

Skinner Meets Piaget on the Reggio Playground: Practical Synthesis of Applied Behavior Analysis and Developmentally Appropriate Practice Orientations

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Abstract. We focus on integrating developmentally appropriate practices, the project approach of Reggio Emilia, and a behavior analytic model to support a quality preschool environment. While the above practices often are considered incompatible, we have found substantial overlap and room for integration of these perspectives in practical application. With the growing number of children with disabilities and challenging behaviors in regular preschool classrooms, it is essential for early childhood teachers to have the skills to identify and help all learners. If children do not have the competencies to listen, observe, participate, talk, and problem solve, then they cannot function in a developmentally appropriate classroom or go beyond their developmental potentials.

Imagine the scenario—Jean Piaget (1937, 1955, 1962, 1971, 2000) and B. F. Skinner (1948, 1953, 1954, 1968) meet on the preschool playground in Reggio Emilia, Italy, not to dispute ideas but to “share” theoretical issues that would contribute to a quality and functioning early childhood classroom. How beneficial this would be for preschool teachers who are struggling to apply the views of Reggio Emilia within their educational training and background of developmentally appropriate practice (DAP). Add the behavioral perspective of the special needs teacher to the mix and there is a menagerie of philosophical issues floating in the air. *Who is right? Do early childhood educators have to dichotomize

among philosophies, or can they integrate and mesh various theories (as Reggio Emilia does) and still preserve the integrity of their preschool classroom?

The complexity of teaching in early childhood is not an either/or situation. It requires enacting a continuum of ideology with no theory practiced in isolation. The Reggio Emilia approach, with its infusion of various theories and innovative practices, achieves a harmony among many contrasting philosophies and sheds light on how to reconfigure such a rigid categorical system (Gardner, 1998). Enthusiasm for the Reggio Emilia approach came at a time when there was considerable professional discourse over the content of DAP guidelines and constructivism as educational practices (Mallory & New, 1994). With its blended educational and cultural perspectives, Reggio has not only inspired American educators, but also stimulated the creation of a powerful arena for reflecting on and questioning educational practices.

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The increased excitement and notable strengths of instructional practices used in Reggio Emilia are recognized as being compatible with DAP. These advantages, combined with the increased number of special needs students included in preschools, forces the early childhood teacher to filter through a wide variety of adaptations and approaches.* Can early childhood educators consider themselves developmentally appropriate, have children engage in long-term projects that provide for communicative skills and patterns of discourse, and "scaffold" children to their developmental potential, *plus* integrate behavior analytic teaching methods (such as Direct Instruction and Precision Teaching) into their fully inclusive classrooms? We believe so. The first author is the director of a constructivist-oriented preschool influenced by Reggio Emilia and explores applications of behavioral theory, the second author is a constructivist trained developmental researcher, the third author is an educational psychologist trained in Applied Behavior Analysis, and the fourth author is the creator of the Competent Learner Model, a behavioral approach based on the works of B.F. Skinner. Our focus in this article is on describing our integration of DAP, the project approach of Reggio Emilia, and the use of behavior analytic strategies as the theoretical basis for a quality preschool environment at the West Virginia University (WVU) Nursery School.

We recognize that constructivist and DAP perspectives based on the work of Piaget, Vygotsky (1978), Bredekamp (1987), and others are often presented as near polar opposites of behavioral accounts of learning and development (e.g., Berk, 2003; Champagne & Tausky, 1976; Cobb, 2001; Santrock, 2001). While it is true that constructivism developed at least partially in response to an increasing prevalence of behavioral practices in U.S. preschools in the early 1960s (Bruner, 1986; Gardner, 1985; Gremmo & Riley, 1995; Kagan, 1978; Kamii & Radin, 1967), we are finding substantial overlap and room for integration of these perspectives in practical application. Skinner's (1953) thorough

analysis of the dynamics of behavior-environment interactions focused on how events establish, strengthen, maintain, and weaken behavior. This extremely student-centered focus is sensitive to the existing repertoires of students (Skinner, 1968). Consistent with Vygotsky (1978), it demonstrates how teachers can arrange activities that scaffold students' learning within their zone of proximal development so as to develop more sophisticated repertoires. All of these can be interpreted as developmentally appropriate practices.

The contrasts between these philosophical foundations are clear, but the commonalities are often ignored. Both constructivism and behaviorism have as their goals the development of independent learners, learners who have the skills to construct their own learning (Skinner, 1968). Both suggest that sufficient support be provided so that the skills needed to learn are developed. Both focus on the learning of individual students, tailoring instruction to ensure that learning. Behaviorism as well as constructivism asserts that knowledge is constructed by the learner, rather than transmitted to the learner (Brooks & Brooks, 1993; Skinner, 1968).

We recognize that what we are proposing flies in the face of tradition. Yet, early childhood educators face increasingly diverse student populations and can be assisted in facing the challenges of student diversity by exploring the potential of integrating the highly influential perspectives of DAP and behavioral practices to support their students' development as independent learners, much the same way Reggio opened doors to various theoretical views.

Evolution of Developmentally Appropriate Practice (DAP)

The philosophical framework of DAP has been ingrained in the minds of early childhood teachers for over 20 years—almost to the exclusion of other philosophical views. The term "developmentally appropriate practice" was first published in 1986 in a position statement from the National Association for

the Education of Young Children (NAEYC) as a tool for programs seeking accreditation by NAEYC (Bredenkamp, 1987; Bredenkamp & Copple, 1986). The position statement was drawn up partially in response to trends toward more formal academic instruction in early childhood programs (Shepard & Smith, 1988).

Ten years later, a revised version of the position statement had significant changes regarding what DAP entailed, particularly with respect to literacy and cognitive development (Bredenkamp & Copple, 1997; Dickinson, 2002). Based on major advances in research affecting interpretations of what was and what was not considered DAP, statements referring to the increased use of formal instruction in academic skills and the widespread use of inappropriate formal teaching techniques for young children were removed. In fact, the most recent version warned teachers about *not* challenging children adequately. There was a shift toward asserting the value of teaching, especially as it pertains to literacy.

In 2007, NAEYC published *The Intentional Teacher* (Epstein, 2007). Epstein reiterated that teachers need a repertoire of instructional strategies to accommodate children's different ways of learning. She argued that "both child-guided and adult-guided experiences have a place in the early childhood setting" (p. 2) and "best practices and intentional teaching work in synergy" (p. 21). Intentional teachers are defined as those who act purposefully with a plan to accomplish a goal, and Epstein suggested moving carefully toward more teacher-directed approaches in instruction when appropriate. Head Start also refers to teacher-directed instruction as an acceptable strategy. The *Head Start Leaders Guide to Positive Child Outcomes* (2003) specified a continuum of teacher behavior, from non-directed to teacher-directed teaching, as a mechanism to enhance children's learning (p. 24). Is the pendulum swinging back toward the middle of the "direct versus child-initiated instruction" continuum? This would empower teachers to make educational choices for

individual children, because the controversy between predominantly child-initiated activity and predominantly adult-initiated direct instruction has left some children stranded in the middle, when a balanced position is in their best interest.

These advancements in educational practices indicate significant changes and demonstrate that early childhood pedagogy is a journey toward best practices. Early childhood educators and researchers continually learn more as they strive to keep up with ever-changing early childhood classrooms. Those struggling to keep developmentally appropriate practices in the forefront, but also wanting to utilize other approaches, realize that just as adjustments occurred in the definition of DAP, they should be fostered in one's personal efforts to utilize best practices. Teachers of young children need to broaden the scope of DAP to include teaching practices that help children become more competent in all domains.

At the 2006 National Institute for Early Childhood Professional Development, NAEYC held forums to launch discussions revisiting the current position statement on DAP (Koralek, 2006). As we write this article, NAEYC is seeking comments regarding the concepts and language of the existing statement and any controversial issues or suggested alterations to be considered for revision. This is a message to early childhood educators that they can—and should—question and expand their approaches to accommodate the diverse needs of children in their classrooms.

Reggio Emilia and Developmentally Appropriate Practices

Reggio Emilia is one approach that DAP has assimilated and accommodated. Piaget's theory and developmental stages are major components of DAP. Malaguzzi (1998), the founder of Reggio, claims that the richest potentiality of Piaget's work is in the epistemology domain or the theory of knowledge, which is consistent with Piaget's own stated focus. Malaguzzi's contention is with the applied value of stages and the use of

such constructs as conservation of matter. Malaguzzi has stated that teachers try to extract ideas from Piaget's theory, but have difficulty using them in educational settings. Despite some contradictions with DAP, Reggio has gained credibility in the early childhood field because Reggio and DAP share philosophical roots.

Reggio is acknowledged in the updated version of *Developmentally Appropriate Practice for Early Childhood Programs* (Bredekamp & Copple, 1997) and serves as a major point of reference in evaluation guidelines for DAP (New, 1998). While Reggio Emilia is viewed as one of the best preschool systems in the world, as reported in *Newsweek* ("The Ten Best Schools," 1991), and is often cited as a prime example of good practices, some feel it is too teacher-directed and not developmentally appropriate (Phillips & Bredekamp, 1998).

The writings of Dewey (1900/1971, 1933/1998, 1938/1971) and Vygotsky (1978) also resonate with both philosophies, but are similarly difficult to translate into educational practice. It is in the interpretation of these theories that DAP and Reggio begin to diverge (Edwards, 2005). Malaguzzi (1998) argued that children at a very young age are capable of making meaning from their daily life experiences through mental acts involving planning, coordination of ideas, and abstraction. While, on the one hand, this is in agreement with Piaget's epistemology (his view of children constructing knowledge through active exploration), on the other hand, Piaget (1937, 1962) argued that such mental acts as planning, coordination of ideas, and abstraction were beyond children's capacity in early childhood. Piaget and Malaguzzi agreed that what children learn does not follow as an automatic result from what is taught. Rather, it is in large part due to the children's own doing as a consequence of their activities and their own resources. Malaguzzi was critical of Piaget's relative lack of attention to social interaction, the distance between thought and language in Piaget's theories, and his overemphasis on what children cannot do, which is embodied in Piaget's concepts of

egocentrism and operations, as well as in his treatment of children's classificatory skills.

Katz (1998) observed that in Reggio Emilia, preschool children use a wide variety of graphics and other media to represent and communicate their constructions and are considered very competent to do so at a younger age than predicted by Piaget's theories. Gardner (1998) succinctly described the Reggio system as a collection of schools in which each child's intellectual, emotional, social, and moral potentials are carefully cultivated and guided. Reggio is focused on helping children to develop their potential within a social context (Edwards, 2005). The Reggio Emilia approach puts a focus on the *potential* of children and views them as capable, rather than focusing on their limitations. Documentation, of the Reggio processes, is looked at as a form of communication because it systematically illustrates the process and results of children's work. It provides children with a "concrete" memory of what they said and did, serves as a jumping-off point for next steps, and provides educators with a tool for measuring continuous improvement (Edwards, Gandini, & Forman, 2005). Teachers in Reggio transcribe hours of comments that children make during the process of a project in order to assist children in revisiting and editing their work. Documentation is a vehicle for teachers to understand the children and make modifications to teaching strategies (Katz, 1998). American preschool teachers often use the term "documentation," but as Katz says, "in U.S. classrooms, the children spend large proportions of time making the same pictures with the same materials about the same topic on the same day in the same way[.] it is unlikely that documented displays would intrigue parents and provide rich content for teacher-parent or child-parent discussion" (p. 40). Within the process of documentation, Reggio teachers encourage conflict of ideas to uncover children's beliefs. Teachers and children confront each other and work through conflict in order to have a better understanding of all perspectives. This type of conflict is not the norm in early

childhood settings outside of Reggio Emilia and may be viewed by some as inconsistent with DAP. While the ideas of Reggio are not wholly consistent with those of DAP, common philosophical threads aid integration of the two perspectives. Reggio has shown educators that diverse philosophies can be integrated in a DAP environment.

The first author, while observing in the Aprile XXV school in Reggio Emilia (personal observation, May 30, 2005), witnessed a teacher working with six preschoolers at a table. There were many authentic materials (e.g., branches, leaves, a vase of flowers) on the table as the children were making clay sculptures of animals. The teacher, talking to a child, pointed to a picture of an animal that was available on the table for children to observe. The teacher pointed to the child's clay sculpture as he was working on it, and then asked questions and followed up on the child's answers with more questions. The teacher vigorously pursued helping the child see discrepancies between his sculpture and the picture of the real animal. The teacher asked even more thought-provoking questions, to the extent that conflict between the teacher and the child was clearly visible. This persistence of questioning witnessed in Reggio is not often seen in U.S. preschools, where fostering self-esteem is often a more dominant concern. Teachers in the United States are encouraged to use open-ended questions to help children obtain higher level thinking skills, but the difference observed in Reggio was the teacher's persistence to the level of creating cognitive disequilibrium. Children in Reggio schools are not praised for work that is below their full capability. Instead, they are viewed as capable learners who can go beyond developmental expectations.

A single unifying theory for education is not likely to emerge anytime soon, but Reggio gives early childhood professionals the opportunity to reconfigure their educational views and to "think outside the box," which helps achieve harmony between contrasting dichotomies. As they accept the innovative philosophy developed in Reggio Emilia,

many early childhood teachers strive to adapt documentation and other Reggio practices to help their classrooms become better and more interesting for all children, including those children with special rights.

Children With Special Rights

Reggio emphasizes children's competency, but what about preschoolers who have difficulty learning? Reggio calls these children "children with special rights." Early childhood teachers in the United States are expected to implement a quality curriculum that aligns with NAEYC's DAP guidelines and also meets individual state content standards, while *also* making good educational decisions for *all* children in their classrooms. With more fully inclusive preschools, demands to implement early learning standards and guidelines, and such mandates as the No Child Left Behind Act (NCLB, 2001), there are more evaluations and accountability efforts likely to reveal more children with learning and behavior challenges in early childhood classrooms (Coleman, Buysse, & Neitzel, 2006).

While most children are prepared to take full advantage of their preschool learning environment, some struggle because their learning environment does not accommodate their specific needs. In fact, over 5 percent of the school-age population in the United States will be identified as having a specific learning disability (National Center for Education Statistics, 2006). The trend is to identify children with difficulties earlier and help them at a younger age. The Division of Early Childhood (DEC) of the Council for Exceptional Children (CEC) recently endorsed a document on an early intervention system for young children at risk for learning disabilities (Coleman et al., 2006). Many preschoolers with learning disabilities do not have the academic skills that would allow for an observable distinction between their intellectual ability and their achievement. Thus, it is difficult, using this criterion, to identify children as having a learning disability and therefore qualify them for the appropriate services.

A lack of such identification does not eliminate problems for the young child who will develop more easily identifiable learning disabilities later in his or her educational career (Vaughn & Fuchs, 2003). Current recommendations include having teachers and parents assist in recognizing children who have learning problems during the preschool years instead of waiting until children are identified in elementary school. Teachers know through ongoing observations if preschoolers show obvious signs of learning difficulties. It could be the child who has a difficult time with letter recognition or putting a simple puzzle together who falls behind her peers. It is the child who falls behind his peers, even with assistance, on tasks that should be in that child's developmental reach.

With the growing number of children with disabilities and challenging behaviors in regular preschool classrooms, it is essential for early childhood teachers to have the skills necessary to identify and help these children. Teachers must recognize the critical warning signs of a young child who may not be learning. In addition, teachers must know how to make modifications, which include individualized instructional strategies for these children. Unfortunately, teachers are not receiving the type of training in higher education institutions that is needed for this kind of preschool intervention (Chang, Early, & Winton, 2005). Teachers who receive more training on how to work with children with disabilities feel more confident and have more positive attitudes toward inclusion (Warash, Curtis, & Morgan, 2006). Teachers need help bringing the practices of the early childhood teacher and the special education teacher together. The early childhood teacher needs strategies and skills to work with young children who have learning or behavior challenges in order to capitalize on the advantages of early intervention. Without the expertise to implement appropriate instructional strategies, teachers become frustrated and children do not receive needed interventions. Intervening early applies not only to young

children exhibiting behaviors associated with a learning disability, but also to young children with other developmental difficulties and challenging behaviors that inhibit their chances for educational success.

Applied Behavior Analysis in Early Childhood Education

Special education teachers have predominantly employed behavioral approaches. Now special education teachers and early childhood teachers have classrooms with typically developing children, children with challenging behaviors, and children identified as needing special services. Can teachers use behavioral approaches in their classrooms and still be exemplifying DAP? We believe so. It is not an either/or issue, but rather an issue that calls for converging theories and teaching methods. Reggio provides a partial model for this convergence, in which various philosophical and educational ideologies are the basis for an innovative program of focusing on the processes and potential of children's learning, the symbolic meanings of knowledge, and how adults use that knowledge in children's best interests (New, 1998). Our goal is to move toward folding behavioral perspectives into that convergence, along with Reggio and DAP.

We have described how DAP has changed over the years with still another position statement in the process of emerging. We have described the value that Reggio Emilia has placed on children's ability to create beyond stage expectations. We have described the combination of the philosophies of Reggio Emilia and DAP. It is now time to integrate the theory and practices of Skinner (1948, 1953, 1954, 1968) and those who have built upon his ideas into the developmentally appropriate classroom. Just as Reggio Emilia has entered the early childhood arena, it is now time to disregard prejudices, cross theoretical battle lines, and see how the work of Skinner and applied behavior analysts can inform practice in early childhood classrooms. We have described earlier how this work is ultimately aimed at the same outcome of developing

independent learners. Applied behavior analysts have developed practices that are developmentally appropriate when used in a developmentally sensitive manner.

The WVU Nursery School incorporates developmentally appropriate practices, uses Reggio Emilia approaches, and has recently incorporated a behavioral model of intentional teaching called the Competent Learner Model (CLM) (Tucci, Hursh, & Laitinen, 2004). Within the CLM approach, learning is viewed as primarily a result of individualized instruction across learning environments. CLM integrates Applied Behavior Analysis, Direct Instruction, and Precision Teaching to develop Competent Learner Repertoires, focusing on the necessary component skills of observer, listener, talker, reader, writer, problem solver, and participator. Once these repertoires are well-developed, learners become competent to learn under everyday circumstances in the absence of formal instruction.

Similar to the DAP and the Reggio Emilia approaches, the foundations of the Competent Learner Model include an appropriate curriculum, effective teaching strategies, and ways to structure the learning environment so that children acquire the necessary competencies to be competent learners. While the language used to describe learners and their environment differs from what developmentally appropriate practitioners are used to, the goals and core concepts are the same.

The CLM was developed to help educators learn to use behavioral approaches that have demonstrated success with children who are autistic and exhibit other profound behavioral challenges (Tucci, Hursh, Laitinen, & Lambe, 2005). The CLM involves collaborative consultations with educators to solve pressing behavior problems and coaching them through a course of study that prepares them to strengthen desirable repertoires and weaken undesirable repertoires. In addition to working with children who have extreme challenges, the authors have found the CLM valuable to use with children who are served in a regular preschool classroom and

exhibit behaviors that impede their progress to become competent learners. Teachers need specific techniques to incorporate in the classroom, techniques that can be woven into the developmentally appropriate classroom environment, so that teachers can arrange learning environments for learners and help them become competent learners in everyday contexts. For example, teachers could encourage children's participation in a literacy activity by using peers as models of that participation and providing assistance as needed for specific learners to successfully participate in the activity. CLM gives specific steps on a continuum of directed to semi-directed to peer-directed, with the necessary environmental conditions to assist in this instruction.

Direct instruction is not a dirty word; it constitutes a variety of teaching techniques that can be used as needed to help children acquire knowledge and skills that allow them to successfully learn from their everyday environment. The problem lies in what early childhood professionals misconstrue as direct instruction. Direct instruction is often referred to in the literature on DAP as "inappropriate teaching" or ineffective practice (Bredenkamp & Copple, 1997), yet early childhood educators use direct instruction every day when they work with young children. Identifying the letters of the alphabet is not something children can learn intuitively but rather is an experience that adults must direct (Epstein, 2007). When students have demonstrated their interest in learning and teachers have carefully supported the development of that interest, more formal direct instruction programs can help to make that learning efficient and generative. Once a student has been taught to identify the letters of the alphabet reliably across a variety of sizes, colors, and styles, he can demonstrate that mastery fluently and be ready to use that skillful knowledge in other ways that eventually lead to literacy.

The rationale for the WVU Nursery School using the CLM partially came from the book *Developmentally Appropriate Practice in Early Childhood Programs* (Bredenkamp

& Copple, 1986, 1997), which included such statements as "children are more likely to achieve a positive sense of self if they experience more success than failure in the early school years" and "a child's social experience with other children during the preschool years helps him/her develop skills and confidence to make friends in the later school years" (p. 40). Research supports the assertion that children must be able to negotiate learning tasks if they are to maintain motivation (Brophy, 1992; Lary, 1990). The CLM coaches educators in arranging and rearranging the parts of their learning environments so that children become participators in the variety of instructional conditions that a teacher employs to support learning.

Consistent with behavioral approaches, *Developmentally Appropriate Practice in Early Childhood Programs* (Bredekamp & Copple, 1997) included the statement that "Teachers coach and/or directly guide children in the acquisition of specific skills as needed" (p. 19). Early childhood educators want children to be competent and lifelong learners; with some children, educators must expedite the learning of essential skills so they can be "in the running." There are some difficulties that children encounter that need to be addressed directly and immediately so that they can progress as competent learners. It makes sense in these cases to use behavioral approaches so that a child can move forward. The director of the WVU nursery school chose the Competent Learner Model (Tucci et al., 2004) Course of Study to train teachers in behavioral approaches because it is a mastery-based, self-paced program with a variety of ways for individuals to learn and practice the formulation, delivery, and monitoring of effective instruction.

One example of a child at the WVU Nursery School who made significant progress when teachers used behavioral techniques was 4-year-old Carlton (pseudonym). On his first visit to school, Carlton's mother explained that he had superior math skills and was advanced in many academic areas but was not fully potty-trained, which was

not a concern for either parent. At the onset of school, Carlton chose to play by himself with no peer interaction. The first full week of school was challenging for Carlton. We expected him to adjust quickly to the three-hour school day, but instead, Carlton had many episodes of crying, wetting his pants, throwing himself on the ground, screaming, hitting, and sucking two of his fingers while putting his other hand down his pants.

A pattern was beginning to emerge when Carlton was asked to participate in any teacher-directed activity. He would "fall out," in the teacher's words, and regress to using toddler-like behaviors. Other children were quickly beginning to think of Carlton as a "baby" and referring to him this way. It was observed over time that Carlton could engage in his own self-directed play but avoided any type of teacher-directed activity. He was often disrespectful to the teacher, throwing himself on the floor in outbursts of tears. He did not talk with his peers nor make any friends. His social problem-solving skills were at a minimum and he did not perform toileting skills independently.

The following scenario was the teacher's first attempt at using specific behavioral techniques to help Carlton. Carlton was assessed across the following five of seven repertoires that constitute skill sets: listener, observer, participator, talker, and problem solver. For example, an effective participator engages in activities under teacher-directed, peer-directed, semi-directed (an assigned task), and non-directed instructional conditions, whereas a non-participator does not engage in these instructional conditions. These five repertoires were ones the teacher felt needed to be addressed because they were the ones interfering with Carlton being a competent learner. These are also the repertoires or skills that many early childhood teachers feel are missing for children with challenges.

The teacher assessed Carlton formally and informally during specific times of the day. She used a data collection system to obtain information that would help her design relevant lessons. The teacher decided

to work on the participator repertoire first, knowing that the repertoires of problem solver and talker would be interrelated with participator tasks. The Competent Learner Model has a curriculum with lesson plans for various levels of competency with respect to the repertoires. These were used as guidelines by the teacher. The teacher identified times in the preschool day when she could construct situations in which Carlton could respond to directions and questions and, more importantly, how to increase the value of his participation with carefully designed use of items and activities that Carlton preferred. Throughout the semester, the teacher worked with Carlton in the classroom, using specific lessons that she modified based on her observations and assessments.

The following is an example of how the teacher set up a lesson during snack time. Midway into the school year, she used snack time as an opportunity to work on some social skills. This snack-time lesson is an example of a natural occurrence when the teacher elaborated on a small-group lesson. Snack is a favorite time for most children, and Carlton was no exception. The nursery school routine included having snack with small groups of children to maximize opportunities for conversation. The teacher arranged for Carlton to practice in a peer situation in which he had the opportunity to respond appropriately. The teacher arranged for an extra snack time with a small group of children among whom she designated the players in this scenario. Because Carrie (pseudonym), another 4-year-old classmate, talked to Carlton on occasion and he seemed interested in her, the teacher placed Carrie at the snack table with him. Sometimes Carlton would position himself near Carrie during free play time. The teacher encouraged Carrie to play with Carlton during free play and they became "buddies" later in the school year.

The teacher decided to pair Carlton and Carrie together during this teacher-directed snack activity. The other children she chose for the extra snack were also good models

and had good verbal skills. The snack scene transpired as follows: As the children began washing their hands, Carlton was sucking two fingers and watching. The teacher asked Carlton to take his fingers out of his mouth. He did and the teacher responded by saying "thank you." The teacher directed Carlton to the sink to wash his hands. The four children sat at the small table with the teacher. The teacher prompted the children by asking what they should say to the assistant teacher passing out snack. All replied by saying "thank you," except for Carlton. The teacher individually prompted Carlton as to what to say. He said "thank you" and the teacher socially reinforced this response while he proceeded to suck his fingers. The teacher reminded him about his hands. The teacher asked the children, "How do you ask for a drink?" and they responded by saying, "please." Carlton mimicked this in an echoic manner and the teacher reinforced his response. The teacher began a conversation by asking a child what they had for lunch. After the child responded, she told Carlton to ask the question to one of the other children. She modeled the words for Carlton. Each time Carlton asked a question, even if he just echoed the teacher, she used social reinforcers. To the other children, this was like a game, but for Carlton this was a teacher-directed activity in which good modeling was occurring.

Having Carrie, a peer, to assist with Carlton was productive. Carrie was rewarding, and putting her in the teacher-directed snack activity was beneficial. The teacher wanted to establish a new level of participation whereby Carlton was engaged in social conversation. The teacher wanted to weaken the existing behaviors of disrespectfulness, such as yelling, saying "no," and crying. Carlton benefited from social reinforcers, and pairing Carrie with Carlton at this teacher-directed activity was particularly effective. The teacher wanted Carlton to interact and answer the teacher's questions; any approximation was reinforced. At first, Carlton's conversation was mimicking and echoic. The teacher

incrementally reinforced the responses, using prompts to encourage correct responses. As the snack time conversations progressed, Carlton's performance became more independent of the teacher's prompts.

Throughout the year, the teacher continued to use various teacher-directed, semi-directed, and peer-directed activities for Carlton. Prior to beginning the designed teacher-directed lessons, the parents had helped to establish a list of potential reinforcers. Different schedules of reinforcement were used in order to establish behaviors to support the various repertoires. Initially, continuous reinforcement helped to establish Carlton's participation; later, intermittent reinforcement helped to strengthen and maintain participation.

Some would ask, "Before trying behavioral techniques, how would the teacher have helped Carlton? Would the same results have been achieved?" Prior to using a behavioral approach, the teacher would have discussed the issues relevant to Carlton with the director. The strategies employed might have included some of the same techniques, but not with the degree of understanding of how Applied Behavior Analysis and Direct Instruction, if done correctly, can benefit the child with behaviors that are inhibiting his/her learning. Whether it is through the Competent Learner Model or some other way to learn and apply behavioral approaches, the teacher needs a systematic and progressive means of implementing intentional teaching techniques. Conducting a functional analysis, setting up an appropriate environment, and knowing when to use teacher-directed, peer-directed, and semi-directed lessons, along with choosing proper contingencies, requires thought and practice. Teachers also need skills, practice, and support for doing detailed observations, developing formats, and effectively using reinforcers.

As they do when adapting Reggio, teachers have to adapt the parts of the behavioral techniques that are useful for their classroom and for their specific children. Observation always has been a primary focus of DAP and has been addressed in numerous

research articles on developmentally appropriate assessment (e.g., Hyson, Hirsh-Pasek, & Rescorla, 1990; Martin, 1999; Niemeier, Cassidy, Collins, & Taylor, 1999). Observation, when coupled with documentation from Reggio approaches, becomes a particularly powerful way to know and appreciate children and helps teachers know when to intervene to help children (Jablon, Dombro, & Dichtelmiller, 2007). These practices are vital components of DAP and are consistent with behavioral strategies. Excellent teachers are excellent observers of student behavior. DAP and behavioral perspectives both insist on the use of careful observation of children as the basis for selecting appropriate teaching techniques and learning opportunities.

Many early childhood teachers are asking for help when it comes to working with children who have challenging behaviors. Deep understanding and facility with tools for working with children who have special needs are missing in many current early childhood classrooms, because teachers are not receiving adequate training for special education (Chang et al., 2005). Whether it is the Competent Learner Model or another behavioral approach, teachers need specific skills to help children with behaviors that impede learning. Once children become talkers, participators, observers, listeners, and problems solvers, they fit into the classroom and can take full advantage of developmentally appropriate curricula.

Conclusions

Our goal for this article was to explain options and expand upon what is considered appropriate for early childhood educators. Simply put, DAP means teaching young children in ways that are effective for their developmental skills as individuals and as a group, and in ways that help children reach challenging and achievable goals (Copple & Bredekamp, 2006). A behavioral approach teaches instructors to formulate, deliver, and monitor programming for challenging learners (Tucci et al., 2004). Within the Reggio Emilia approach, teachers and

parents view children as capable and foster their intellectual development through creativity, symbolic representation, research, and documentation (Malaguzzi, 1998). All of these frameworks can improve the lives of children. If children do not have the competencies to listen, observe, participate, talk, and problem solve, then how can they function in a developmentally appropriate classroom or go beyond what Reggio suggests are their developmental potentials? Certain skills must be in place to take advantage of what existing early childhood programs have to offer.

Malaguzzi (1998) stated, "Like Piaget, the aim of teaching is to provide conditions of learning" (p. 83). Is this not what Skinner (1968) said as well? Malaguzzi says that a unifying theory of education that sums up all the phenomena of educating does not exist and never will. Educators must act according to their own personal theories (which are informed by the work of others) and their own direct experience of working with children. "The validation of the practical work of the teacher is the only rich 'text-book' on which to count for aid in developing educational reflections" (p. 86).

"Sharing theories is a response to uncertainty. This is the reason why any theory, in order to exist, needs to be expressed, communicated, and listened to by others" (Clemens, 2006, p. 28). This is what we hope to accomplish by the collaboration described in this article. We encourage our readers to consider embarking on such collaborations of their own with others willing to share their perspectives and practices. If we focus on what arrangements enhance our students'/children's participation in well-designed learning activities, then we will develop competent learners—those who learn under everyday conditions. This is what parents, teachers, and society strive to achieve for all of us.

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