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Reconsidering the Education of Gifted Young Children with the Reggio Emilia Approach

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Abstract

While conceptualizations of giftedness have been broadened to include many forms of giftedness, a reconceptualization of gifted programs has not followed. The paper argues that the Reggio Emilia approach to early childhood education, combining important features of the fields of early childhood education and gifted education, is a good fit for gifted young children. This approach is proposed for gifted young children because of its view of children as competent and full of potential, its emphasis on the development of symbolic languages early in life, and its conduciveness to higher-level thinking. The paper suggests that the Reggio approach not only enhances intellectual development, but also nurtures multiple forms of knowledge representation in early childhood, thus laying foundations for diverse talent development.

Early identification and the discovery of one's gifts are critical experiences of transformation leading to early specialized interest and instruction (Walters & Gardner, 1984). However, gifted young children are underserved compared with their older counterparts (Karnes, 1983; Koshy & Robinson, 2006). There is hesitancy about early identification (Barbour & Shaklee, 1998; Sankar-DeLeeuw, 1999). A common concern of educators, which partially explains identification hesitancy, is that acceleration is harmful to children's social and emotional development (Gross, 1999; Sankar-DeLeeuw, 1999). There is also hesitancy due to beliefs that giftedness cannot be reliably measured and that early manifestations are likely unstable because of rapid change in early childhood; however, Robinson (2008) refuted such claims with research evidence. What is more, although guidelines abound for educating gifted young children, few programs exist. This paper, speaking to practitioners and researchers primarily concerned with educating for intellectual giftedness, argues that the Reggio Emilia approach to education, in which projects undertaken by children are its curriculum and teachers' documentation of what the children are thinking and learning is its pedagogy, has great potential to meet the educational needs of gifted young children.

Over the years, conceptions of intelligence and giftedness have expanded from a single general concept of high intellectual ability to multi-dimensional conceptions and from what is demonstrated via paper-pencil tests to real-life applications of intelligence (Gardner, 1983/1993; Renzulli, 1986, 2005; Sternberg, 1985, 1999). Furthermore, intelligence is viewed as situated in a cultural framework (Feldman, 1986; Gardner, 1983/1993). More and more, research examines how giftedness is conceptualized across cultures (Chan, 2009; Peterson, 1999; Peterson & Margolin, 1997; Sternberg & Grigorenko, 2004; Yang & Sternberg, 1997). In short, a paradigm shift has occurred in the field of gifted education at the level of conceptualization of giftedness (Borland, 2005; Feldman, 1991; Frasier & Passow, 1994; Matthews & Foster, 2006). For example, Feldman's view of the new paradigm consists of conceptualizations of giftedness as domain-specific, developmental, and field-oriented; identification as based on performance; and context as crucial in the development of giftedness. This shift has influenced policy. For example, the province of British Columbia in Canada defines a gifted student as one who "possesses demonstrated or potential abilities that give evidence of exceptionally high capability with respect to intellect, creativity, or the skills associated with specific disciplines" (British Columbia Ministry of Education, 2008, p. 51). This definition is in line with current thinking about giftedness, in that giftedness, either demonstrated via performance or latent potential in a discipline, is rooted in specific disciplines.

Current conceptions of giftedness include many forms of giftedness. Broadened conceptions mean that rather than a select few—usually the top 2% on the normal curve of standardized ability and achievement test scores—there are many more gifted children (Belanger & Gagné, 2006; Feldhusen, 1998). Yet, current practice in gifted education has not kept up with broadened conceptions of giftedness and continues to serve primarily students identified as academically and intellectually gifted (Feldhusen, 1998; Keating, 1991; Olenchak, 1999; Renzulli, 2002). When diverse forms of giftedness are considered, caution in identifying young students for gifted programs may heighten because our knowledge of the variety of forms of giftedness is incomplete and there are no specific implications for practice.

The problem of hesitation may be lessened by serving gifted young children in inclusive settings, bypassing what Borland (2005) called "the divisive, perhaps intractable, problems of defining and identifying giftedness" (p. 13). Borland's proposal, gifted education without gifted children, focuses on serving gifted children with differentiated curricula and instruction in the regular classroom. The Reggio Emilia approach to early childhood education is promising in this regard. Its innovation has attracted attention from early childhood educators around the world (Bredekamp, 2004; Katz & Chard, 1996; New, 2003; Wexler, 2004) and components of its practice have been attempted in various locations (Abramson, Robinson, & Ankenman, 1995; Edwards, 2005; Nuttall, 2003; Wien, 2008). Educational implications of the Reggio approach for gifted young children have been drawn specifically in the development of curriculum (Barbour & Shaklee, 1998) and have been considered more generally by Hertzog (2001) and Porath (2006). Hertzog considered that Reggio educators and gifted educators share many values and beliefs about children (e.g., assuming their students are capable and believing learning should challenge them). Porath viewed the Reggio approach, with its many opportunities for multiple representations of knowledge, as conducive to developing complex, flexible thinking; her research has shown that such thinking is a major marker of giftedness in a variety of domains.

Although the Reggio approach does not brand itself as a program model for gifted children, it views all young children as competent and nurtures multiple forms of knowing and understanding. In this article, I suggest that the Reggio approach has the potential to help devel-

op multiple forms of giftedness by nurturing multiple forms of knowledge representation in early childhood, as well as enhancing intellectual development, the primary concern of the traditional paradigm. When such nurturance is in place, more children profit from the experience and develop their innate abilities to high levels (Plucker & Barab, 2005). In these ways, the Reggio Emilia approach would help meet the educational needs of gifted young children. Although I started the paper with the term *gifted young children* as it is traditionally used in the field of gifted education, it is also inclusive of many forms of giftedness; as such, it is used to include children who have the potential to develop gifted behaviour in any knowledge domain.

Gifted Young Children's Needs as Viewed from the Interface between Gifted Education and Early Childhood Education

Serving gifted young children in the educational system requires the collaboration of gifted education and early childhood education (ECE). Such collaboration would be facilitated by fostering the following points of intersection: (a) early education and early identification; (b) focusing on the individual needs of children; (c) nurturing young children's natural curiosity; (d) integrated, project-based curriculum based on children's interests; and (e) assessing individual abilities (Barbour, 1992). There is limited literature on the interface between gifted education and ECE. Barbour and Shaklee (1998) observed that curriculum development in both fields takes individual learning needs and interests into account, but a fundamental difference is that early childhood educators consistently build on individual needs while gifted education begins with, but does not seem to sustain, this focus. ECE curricula are designed based on what the child knows and "the basic needs, interests, and abilities of the individual child" (Barbour & Shaklee, 1998, p. 232), while there is a tendency in gifted education to "make assumptions about how a child learns (e.g., faster rate, need for complexity) and design curricula based on those assumptions" (p. 231). Keating (1991) and Robinson (2006) concurred with the view that gifted education does not do a good job of differentiation once gifted students are grouped together for instruction. Robinson lamented that it is ironic that "where, having argued that one size in the regular classroom does not fit all, we proceed in our special classrooms to teach as though it did" (p. 343).

Focus on academic development rather than balanced development characterizes gifted education. Hertzog and Fowler (1999) highlighted other fundamental differences that emerged from expert evaluations of a university-based program for gifted young children. While differentiation according to children's ability levels and acceleration of academic content in math and language was the focus of the gifted education expert, the ECE expert viewed emphasis on paper and pencil tasks as developmentally inappropriate and supported learning in social, emotional, cognitive, and physical domains, not placing an extensive or exclusive premium on academic content (Hertzog & Fowler, 1999). The ECE expert also noted the inappropriateness of giving the children in the program the same materials and activities; in this aspect, both experts agreed on the need for differentiation. The gifted education expert talked about the need for broad-based themes, issues, and problems in academic content; Barbour (1992) deemed this a shared feature between the fields, as the connection between domains of development and disciplines has prompted the use of broad-based themes in ECE. Where the two expert opinions converged was meaningful and connected learning. Where they differed was that the gifted education perspective focuses more on academic content and the development of higher order thinking, while the ECE perspective focuses on the whole child and balanced development.

A comparison of ECE and gifted education is provided above. Are there ways to reconcile the fundamental differences of early childhood and gifted education in the best interest of the child while holding on to the shared features? Is it possible to integrate the best from both fields in programming for gifted young children? The Reggio Emilia approach to ECE is a potential bridge between the two fields (Barbour & Shaklee, 1998).

Reggio Emilia Approach to Early Childhood Education

Reggio Emilia Preschools and Infant–Toddler Centers are located in the city of Reggio Emilia in Italy. The Reggio approach takes ideas from thinkers such as Piaget, Vygotsky, and Dewey, and blends them to create a program uniquely its own. There are a few features of the Reggio Emilia approach to ECE (New, 1993; Project Zero and Reggio Children, 2001). First of all, the environment is regarded as the third teacher and teachers take great care to create an inviting environment to foster an independent and active learner role. Second, teachers do not teach as much as document the learning process (e.g., describe what children say while engaging in a project, collect their work in progress, interpret what the children are learning and thinking, and share the documentation with the children, their parents, and the wider community) and facilitate learning (e.g., ask questions, when necessary, to provoke and further the children’s thinking). Third, instruction and assessment are fed back into each other (teachers construct knowledge of what children are thinking and learning based on documentation data and use this knowledge in further planning. Fourth, open-ended and often long-term projects serve as curriculum.

The Reggio Approach and Gifted Education

Researchers in the field of gifted education have recommended project- and inquiry-based instruction (Hertzog, 2005; Plucker & Barab, 2005; Renzulli, 1977; Renzulli & Reis, 1985). Investigatory projects are also recommended for gifted young children (Roedell, 1990) because of their love for complexity, abstraction, and connection (Harrison, 2004). Provision of advanced content is a given in gifted education. Reggio projects all involve complex content and cover broad-based themes. The projects are emergent in nature; they are often initiated by children, or are designed by teachers in response to student interests or to promote student learning (Project Zero and Reggio Children, 2001). The projects are often conducted in small groups of 3–4 children per group (Rankin, 2004). Reggio educators consider the basic needs, interests, and abilities of the individual child in designing projects and grouping them for doing projects; as such, there is no predetermined curriculum to fit all but, rather, fluid curriculum design (Project Zero and Reggio Children, 2001). The project approach, planning curriculum based on children’s interests, is an effective way to provide developmentally appropriate practice for young children (NAEYC, 2009; Yoon & Onchwari, 2006) and foster social development (Rankin, 2004).

The project approach is probably most relevant to gifted young children due to its emphasis on higher order thinking. Reggio projects give ample opportunities to children to verbalize their thinking and reflect upon their thinking and learning processes as they engage in project work. Self-assessment is a constant in Reggio Emilia practice; the teachers ask children “to comment on their work and that of the others” (Project Zero and Reggio Children, 2001, p. 173). In addition, documentation panels displaying children’s thinking and learning processes have

direct impact on children's learning. Children see that their thoughts and work are valued (Project Zero and Reggio Children, 2001) and their thought processes, on documentation panels, become objects for reflection, which furthers their thinking and learning.

In summary, the Reggio approach, particularly its project-based learning, serves as a bridge between ECE and gifted education. The concerns of gifted education in terms of academic learning, particularly higher order thinking skills, are addressed by Reggio projects, as are the concerns of ECE on individual needs and the whole child.

How the Reggio Approach Builds Foundations for Diverse Talent Development

The Reggio approach is relevant to educating gifted young children in the current context of broadened conceptions of giftedness. First, it views all children as competent, implying that more children, not just a select few, can be gifted. Second, it supports the representation of knowledge via different symbol systems, building a foundation for developing multiple forms of giftedness.

The Image of Children as Competent and Full of Potential

The Reggio Emilia approach views all children as having “a common gift, namely potential and competencies” (Malaguzzi, 1998, p. 79). In other words, the Reggio approach shows “a deep respect for children's intelligence” (New, 2003, p. 35). Reggio educators do not seem to assume a ceiling as to what children are able to accomplish. The project approach essentially views children as competent individuals capable of taking on complex tasks. In fact, teachers located outside of Italy who have tried the Reggio approach learned that their students were capable of a lot more than they expected (Edwards, 2005; Gallas, 1991; Katz, 1998; Krechevsky & Stork, 2000) and began to emphasize children's developmental potential as opposed to their development levels. Similarly, Hertzog (2005) suggested that when student learning is enhanced, via project-based learning implemented school-wide to be responsive to gifted potential unrecognized in general education classrooms, it changes teacher beliefs about student ability and teacher practice. In other words, the view of children as competent and the demonstration of competence by children are mutually reinforcing. The mastery model of giftedness proposed by Matthews and Folsom (2009) also takes the position that “[e]very child has tremendous potential” (p. 22) and encourages high-level development in all.

Development of Symbolic Languages

Theory and research have established that the ability to represent objects, people, and events mentally is fundamental to acquiring disciplinary knowledge, as well as to the development of reflection and planning (Copple, 2003). Knowledge representation, both in terms of understanding and expression of that understanding, takes place via symbol systems (Gardner, 1983/1993). We use symbol systems (e.g., linguistic, mathematical, and visual systems) to represent and communicate knowledge. Gardner's study of knowing the world through symbols in early childhood led to the development of his theory of multiple intelligences (Gardner, 1991). Although he found that the children studied possessed multiple intelligences, these intelligences developed into increasingly distinctive configurations; for example, some children tended to take

a spatial or visual approach to tasks, some quantitative, some linguistic, and some social (Gardner, 1991). This pattern could be discerned when the children were as young as 4 years old; by the age of 6 or 7, each of the intelligences had developed to a high degree (Gardner, 1991). In addition, Liben (2009) and Porath (1992, 1997) showed that high level domain-specific development is present in early childhood.

In the Reggio Emilia exhibit, *The Hundred Languages of Children*, which went on tour around the world, the 100 languages is a metaphor for multiple ways to represent thinking (Edwards, Gandini, & Forman, 1998). Of the many languages that Reggio educators believe young children to be capable, many are two- and three-dimensional representations. These visual media are accessible to young children (Edwards et al., 1998; Katz, 1998). Oral language is another medium that has been given prominence in the Reggio approach. Reggio children are encouraged to verbalize their thoughts by commenting on their products, and, as mentioned earlier, to reflect on their work.

Illustration

In the following, I use a widely shared (and my favourite) Reggio project to show how multiple ways of representing and communicating knowing and thinking speak to “a deep respect for children’s intelligence” (New, 2003, p. 35) and promote children’s thinking and learning. Because of detailed information that includes children’s words and photographs, the project documentation provides rich data for discussion of the relevance of the Reggio approach to educating gifted young children, both in ways that foster intellectual development and in ways that plant the seeds for diverse talents to develop. The documentation (i.e., description, interpretation, and photographs provided by the Reggio teachers) is available from the website, Making Learning Visible (n.d.). I provide a summary here. Readers who are unfamiliar with this documentation would make better sense of the discussion in the next section if they visit the web pages first.

The project, in which three children, Giovanni, Giulia, and Leonardo, 4 and 5 years old, worked as a group to each represent a familiar game (i.e., Ring-around-the-Rosy) on paper, demonstrates visual, verbal, and kinesthetic representations of knowing and thinking. Reggio educators often conduct their projects in these ways: (a) asking children to make predictions; (b) encouraging children to reflect on their own work and the work of their group members; and (c) re-launching the problem at hand in order to consolidate their students’ learning. These components allow charting of the children’s progress while elucidating the learning processes. The children predicted how they would draw. Then they drew, wondered aloud as they reflected on their work, reflected on each other’s work, acted out their drawings, borrowed each other’s ideas, and played the game to note crucial details. When they represented the game a second time, they continued to do the same, reflecting, learning from each other, and playing the game to get a firm grasp of the abstract concepts required for the difficult project, which Reggio educators believe that young children are capable of taking on.

Externalization of thoughts via each representational system affords close observation, idea sharing, and reflection. For example, Giovanni’s observation and insightful comments prompted Giulia a couple of times to ask thoughtful questions of herself. Higher level thinking occurred along the way, such as problem solving, critical thinking as the children reflected, and grasping the abstract concepts of gaze and profile necessary to represent three dimensions in two dimensions (i.e., the direction of gaze of the person who draws as well as the figure drawn helps

position figures on paper, and drawing the profile of a figure first provides an anchor for the drawing). The multiple representations are particularly helpful to advance the children's thinking and learning, in that they provide experiences that are not afforded when a child uses any one of the representational systems singly. For example, the three children cast new light on the task at hand and acquired new insights as they acted out a two-dimensional drawing and as they viewed the three-dimensional game as a photo. When they transformed their representation from two-dimensional to three-dimensional, new understanding accrued. When they reframed the three-dimensional representation in a two-dimensional space, they were again able to examine the task anew. When they integrated these perspectives and insights, Giovanni and Giulia were able to achieve at an exceptional level for their age.

Discussion

Drawing upon the spatial representation project above, I present the relevance of the Reggio approach to educating gifted young children, focusing on these aspects: viewing children as competent, higher level thinking, multiple representations, and integration of all three in nurturance of diverse talents in early childhood.

Viewing Children as Competent

The spatial representation project requires a solid understanding of three-dimensional representation. It is "hard," as Giulia said, for children 4–5 years old. Yet, this appears to be a staple Reggio project. It demonstrates the Reggio belief that children are capable of tackling difficult concepts. As well, high expectations for the children were expressed in the teacher's documentation. For example, the documentation concludes with a critique of Giulia's second drawing, that although she seemed to have understood the rotation of the figures, she did not appear to understand other aspects of the representation of space such as figure–ground relations, showing that Reggio teachers hold high expectations for their students and suggesting that they keep their eyes open for ways to advance their students' learning further. At the same time, the teachers also understand that conceptual understanding takes time to develop. Even Giovanni, who exhibited more advanced thinking than his peers before the project started—and throughout the project as documented—produced a graphic representation that departed from his thinking, indicating that he had not worked out conceptual details to represent his understanding. However, Reggio teachers rarely teach directly; instead, they re-launched the project, as they typically do, for the children to re-engage the challenge and to consolidate their learning. Giovanni progressed quickly and produced a very fine second drawing as he immersed himself in the project and as he worked collaboratively with his peers. Even though his second drawing still resembled his initial schema, Leonardo in fact demonstrated that he had understood two key concepts in spatial representation, those of gaze and profile, in his commentary on his work.

Higher Level Thinking

The high level of thinking that took place is striking. Higher order thinking is a major concern of gifted educators, as mentioned before. As the children worked, they encountered various problems to be solved. Giovanni's suggestion to enact Leonardo's drawing is an example of

creative thinking and problem solving. The process of Giulia's second attempt at representing the game on paper is marked by continuous problem solving. The children's assessment of their own work exhibited critical thinking.

The Reggio children developed abstract concepts as they were engaged in the project and used them as "cognitive props." Giovanni was the first to understand the concepts of gaze and profile. Where one gazes helps shift the perspective of the person who draws and position the figures in space. When he guided Giulia, pointing out, as if frame by frame, the role of gaze in relation to positions in space, Giovanni actually combined the various perspectives of the drawer and the children playing the game. Essentially, he asked Giulia to take the perspective of each figure in her drawing and to shift from the perspectives within the game (those of the figures) to the perspective outside the game (that of the person who draws). This integration of different spatial perspectives is remarkable indeed for a child his age. The idea of a profile, along with the front and the back, also helped position the figures on paper. These abstract concepts were taken up by Leonardo and Giulia to cope with the difficult task of representing a game spatially on paper. These concepts are conceptual building blocks in visual representation.

Multiple Representations

Multiple representations occurred sequentially and in combination, facilitating children's thinking and learning. Representations of the game included visual, kinesthetic, and verbal. At first, the children represented the game on paper based on their memories of the game; then they represented the game by acting out Leonardo's first drawing; and finally they represented the game by actually playing it and viewed it as if it were a photo—to allow for easy transfer of the image back to two-dimensional representation.

Once our thoughts are externalized in the form of products, such externalization "embodies our thoughts and intentions in a form more accessible to reflective efforts" (Bruner, 1996, p. 23). Visual images allow children to see and reflect upon the content and the process of learning (Gallas, 1991). Where visual representation occurs, verbal representation often follows. Sharing of ideas exposes different ideas. The three children loaned their knowledge to each other, as the teacher documenting their learning noted. Visual and verbal representations are complementary. The drawings, as thoughts externalized, provided concreteness for the children to refer to in their linguistic exchange. The enactments and reenactments of the game and drawings were kinesthetic. Visual, linguistic, and kinesthetic representations are accessible to young children and as such are effective tools for communication and representation of thinking.

Cognitive advancement is afforded by multiple representations. The blending of, and moving between, modes of representation advance thinking. For example, Giovanni's transformational and initiating idea was to reenact the game, via kinesthetic movements, based on the children's drawings. In a way, the canvas was enlarged from two dimensions to three dimensions and real actors were placed in it. In this way, his idea restored the game as drawn to the game as played. Perhaps stimulated by the idea of enactment and reenactment suggested by Giovanni and Leonardo, Giulia also integrated different representational modes. At her second attempt, when she wondered out loud with her hand placed in front of her, Giulia seemed to use her hand as a cognitive prop, or used relations in space as guidance, as the documenting teacher suggested. The back of her hand seemed to refer to the back of the figure she had drawn. That would mean that she recast the image from two dimensions to three dimensions and then tried to imagine recasting the same image in three dimensions back to two dimensions. If she did imagine her hand

with the back facing her, as the figure she had drawn, perhaps, instead of asking a classmate to stand with his or her back facing Giulia, it was easier to use her own hand as a prop and to re-mount the smaller image (her hand) back to two dimensions.

The Reggio approach encourages children to use a combination of symbolic systems. Edwards and Willis (2000) noted that it is most natural for young children to combine symbolic forms when they seek to express themselves and communicate their ideas with others. Besides combining media, children also transfer from one medium to another. “It is clear that going between different media allows children to confront and solve different problems as they progress through a project” as each medium has different affordances (Edwards & Willis, 2000, p. 263). Likewise, the founder of the Reggio approach, Malaguzzi (1998), noted the cognitive gains when children move between modes; such transfer helps children refine their understanding:

As they go from one symbolic language to another, the children find that each transformation generates something new.... They have to reestablish and clarify the frames or contours of the problem. With each step, the child goes farther and higher, as a spaceship with several stages, each pushing the rocket deeper into space. (p. 92)

How the Reggio Approach Plants the Seeds for Developing Diverse Talents

The three Reggio children’s products demonstrate the emergence of foreground–background differentiation, a central spatial structure found typical of children aged 8 (Case, Stephenson, Bleiker, & Okamoto, 1996). This places the Reggio children’s performance 3–4 years ahead of what would be expected for their age. Porath’s work on a set of central conceptual structures including central spatial structure shows that gifted children are typically one substage advanced (about 2 years) from the perspective of the neo-Piagetian developmental model (Porath, 1992, 1996, 1997, 2000, 2006). Porath (1997) presented data that are comparable to the three children’s drawings. She discussed a 6-year-old gifted artist who demonstrated an emerging ability to differentiate foreground and background; even though he had not yet developed the ability to depict occlusion, one of his drawings shows that objects in the foreground and in the background are interpenetrated. An examination of Giulia’s and Giovanni’s drawings reveals the same pattern. However, I am hesitant to say that in early childhood what the three Reggio children demonstrated could or should be pegged down as one form of giftedness or another. What is far more important is contextual support for extensive practice in two-dimensional and three-dimensional representation in the Reggio approach and the role of such context in the development of spatial thinking and intellectual reasoning.

A similar question can be asked of the social context and children’s understanding of their social world. It would be interesting to explore the effect of frequent practice of working with peers on Reggio children’s understanding of mental states, as the role of social participation and language exchange in the development of social understanding is well established (Astington, 2001; Carpendale & Lewis, 2004; Tomasello, 1999). Furthermore, different perspectives on experience are often contrasted in language interaction; through regular language exchange, children come to understand that what others see, think, and believe is often different from their own perspectives (Tomasello, 1999). Contrasting perspectives are facilitative of the development of social understanding. The documentation of Ring-around-the-Rosy clearly reveals how the children shared their different views and bounced their ideas off each other. As Gee (2003) asserted, understanding is deepened via engagement in social practice such as various ways of acting, interacting, valuing, feeling, and using various objects, technologies, and symbolic lan-

guages. In light of limited data on spatial and social intelligences, perhaps it suffices to suggest that the Reggio approach plants the seeds for the development of diverse forms of giftedness by nurturing multiple forms of knowledge representation in early childhood.

Reggio educators attend to children's symbolic competence, presenting them with opportunities in which they can try out different modes and further develop their facility with them. The use of multiple forms of representation serves children well. As noted earlier, this has a reciprocal relationship with Reggio's view of children as competent: allowing children to express in different ways enables teachers to see that their students are capable of a lot more than expected, which in turn makes teachers provide more educational experiences that allow children to express themselves in a variety of media. The encouragement of multiple representations means greater occurrence of cognitive gains. It is clear that by the end of the Ring-around-the-Rosy project, the 4- and 5-year-olds had begun to truly appreciate spatial representation—not a small feat for their age. In addition, there is higher level thinking in each domain. Viewing young children as competent, nurturing symbolic competence by allowing multiple representations, taking children's thinking seriously, and using project work to promote higher level thinking, the Reggio approach thus lays the foundation for diverse talent development. If there is sustained encouragement of multiple representations in subsequent years in school or other settings, talents have a better chance of being developed.

Recognizing and nurturing multiple forms of giftedness could also help address how some groups are underrepresented in programs for gifted students. A solution to the underrepresentation problem is to expand conceptions of giftedness (Callahan, 2005). This solution would not only help us to discover and support giftedness in underrepresented students, but would also address the gifts of students who may not 'test well' on standardized instruments. Gardner (1991) said that an education built on multiple intelligences can develop a broader range of talents, and it can make the standard curriculum accessible to a wider range of students. Gallas (1991) concurred with the effect of arts on children's demonstration of their abilities. She noted that different art forms have different affordances and thus allow all children, including children who are English learners, children with disabilities, and children "whose modes of communication and expression do not fit the predominant classroom discourse" (p. 50), to participate in class and to demonstrate their strengths.

Conclusion

I have attempted to demonstrate that the Reggio approach is promising as a program model for gifted young children. It bridges gifted education and ECE. Encouraging multiple ways of representation and communication of what one knows and understands is at the heart of recognizing multiple ways in which one can be competent. In so doing, Reggio children subsequently excel in domains that rely on symbolic forms with which they are most comfortable and skilled. The documentation of the spatial project provides food for thought for educating gifted young children in its demonstration of nurturance of multiple ways to represent knowing and understanding, belief that all children are competent, and promotion of higher level thinking. These features build a solid foundation for developing diverse talents in the current context of broadened conceptions.

Although the Reggio Emilia approach does not talk about giftedness, it has a way of bringing out the best in children. There seems little doubt that Giovanni is intellectually gifted. Giulia showed herself to be a promising student. Her thinking is intelligent and thoughtful, per-

haps “enabled” by the Reggio approach. Even Leonardo made cognitive gains in the short period dedicated to the project. Given that young children are not readily identified for special services and tend to be served in integrated settings, that alternative assessments to identify diverse forms of giftedness take time to be developed and validated, and that the approach has attracted increasing attention from educators around the world and some of its features have been implemented at various sites, the Reggio approach has a better chance of nurturing gifted young children in a variety of settings than models restricted to gifted education practice.

I conclude with a few suggestions for future research. There have been numerous reports of young children’s learning via the Reggio Emilia approach. Reggio teachers act as qualitative researchers, observing and recording what children say and do, seeking their meanings, sharing findings with the local community—and, later, with other researchers around the world—and applying what they have learned to inform teaching. Learning processes as well as outcomes on a variety of topics have been presented and published with rich data including transcripts and photographs. Enthusiasm for the approach among early childhood educators around the world has resulted in the approach being replicated and subsequent results published, mostly documenting project work. Lacking are comparative studies. Research on, for example, two enrichment programs, one in which the teacher is traditionally trained in gifted education and the other in which the teacher applies the Reggio approach, would add to our understanding of gifted young children’s learning. The Reggio approach, fostering depth of learning, lends itself to enrichment programs well. As well, studies on teachers of gifted young children who apply the Reggio approach may result in raised expectations for all their students—whether they are formally identified as gifted or not and whether their forms of giftedness are nontraditional or in academic subjects—and change their teaching practice accordingly, as found in previous research on teachers of young children. Gifted educators may especially welcome such studies given that many gifted children spend much, if not all, of their time in the regular classroom without differentiation and appropriate challenge (Archambault et al., 1993; Westberg, Archambault, Dobyns, & Salvin, 1993). Finally, studies following children in preschool and primary classrooms that apply the Reggio Emilia approach over time may be considered to formally assess the link between the approach and the development of multiple forms of giftedness. Of course, participation in extracurricular activities, years of receiving Reggio-inspired education, and the setting in which it occurs (the regular classroom or an enrichment program) should be noted. Such longitudinal studies may also chart development of giftedness in diverse forms.

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