction to engage diverse learning styles and address all domains
- Creating environments that are safe, stimulating, and welcoming for children of all ability levels
- Meeting children’s basic need for sustenance, shelter, clothing, and health care
- Encouraging processing and representation in a variety of ways
- Helping children make personal connections and find meaning in their experiences
- Supporting families with respect for family diversity. (Jalongo et al., 2004, as cited in Follari, 2007, p. 17)

The implication of these practices for early childhood talent development is that high-quality early childhood programs include addressing the varied levels of development in children, and also meaningful learning experiences across all domains. Therefore, young children who have advanced experiences in specific areas and skills beyond their peers should be challenged in high-quality early

learning environments and should not need labels or separate learning environments from their age-mates to be challenged. A high-quality early learning environment addresses the needs of the whole child, including the social and emotional domain of development. How people wrestle with challenges and especially how young children demonstrate skills of task persistence, initiative, and curiosity has also been studied and has shown to indicate predictions for their future.

What We Know About Approaches to Learning

Denham and Weissberg (2004) discussed the organizational perspective of children's learning in their review of the literature on socioemotional learning. They stated,

An important task of early childhood is to move from primarily lower brain control (where arousal and desire equal behavior), to the coordination and self-regulation of emotion, cognition, and behavior via cortical capacities. Such capacities include maintenance of attention, social problem-solving skills, frustration tolerance, and management of affect, all of which are critical to academic, social, and personal outcomes. (p. 2)

Their review confirmed connections between positive peer relationships and later mental health and well-being, as well as better academic performance. The research on social-emotional learning also confirmed that early childhood interventions can mediate outcomes. This has a direct impact on the field of gifted education because giftedness is often labeled by observing strengths that we now know can be taught. Parents and teachers can help children approach learning tasks positively and improve their executive functioning skills.

Five behaviors comprise the category "approaches to learning" in the Head Start Child Development and Early Learning Framework: initiative, curiosity, persistence, attentiveness, and cooperation. Checklists of these behaviors have often been included in identification components of giftedness. Parent support and the learning environment are linked strongly to a child's readiness to learn (Chazan-Cohen et al., 2009). Teachers who integrate intentional teaching of approaches to learning within the academic curriculum encourage sustained academic success (Fantuzzo, Perry, & McDermott, 2004). Research suggests that developing positive approaches to learning at home may be even more critical than at school in mediating long-term academic achievement (Chazan-Cohen et al., 2009; Dominguez, Vitiello, Fuccillo, Greenfield, & Bulotsky-Shearer, 2011; Hindman & Morrison, 2011; Iruka, 2008; Kleisner Walker & MacPhee 2011).

In Renzulli's (2012) discussion of his four-part theoretical approach to talent development, he too recognized the research that explained the impor-

tance of executive functioning skills. He stated, “These authors point out the importance of noncognitive skills in personal and social as well as academic development and—more important for this overall theory—a meta-analysis showed that these skills could be taught” (Renzulli, 2012, p. 157). This informs the field of early childhood talent development—not only do we need to build upon students’ cognitive strengths and provide learning experiences in their strength areas, but interventions that address positive approaches to learning and executive functioning skills will facilitate the nurturing of potential found in all young children.

DEFENSIBLE CONCLUSIONS

From these bodies of research, we can defensibly conclude the following:

1. Young children have potential for talent development.
2. Early life experiences greatly impact later achievement.
3. Poverty has a profound impact on children’s learning experiences.
4. Building a foundation in children’s first language helps them to acquire English.
5. High-quality early learning environments challenge young children and address their individual learning needs.
6. The social-emotional skills and positive approaches to learning that enhance peer relationships and later achievement can be taught.

LIMITATIONS OF THE RESEARCH ON THIS TOPIC

Previous studies about gifted young children most frequently used IQ as the determining factor for identification and research on this subgroup of children. This narrow, but standardized definition severely limits an examination of what we can learn about all young children. By broadening the scope of knowledge to include what influences young children’s learning, we gain a better perspective of how to nurture and develop their talents.

Although there is research suggesting that specific types of curricula, and particular interventions or instructional approaches do improve child outcomes, more research is needed to understand how teachers optimize potential in young children. Why do some practices work effectively with some children, and not others? What roles do individual differences play in taking advantage of learning experiences and opportunities? And finally, in what ways may early childhood educators narrow the *opportunity gap* for young children, so talent development could be a goal for all children?

PRACTICES NO LONGER DEFENSIBLE

Practices that are no longer defensible based on the review of existing literature include, but are not exhaustive:

1. The practice of labeling young children as gifted through standardized tests, in particular IQ tests, for the many reasons stated above, including changes in conceptions of intelligence, and what we know influences early learning.
2. The use of behavioral checklists that include curiosity, persistence, and attentiveness to label young children gifted. We know that these skills can be taught and should be part of all early childhood learning experiences.
3. The practice of separating young children—determining some are gifted and others not—does not take into account influences of early learning experiences and unwittingly serves to widen the opportunity gap.
4. Children learning English should be gaining a foundation in their first language as well as acquiring a new language. Pulling them out of instruction in their own language to attend special programs (e.g., gifted programs) should be done with caution.

PRACTICAL IMPLICATIONS

Ambrose's (2009) discussion of large-scale socioeconomic, political, and cultural influences on giftedness and talent and his theory of aspiration and self-fulfillment informs the field of early childhood gifted education. There are numerous influences way beyond the child's world that may impact a child's talent development. All teachers of young children should be aware of these. What we should do as best practice in early childhood gifted education is mediate these influences so that all children have access to the aspiration and self-fulfillment that Ambrose described. Early childhood education should serve as a foundation for building upon strengths, providing opportunities for children to connect their prior experiences to new ones, and developing the positive approaches to learning that may later manifest in expertise or talent.

RELEVANT AND ADDITIONAL RESOURCES FOR EARLY CHILDHOOD EDUCATION

Many of the resources for studies related to young children are available through national organizations and association websites. Effective practices are

included in position statements, learning standards, and executive summaries of research—all available from organization websites.

- *National Association for the Education of Young Children*—<http://www.naeyc.org>
- *National Center for Children in Poverty*—<http://www.nccp.org>
- *Office of Head Start*—<http://eclkc.ohs.acf.hhs.gov/hslc>

Authors who specialize in research influencing early childhood education:

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Ken Dickson, a K–12 administrator for more than 30 years, focuses his research and practice on cultural diversity and advanced academics relationships particularly with regard to students with special needs who are traditionally underrepresented in advanced programs. Ken frequently presents on cultural diversity and academic relationships topics in a variety of forums. His advocacy for children with exceptional needs is evidenced by decades of services to various educational groups including service as a board member of the National Association for Gifted Children (NAGC); past chair of NAGC's Special Populations Network; and membership on many NAGC committees; the board of the Council for Exceptional Children (CEC); the board of The Association for the Gifted; CEC's Children and Youth Action Network; the board of CEC's Culturally and Linguistically Diverse Exceptional Learners Division; and the National Alliance of Black School Educators Commission on Special Projects, Research & Evaluation and District Administration.

Robin K. Dickson, Ph.D., is an assistant professor working with a hybrid Ph.D. program in educational psychology and educational technology the College of Education at Michigan State University. A graduate of the University of Virginia's Curry School of Education in educational psychology with emphasis on gifted and talented education, Dickson pursues her passion for understanding how rich learning environments nurture creativity and high achievement. At the Michigan Virtual School, she helped create "virtual summer camps" and online afterschool programs for middle school students in mathematics and science, as well as enrichment opportunities in research for high school students. Dr. Dickson's current work focuses on how hybrid and online programs, from K-12 through Ph.D., can use new technologies and social media to empower a diversity of learners. She conducts evaluations of gifted and talented programs in K-12 schools, has spoken at state and national conferences, and published numerous book chapters and articles.

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Katherine Gavin, Ph.D., is an Associate Professor at the Neag Center for Gifted Education and Talent Development at the University of Connecticut. The main focus of her research is the development and evaluation of advanced math curriculum for elementary students. Dr. Gavin received the 2006 National Association for Gifted Children Early Leader award and the Neag School of Education Distinguished Researcher Award from the University of Connecticut. She has published more than 100 articles, book chapters, and curriculum materials on mathematics education with a focus on gifted students. She has more than 30 years experience in education as a math teacher, curriculum coordinator, math department chair, and assistant principal. She works with teachers nationally and internationally who are interested in developing mathematical thinking and talent in their students.

Marcia Gentry, Ph.D., directs the Gifted Education Resource Institute at Purdue University where she enjoys working with doctoral students, engaging in research, providing direct services to gifted youth, and working with educators from around the world to improve services for gifted, creative, and talented youth. Her research has focused on the use of cluster grouping; the application of gifted education pedagogy to improve teaching and learning; student perceptions of school; and on nontraditional services and underserved populations. Dr. Gentry developed and studied the Total School Cluster Grouping Model and is engaged in continued research on its effects concerning student achievement and identification and on teacher practices. She is currently directing several research projects aimed toward discovering and developing talents among students from underrepresented populations. She remains active in the field through service to the National Association for Gifted Children and the American Education Research Association and by writing, reviewing, and presenting research aimed to improve education for children, youth, and teachers.

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Matthew Makel, Ph.D., is a gifted education research specialist at the Duke University Talent Identification Program. He received his Ph.D. from Indiana University. His research examines the nature and development of the abilities, perceptions, and environments of academically talented youth to better understand the factors that lead to the expression of talent. He focuses primarily on academic self-concept, implicit beliefs, long-term outcomes, replication, talent development, and time allocation. He also seeks to communicate and translate research findings to nonresearchers.

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Matthew McBee, Ph.D., is assistant professor of experimental psychology at East Tennessee State University where he teaches courses on statistics, experimental design, and quantitative research methodology. He is interested in many aspects of gifted and talented education, with a particular focus on the

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Sidney M. Moon, Ph.D., is professor of gifted, creative, and talented studies and Associate Dean for Learning and Engagement in the College of Education at Purdue University. She has been involved in the field of gifted, creative, and talented studies for 31 years. In that time, she has contributed more than 75 books, articles, and chapters to the field. Sidney is active in the National Association for Gifted Children where she has served as Chair of the Research and Evaluation Division, a member of the Board of Directors, and Association Editor. Currently, she is serving as treasurer of the American Educational Research Association Special Interest Group (SIG), Research on Giftedness, Creativity, and Talent. Her research interests include talent devel-

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Paula Olszewski-Kubilius, Ph.D., is the Director of the Center for Talent Development and a professor in the School of Education and Social Policy at Northwestern University. Her most recent work is a coauthored monograph: "Rethinking Giftedness and Gifted Education: A Proposed Direction Forward Based on Psychological Science." She has served as editor of *Gifted Child Quarterly*, coeditor of the *Journal of Secondary Gifted Education*, and on the editorial review boards of *Gifted and Talented International*, *Roeper Review*, and *Gifted Child Today*. She currently is on the board of trustees of the Illinois Mathematics and Science Academy and the Illinois Association for the Gifted and serves on advisory boards for the Center for Gifted Education at The College of William and Mary and the Robinson Center for Young Scholars at the University of Washington. She has served as president of the National Association for Gifted Children from whom she received the Distinguished Scholar Award.

Stuart Omdal, Ph.D., was an elementary teacher for 15 years, both in the regular classroom and as a gifted education coordinator facilitating the Schoolwide Enrichment Model. Since completing graduate school at the University of Connecticut in 1995, he has been a professor of gifted education at the University of Northern Colorado (UNC). He is the Director of the Summer Enrichment Program and Director of the Center for the Education & Study of Gifted, Talented, Creative Learners at UNC. His professional interests include creativity in education, twice-exceptionality, underachievement of students from nondominant cultural and language groups, and the implementation of Response to Intervention in gifted education. He is on the board of directors for the Association for the Education of Gifted Underachieving Students (AEGUS) and the Colorado Association for Gifted and Talented

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Jean Sunde Peterson, Ph.D., Professor Emerita at Purdue University, was a classroom teacher for many years and was named State Teacher of the Year. She developed summer foreign language day camps for children prior to graduate work in counseling and development at the University of Iowa. She directed school counselor preparation for several years at Purdue University and continues to focus most of her research and writing on concerns related to the social and emotional development of high-ability youth. Her national and international workshops, conference keynotes, and presentations address those areas, as well as academic underachievement, bullying, negative life events, development-oriented group work with children and adolescents, and listening/responding skills for teachers and parents. She has authored more than 100 books, invited chapters, and journal articles; has received national awards for scholarship; and has received awards at Purdue for teaching, research, and service.

Rebecca L. Pierce, Ph.D., is associate professor of mathematical sciences at Ball State University, Director of Undergraduate Programs, and a former fellow at the Center for Gifted Studies and Talent Development. Dr. Pierce has taught mathematics and statistics to elementary, middle school, high school, and college students. Dr. Pierce directs the Ball State Institute for the Gifted in Mathematics. She has authored or coauthored numerous publications in professional journals, as well as several books and book chapters and has made presentations on statistics, statistical methods and career opportunities for mathematics and statistics majors. With other Ball State colleagues, she was awarded several Javits' grants. She serves as a reviewer for *Roepers Review*, *Gifted Child Quarterly*, *Journal for the Education of the Gifted*, and *Teaching Statistics* and as editor for *The Statistics Teacher Network*. She received the Leadership Award from the Indiana Association for the Gifted.

Jane Piirto, Ph.D., is Trustees' Distinguished Professor at Ashland University. She is the author of 17 books, both scholarly and literary, including *Talented Children and Adults: Their Development and Education* (three editions), *Understanding Creativity*, *Understanding Those Who Create* (2 editions),

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Joseph S. Renzulli, Ph.D., is a professor in the Department of Educational Psychology at the University of Connecticut and was selected as a Board of Trustees Distinguished Professor. He holds dual directorships at the Neag Center for Gifted Education and Talent Development and the federally funded The National Research for the Gifted and Talented. He is noted for developing the three-ring conception of giftedness and the Schoolwide Enrichment Model. His research has focused on the broadening the process of identification and the development of giftedness in young people and on organizational models and curricular strategies for total school improvement. A focus of his work has been on applying the strategies of gifted education to the improvement of learning for all students. He is a Fellow in the American

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