An Independent Review of Empirical Research: The Relationship Among Core Aspects of Childhood Development and Arts-based Curricula

March 1, 2012

ABSTRACT

The purpose of the present investigation is to explore the theoretical underpinnings and scientific basis for Arts Alive!, a multi-modal arts program designed to enhance a variety of developmental skills in children and adults. The scope of the investigation is limited to exploring the relationships between the essential components of the Arts Alive! curriculum and the development of social, motor, language, cognitive, and affective regulation skills in young children. Findings support the Arts Alive! curriculum as a valid, research-based intervention for children at early childhood, pre-kindergarten, kindergarten, first grade and second grade levels.

An Independent Review of Empirical Research: The Relationship Among Core Aspects of
Childhood Development and Arts-based Curricula

DANCE/CREATIVE MOVEMENT AND DEVELOPMENT

Dance educators have long supported that dance and creative movement are beneficial to the development of children of all ages. Hanna (1988), Joyce (1994), Karff (1969) and Stinson (1998) believe that dance fosters a healthy development in a wide variety of domains, including self-image, self-body awareness, and self-esteem. Gilbert (1992) believes that dance and creative movement help children cope with emotional and cognitive challenges while Stinson (1998) believes that dance and creative movement yield a higher ability for children to concentrate and focus. Both Gilbert (1992) and Stinson (1998) conclude that tolerance and respect for diverse others are further benefits that children develop out of dance and creative movement education.

When it comes to the emotional benefits of dance and creative movement, Fleming (1976) and Karff (1969) suggest these help children in their emotional expression and emotional understanding while Karff (1969) further believes that dance is an outlet for tension relief and emotional release. Stinson (1998) believes that dance and creative movement help children with their self-control while Bloch (1977) and Fleming (1976) state that dance and creative movement help children with their problem solving, decision making, taking responsibility, and making adjustments.

Research by Lobo & Winsler (2006) examined the effects of an eight-week instructional program in creative dance/movement on the social competence of low-income preschool children. It is possibly the "first of its kind to use a scientifically rigorous research design to test the efficacy of an early childhood creative dance/movement curriculum" (Lobo & Winsler, 2006,

p. 505). Participants included forty preschool children from a large Head Start program. They were randomly assigned to either an experimental dance program or an attention control group. Teachers and parents were blind to the children's group membership and rated children's social competence both before and after the program using English and Spanish versions of the Social Competence Behavior Evaluation: Preschool Edition. The results showed significant greater positive gains over time in the children's social competence and both internalizing and externalizing behavior problems for the experimental group compared with the control group. These findings suggest that a curriculum including dance and creative movement would have positive effects on enhancing social competence and improving behavior in preschool children.

There has also been research on the positive effects of dance programs in improving a variety of developmental outcomes for special-needs children. Research by Jay (1991) was conducted to determine whether a dance program for preschool handicapped children could influence their creativity. The study was conducted in two schools in Illinois and the participants were 17 handicapped preschool children with speech/language issues, behavior disorders, and mental retardation. The children in the experimental group participated in a 12-week dance program, which was based on sensory experiences. At the beginning and end of the study, the Torrance Test of Thinking Creatively in Action and Movement (TCAM) was administered to each child, consisting of three subscales measuring fluency, imagination, and originality. The results indicated the experimental group improved on fluency, imagination and originality greater than the comparison group did. However, only imagination was significantly changed by the dance program, while fluency and originality were not. These findings suggest that a creative dance program can positively affect creativity among a diverse group of preschool children with special needs.

In conclusion, research recognizes dance and creative movement as beneficial to the development of preschool children. The proposed positive effects include enhanced positive self-image and self-esteem, increased ability to cope with emotional and cognitive challenges, improvement on concentration and focus, and increased tolerance and respect for diverse others. Further benefits include increased emotional expression, emotional understanding, self-control, problem-solving, decision making, social competence, and creativity. Dance and creative movement also have been suggested as a tension relief and emotional release and as a means to improve behavior in preschool children. Therefore, including dance and creative movement in a child's education could enhance their development in many ways.

DRAMA AND DEVELOPMENT

Dramatic play in the educational setting is often used to enhance gains in cognitive development. This may be because children learn through experience. Therefore, researchers are beginning to use play as a measure of cognition in their research. For example, Pellegrini (1980) sampled kindergarten children in a rural public school where children were given a standardized achievement test and then observed during their free play periods. It was found that dramatic play was the "best predictor of achievement" (Pellegrini, 1980, p. 535) in the standardized tests. It is also suggested that dramatic play may encourage literacy development when the drama is placed in a literate play setting that includes reading and writing materials (Christie, 1990; Fields & Hillstead, 1990). Dramatic play offers the young child an opportunity to use symbolic representation, which is the ability to use one thing to represent another. Thus, language acquisition in which letters and words represent ideas is learned through dramatic play (Fields & Hillstead, 1990). Therefore, dramatic play may promote various forms of cognitive learning.

As in the area of dramatic play, creative drama's positive influence on the development of cognitive skills has been the subject of many studies. Research in, "language arts has confirmed that reading, writing, and verbal skills are enhanced when developed in concert with drama work" (Furman, 2000, p. 174). In a study of second-grade students that compared the use of interpretive drama and workbooks in conjunction with beginning readers, the results suggested that the drama was more effective than workbooks in developing the comprehension skills of "recognition and recall of details, sequencing of events, and generalizing the main idea" (Henderson & Shanker, 1978, p. 243). McKean & Sudol (2002) sought to understand if and in what ways the use of drama might improve 5th grade students' writing. Their study provides empirical evidence that drama as a strategy of instruction embedded within a writing language arts unit helps students improve their writing. The students in the drama group scored higher in their writing organization, word choice, and ability to implement voice into their writing. Samuels (2002) examined how 4th grade students at an elementary school in the southeastern United States used reading comprehension strategies, such as building and activating schema, questioning, and determining importance, when creative drama and literacy were integrated. The results indicated that drama is beneficial in helping struggling readers use comprehension strategies and that strategies may be used to build and activate schema by consciously or unconsciously making connections to text.

According to Pinciotti (1993), children's ability to represent and relate their worlds to the reality of another is crucial in the development of thought and language. She states, "early dramatic learning begins with imitation and expands as the child is able to transform reality and make the physical and mental connections between imagination and action" (Pinciotti, 1993, p. 25). As dramatic qualities emerge and personal knowledge of the world increases, new cognitive,

social, and affective abilities develop. Therefore, not only cognitive skills are learned through dramatic play and creative drama. Wagner (1988), in a qualitative review of several studies, emphasized the positive effect classroom drama has shown on such affective variables as selfconcept, self-confidence, and self-actualization. Conard & Asher (2000) ran a meta-analysis and found that imagination, independent thinking, cooperation, social awareness, release of emotions, and better speech habits are affected by creative drama. A meta-analysis run by Kardash and Wright (1986) reported a strong positive relationship between drama and a variety of cognitive outcomes, including moral reasoning, self-esteem, oral language development, reading, and various drama skills. A meta-analysis run by Podlozny (2001) found that, "the largest effect size was found for studies assessing the effect of drama on written measures of story understanding" (p. 103). There were large effect sizes for studies assessing the effect of drama on writing, story understanding as measured orally, and reading readiness as well. Classroom drama was shown to improve reading achievement and oral language and even though the effect size was not significant, classroom drama also seemed to have an effect on vocabulary (Podlozny, 2001).

The research examined here establishes drama as a tool to progress the development of young children. The effects of drama include literacy development, language acquisition, reading, writing, and verbal skills. Through drama they can also develop self-concept, self-confidence, self-actualization, independent thinking, cooperation, social awareness, and moral reasoning. For these wide-range of benefits, it can be suggested that drama should play a role in education.

MUSIC AND DEVELOPMENT

There has been much debate over the role of music in the development of children. While some believe that children benefit in their development through musical instruction, others believe that integrating music into educational lessons will have a valuable effect as well. Many studies have shown that providing high-quality care and education in the early childhood environment can positively affect child development (Shore, 2010). According to McIntire (2007), adding rhythm, music, and movement to a learning experience sends messages to the brain through various pathways and creates a richer learning experience. Learning musical skills can be linked to learning literacy skills such as decoding skills, listening skills, rhythm skills, communication skills, creating skills, thinking skills, vocabulary development, expressive skills, and large- and small-motor development (McIntire, 2007). As claimed by Salmon (2010), "teachers should be serious about integrating music into their language curricula because of its potential to activate children's prior knowledge and promote thinking" (p. 943). She states that through early exposure to music and its connections with language and literacy, teachers can scaffold children's listening, oral and written language. She concludes that music is connected with social and cognitive development, it is inherent in people's schema development, it has the potential to activate children's prior knowledge, it generates imagery (visualization), and it is an important element for language development and comprehension. Teachers should create environments that invite children to communicate through the use of music because it is a deeprooted motivator that helps children establish connections with their world, which in turn enhances their desire to communicate what they have in their minds (Salmon, 2010).

Preliminary results of Schlaug, Norton, Overy, & Winner's (2005) longitudinal study in five- to seven-year-old children suggest that cognitive and brain effects from instrumental music

training can be found in domains such as fine motor and melodic discrimination that are closely related to the instrumental music training. They found significantly greater change in scores for the instrumental group compared to the control group in behavioral tests directly linked to instrumental music training such as fine motor skills and auditory discrimination skills, as measured by Gordon's PMMA (1986). Data from their cross-sectional study of nine- to eleven-year old children with an average of four years of musical training suggest that, "the predicted effects become stronger, and that transfer effects begin to emerge in addition to those strong effects in closely related motor and auditory domains" (Schlaug et al., 2005, p. 228). This suggests that continuation of musical instruction beyond preschool promotes development as well.

Gromko & Poorman (1998) conducted a study where preschool children from a private Montessori school in a Midwestern city were given musical sessions which were designed to involve the children's motor systems in response to musical sound, to draw their attention to pitch and rhythmic aspects of songs, and to increase their memory for musical sound. All children were pre-tested on the WPPSI-R spatial-temporal tasks in September 1996 and post-tested in May 1997. For the 3-year-olds in their study, an intellectually stimulating environment resulted in a gain in the ability to perform spatial-temporal tasks. Therefore, it was found that music training can have a positive effect on the development of spatial intelligence in preschool children. Specifically, "that early music training with an emphasis on sensory motor activity, visual and aural perception of space and sound, and the improvement of memory for space and sound nurtures a young child's intrinsic love of learning, helps them move expressively and perceptively within their environments, and sustains and encourages their intellectual growth up to the point that they enter school" (Gromko & Poorman, 1998, p. 178). Another study involving

music training with young children for 8-months found that piano-lessons showed a 34% increase in spatial-temporal reasoning and the improvement was still evident after 24 hours (Rauscher, Shaw, Levine, Wright, Dennis, & Newcomb, 1997). The lessons engaged many different areas of the brain and utilized prior knowledge and built on this with new knowledge.

In a recent study (Neville et al., 2008), 88 children from Head Start preschools were randomly assigned to four possible groups: one large group with a regular Head Start instructor, a small group focusing on music activities and training, a small group in which children had regular Head Start instruction, and a small group in which the children received special training in focusing their attention to become more aware of details in general. The children were tested before and after and in both the small groups of music students and attention focusing students, there were strong and significant improvements in IQ, numeracy, and spatial cognition. This is an indication that musical activities can result in cognitive improvement. Another study showed that after 7 months, students in a music training group performed the same or better in reading but were significantly "ahead of their peers in math, even though they had started out slightly behind" (Gardiner, Fox, Knowles, & Jeffrey, 1996).

Based on this prior research, it is evident that music has a positive effect on the development of children in areas such learning literacy skills, communication skills, fine motor and melodic discrimination, spatial-temporal reasoning and abilities, improvements in IQ, numeracy, and spatial cognition, and in math skills. It may be further argued, thus, that integrating music into the educational setting creates a richer learning experience for not just preschool children but all children.

ART AND DEVELOPMENT

An important topic is whether art integrated into education has any positive effects on the development of children. Some say that growth and development in art may affect growth and development in other areas of school learning. Carter (1993) believes teachers have been and probably always will teach art education, noting that art education should maintain a more "disciplined" role in the classroom and, at the same time, fit into the already structured framework of the elementary teacher (Carter, 1993). In agreement, Defoor (1993) states that a well-balanced curriculum should include art along with other subject matter. For example, Grauer (1984) believes one of the most extensive ways of coordinating art and literature is allowing the students to write and illustrate their own books. Grauer (ibid.) further noted states that if the books they work on are based on a science topic, then all three subjects—art, literature, and science—could be incorporated into the learning experience. Art and language are two different modes of communication that can be used to complement and expand understandings. Grauer (1984) gives the example of the Kindergarten, and Grades One, Two and Three at McKay Elementary working together on the theme of Dinosaurs. The children's, "visual and verbal skills were used to explore projects such as a large paper mache dinosaur, wall mural, dioramas, paintings, Big Books (books written and illustrated in a large format so they could be enjoyed by the whole class), prehistoric word booklets, poems, graphs, and even some songs and music around the theme. This linked learning in Science, Language Arts, Math, Music and Art" (Grauer, 1984, p. 33). Writing and illustrating class or individual student books was one of the main ideas spawned by linking art and writing in classrooms. Children began to see themselves as authors and illustrators, which in turn makes the learning experience more exciting.

Research conducted by Smith (1999) assessed the effectiveness of discipline-based art education (DBAE) and interdisciplinary art (IA) teaching methods on higher level thinking skills, and attitudes toward science and social studies. Two of the sixth-grade classes at a rural West Tennessee school were taught using the DBAE method and two were given the IA treatment. There were no significant differences between the attitudes or higher level thinking skills of students in the DBAE or IA treatment. However, it was found that DBAE produced more overall creativity and originality than IA. Smith thinks that students can benefit from a combination of both methods, suggesting that integrating art into education has an influential role in higher level thinking skills and attitudes towards science and social studies. Johnson (2008) suggests that art making is often a social activity for young children. As they talk together, they develop language and socio-emotional skills. She states that, "by engaging young children in talking about artwork, teachers help them actively focus on aspects of their artwork and that of others; build vocabulary; deepen perceptions; reflect on the effects of media, process and images; and communicate the ideas and meanings they discover" (Johnson, 2008, p. 79).

Phillips, Gorton, Pinciotti & Sachdev (2010) implemented an approach to early childhood education that integrates visual and performing arts throughout the preschool curriculum (Art as a Way of Learning) into a program (Promoting and Supporting Early Literacy through the Arts) designed to improve the emergent literacy and school readiness of at-risk young children in community-based preschool settings. They did a pre- and post-test to explore this program's potential effects in a real-world setting and preliminary results revealed improvements in the young children's emergent literacy and school readiness skills after participation in the program. They concluded that, "arts-related activities engage representational, communicative, expressive and social capacities that can stimulate new shifts in young children's awareness,

perception and thought. These arts-related experiences provide a rich and unique platform from which young children can both understand and prepare for the world around them" (Phillips et al., 2010, p. 111).

Mills (1972) ran an experiment in a public-school setting to determine the degree of transfer of learnings resulting from specific art lessons. The research was concerned with the effects of art instruction on reading development and quality of drawings. The children who were taught art lessons that stressed the inclusion of details accumulated a significant pretest-postest change in their scores on the Metropolitan Reading Tests and in the quality of their drawings. This suggests that not only art can effect development but specific art instruction can improve development of skills as well.

Based on this research, it can be said that art is a beneficial addition to an educational lesson plan. That is, arts-related activities provide improvement in literacy, communication, higher level thinking skills and attitudes towards science and social studies. They also engage representational, communicative, expressive and social capacities that can stimulate new shifts in young children's awareness, perception and thought.

DEVELOPMENT OF SOCIAL SKILLS

A popular educational topic is determining which activities are linked to the development of social skills in children. Oden & Asher (1977) coached third- and fourth-grade socially isolated children in social skills for 4 weeks. They were given instructions from an adult in social skills relevant to friendship making, played games with peers to practice social skills, and participated in a post-play review session with the coach. The coaching group increased on a play sociometric rating significantly more than the control groups. The children who were coached also received a greater gain in friendship nominations by their peers. A follow-up

assessment done a year later showed a continued progress on the play sociometic rating for the children who had received coaching. These results suggest that coaching children in social skills can make a lasting contribution to children's social learning.

Another educational activity that may promote social skills is sociodrama. According to Landy & Borisoff (1987), "sociodrama is distinct from other dramatic role-playing in that the emphasis is upon presenting the dimensions of a social issue" (p. 68). Through playing out a social issue in a role, children learn the "dramatic, cognitive, and philosophical tools essential to apply to the learning of various subject content" (Landy & Borisoff, 1987, p. 71). A report by Fernando Murillo (2007) suggests that drama applied in the classroom significantly enhances the students'socio-affective skills, "providing them with new tools to understand their own inner processes and those of others, and to develop strategies for learning and communicating more effectively" (p. 2). He says that reasons for using drama in the classroom are to help build confidence and to help develop skills and strategies for learning. Research has shown that children who are active in pretend play are usually more joyful and cooperative and more willing to share and take turns (Edelman, 1997). Edelman states that through imaginative play, children learn empathy for others and it helps them to be more attentive, and to use self-control. She also says that cooperative play, for example, block building, helps children learn to respect the ideas of others, learn to contribute to joint efforts, and learn how to solve problems by working together to find a solution.

According to Dewar (2009), many activities can help children develop social skills such as the name game, follow the leader, block building, working on a garden together, cooperative ball games, charades, and role-playing. Pellegrini, Dupuis, & Smith (2007) say it's plausible that social play, more specifically pretend social play, is a good way for children to learn appropriate

social behaviors. Pretend play may also involve perspective-taking which is a key social skill that permits us to understand each other's intentions and actions (Spinka, Newberry, & Bekoff, 2001).

This research suggests that sociodrama, drama, pretend-play, social play, cooperative play and even coaching may have a direct link to social skill development in children.

DEVELOPMENT OF FINE MOTOR SKILLS

It is believed that the acquisition of fine motor skills is "an important aspect of children's developmental growth as fine motor skills enable children to participate in valued occupations in the areas of activities of daily living, education, play, and social participation" (Marr, Cermak, Cohn, & Henderson, 2003, p. 550). Also, "the acquisition of rudimentary and fundamental motor skills allows children to explore their environment, exert their expanding independence, and socialize through the sharing of physical activity experiences" (Thomas & Thomas, 2008, p. 185). Therefore, it's natural for research to examine which activities are linked to the development of fine motor skills in children. Understanding this would possibly assist educators to better prepare preschool children for the kindergarten experience.

The purpose of the research by Marr et al. (2003) was to describe and compare the fine motor activities in preschool and kindergarten classrooms. Children in 10 Head Start and 10 kindergarten classrooms were observed for a day. The children were either in a group where they performed fine motor activities with no academic purpose, fine motor activities with academic purpose, academic activities with no fine motor component, and nonacademic activities with no fine motor component. The fine motor activities in which the children engaged were self-care, hand manipulative activities, and paper and pencil activities. The self-care activities included handwashing, toileting, opening milk and treats for snack, eating breakfast, and putting on and

taking off a coat. The hand manipulative activities included cutting, playing with Legos, playdough, puzzles, finger plays, and block building. Paper and pencil activities involved writing or coloring with a pencil, crayon, or marker, or painting with a paintbrush. What they found was that children in Head Start spent a little more time than one third of their class time and children in kindergarten spent almost half of their class time in some type of fine motor activity. This indicates that kindergarten has a slightly higher demand of fine motor skills, which in turn means that preschools need to be including fine motor skill activities into their curriculum to better prepare students for kindergarten. McHale & Cermak (1992) found, on average, 30 to 60% of the 2nd- to 6th-grade day was spent in fine motor activities. Therefore, as children move up in grade level, the need for fine motor skills will increase. This means they need successful development in fine motor skills while in preschool to be successful in later years of development.

Research conducted by Case-Smith (2000) examined how performance components and variables in intervention influenced fine motor and functional outcomes in preschool children. The 44 preschool-aged children with fine motor delays received occupational therapy services to enhance fine motor performance for eight months. They were administered eight fine motor and functional performance assessments at the beginning and end of the school year. Most of the sessions used fine motor activities while others addressed peer interaction and play skills. They found that the children made a gain in fine motor development over the school year and that the fine motor outcomes were most influenced by emphasis on play and peer interaction goals. This suggests that the influence of play in intervention activities can enhance fine motor performance in preschool children. According to Pierce (1997), play may be an effective means to motivate and engage children so that they become more focused or make greater efforts to attempt fine motor activities. Because children play in all environments, use of play activities that enhance

fine motor skills can enable the children to generalize their skills to other settings and other play opportunities (Parham & Primeau, 1997; Reilly, 1974).

According to Poole, Miller, & Church (2005) preschool children enjoy patting, squeezing, and molding play dough and damp sand. They exercise their fine motor skills and improve their eye-hand coordination in participating in art and writing activities. Mahoney (2012) suggests that fine motor skill development activities include molding and rolling play dough into balls, scissor acitivities, sensory activities such as clapping games, crab walking, catching bubbles between hands, drawing in a tactile medium such as wet sand, salt, and rice, and picking out small objects like pegs, beads, coins, etc., from a tray of salt, sand, rice, or putty.

In conclusion, the research examined above indicates there are many activities to enhance fine motor skill development. If these are included in the educational curriculum at the preschool level, then children will be better prepared to perform activities throughout the increasing grade levels in their educational career.

DEVELOPMENT OF GROSS MOTOR SKILLS

Gross-motor development is a critical component of preschool and elementary school educational programs (Ignico, 1991). During these early school years, a child's motor ability begins to emerge. Motor skills are "deliberate and controlled movements requiring both muscle development and maturation of the central nervous system" (Gale Research, 1998). Games that are well suited to the motor skills of elementary school-age children include kick ball, dodge ball, and team relay races. According to Poole, Miller, & Church (2005) to keep children interested, use different items to strengthen large arm muscles such as parachutes to move in the air, bean bags to toss, climbers to pull up on or swings to pump, big balls to kick, trikes and

scooters to push to perfect gross leg movements. Ignico (1991) examined the effects of a competency-based assessment and instructional program on 30 kindergarten children's gross motor development. They were tested on locomotor skills including running, hopping, jumping, sliding, galloping, skipping, and leaping and manipulative skills including dribbling, kicking, throwing, catching, and striking. For 10 weeks the treatment group received instruction on the 12 items for 28 minutes each day. They were tested before and after the 10-week instruction was given. The most significant finding was that participants receiving the 10-week instructional program showed a substantial improvement in gross motor skills. It showed a 19 point increase in the mean scores from pretest to posttest. These results suggest that a competency-based instructional program can produce gains in the motor skill performance of children.

Research by Wang (2004) investigated the effects of a creative movement program on gross motor skills of preschool children. Sixty children were pretested and post-tested after they participated in a creative movement program for 30 minutes twice a week. The plan consisted of warming up, exploring the concept, developing skills, creating, and cooling down. The developing skills part of the lesson consisted of introducing and practicing locomotor skills such as hopping, skipping, crawling, creeping, walking, running, leaping, jumping, galloping, rolling, and climbing. The non-locomotor movements they did were movements of the limbs and trunk, bending, extending, stooping, and twisting. For example, they stood on one foot, performed situps, and push-ups. They were also introduced and guided through the elements of movement and dance concepts. Results showed that students participating in the creative movement program in gross motor skills scored significantly higher than those in the control group. There was also a higher significant difference in locomotion score. This study found that gross motor skills can be influenced by an appropriate movement program. Research has also shown that programs that

promote the indentified sequential skills make significant gains in motor development (Block & Davis, 1996; Boucher & Doescher, 1992).

According to High Reach Learning, (2007) balls, push toys, short and small climbing structures, riding toys, and large stacking blocks are some of the many materials that can be used in the classroom to develop large motor skills. Gabbard & Rodrigues (2008) suggest that preschoolers accumulate at least 60 minutes of structured physical activity daily to develop competence in movement skills that lead to more complex movement tasks. Movement experiences they should do are ones that require coordinating body movements with visual information, such as ball rolling, throwing and catching balls, and striking or kicking. They can also do activities such as dancing, biking, jump rope, swimming, and brisk walking to help develop gross motor skills.

This research suggests a variety of different activities for children to perform in order to develop gross motor skills at the preschool age. If these were to be included in an academic curriculum, they would enhance gross motor abilities, which would be beneficial throughout their lives.

DEVELOPMENT OF RECEPTIVE LANGUAGE

Receptive language is defined as the ability to understand and comprehend what is being said or read. Several studies have demonstrated a concurrent relation between language and reading in children. Language skills are thought to provide a critical part of the foundation for reading skills and success in school (Arnold, Lonigan, Whitehurst, & Epstein, 1994). While there is controversy over the issue, "most scholars agree that shared book reading contributes in important ways to early literacy and language development" (Wasik & Bond, 2001, p. 243).

Whitehurst, Falco, Lonigan, Fischel, DeBarsyshe, Valdez-Menchaca, & Caufield (1988) demonstrated that a program of shared reading, called dialogic reading, can produce substantial changes in low-income preschool children's language skills. Dialogic reading "includes a series of procedures in which the adult asks open-ended questions, creates opportunities for the children to participate in storytelling, and actively listens and encourages a discussion about the story" (Wasik & Bond, 2001, p. 244).

Research by Wasik & Bond (2001) examined the effects of a book reading technique called interactive book reading on the language and literacy development of 127, 4-year-olds from low-income families. The 15-week study involved both shared book reading and extension activities supporting the use of the vocabulary presented in books. While reading to the children, teachers presented concrete objects that represented words in the books. The children were then provided with multiple opportunities to use the book-related words, including being asked openended questions and engaging in conversations about the book and activities. This in turn provided the children with opportunities to use language and learn vocabulary in a meaningful context. The children in the interactive book reading intervention group scored significantly better than those in the comparison group on the Peabody Picture Vocabulary Test-III and other measures of receptive and expressive language. These findings suggest that interactive book reading can promote the development of receptive language and literacy skills in preschoolers.

In similar research by Wasik, Bond, & Hindman (2006), a language and literacy intervention was implemented in 10 Head Start classrooms. Teachers were trained in specific book reading and conversation strategies and the focus of the intervention was to train teachers how to increase opportunities for language and vocabulary development in young children. The teachers were trained to show the children an object that represented the vocabulary word and

ask questions such as, "What is this?" or "What do you call this? The teacher would then say, "What can I do with the.." or "Tell me what you know about this." Teachers were also trained to ask questions that would promote discussions during book reading such as, "Tell me more about what is happening on this page" and "What do you think will happen next?" When the reading was over, teachers were instructed to ask children reflection questions such as, "What part of the book did you like best?" and "Tell me why you think the character did what she did." Children in the intervention classrooms engaged in conversations and also expressed and elaborated on their ideas, feelings, and reactions to stories and activities. At the end of the school year, children in the intervention classrooms performed significantly better than children in the control classrooms on the Peabody Picture Vocabulary Test-III and the Expressive One-Word Vocabulary Test (3rd edition). The results suggest that "teachers' use of strategies such as providing feedback to children's language, asking descriptive questions, and using active listening strategies is positively related to children's outcome language measures" (Wasik et al., 2006, p. 70). The data also suggest that teachers' questioning before and after book reading may have more of an impact on children's language growth than during book reading. Both studies (Wasik & Bond, 2001; Wasik et al., 2006) demonstrate the usefulness of interactive reading in language development for young children. Also, according to Arnold et al. (1994), "picture book reading seems to provide an excellent context for teaching language skills" (p. 236). Through story-time intervention, children are encouraged to talk about picture books and provide appropriate language feedback and models, which in turn has large effects on children's language acquisition.

Research by Moyeda, Gómez, & Flores (2006) examined a music education intervention program (PIMITL in Spanish) for promoting vocabulary in 30 preschoolers. Two researchers

trained as teachers and as music educators, presented the program twice a week for a total of 20 sessions lasting 40 minutes each in a classroom setting. The sessions included musical activities that emphasized repeating rhythmical patterns and remembering sound sequences, as well as discriminating and making graphic representations of timbres, rhythms, and melodic lines. Results suggested that the children took in the vocabulary words that they heard in their environment more easily than the children in the other groups. The PIMITL program can be "considered as a resource for stimulating language at the preschool level, similar to that of reading stories" (Moyeda et al., 2006, p. 7). This research suggests that musical activities can promote receptive language development in preschoolers if implemented into an educational curriculum.

The research examined here indicates the activities of shared book reading, interactive reading, use of picture books, and musical activities enhance the development of receptive language in preschool children. If these were to be incorporated into an educational lesson plan, they would benefit preschool children greatly in their development.

DEVELOPMENT OF EXPRESSIVE LANGUAGE

Expressive language is the ability to use speech and gestures to communicate meaning. The development of expressive language is of course very important to a person's ability to interact in the world. Therefore, there are a number of studies that examine what activities can promote expressive language development in childhood. For instance, Whitehurst, Falco, Lonigan, Fischel, DeBaryshe, Valdez-Menchaca, & Caulfield (1988) experimentally examined a 1-month, home-based intervention, designed to optimize parental reading of picture books to young children. Parents in the experimental group were instructed to increase their rates of open-

ended questions, function/attribute questions, and expansions. They were also instructed to respond appropriately to children's attempts to answer these questions and to decrease their frequency of straight reading and questions that could be answered by pointing. It was found that these children scored significantly higher than the children in the control group on standardized posttests of expressive language ability: the verbal expressive subscale of the Illinois Test of Psycholinguists Abilities (1968), the Peabody Picture Vocabulary Test-Revised (1981), and the Expressive One Word Picture Vocabulary Test (1981). The children also had a higher mean length of utterance, a higher frequency of phrases, and a lower frequency of single words. Therefore, the encouragement of children "to speak more often through use of wh- questions and open ended questions, to repeat, expand, and recast the child's speech more often, and to provide praise and corrective feedback contingent on the child's speech" (Whitehurst et al., 1988, p. 558) enhances the development of expressive language.

According to Hart & Risley (2009), "teachers should make every effort to ensure that children are engaging in meaningful conversation and language throughout the day" (p. 5). In order to create a language-rich classroom, teachers should engage children in extended conversations, encourage children to tell and retell stories and describe events, discuss a wide range of topics, model use of new and unusual words, discuss word meanings, ask open-ended questions, give explicit guidance on vocabulary, syntax, and pronunciation, challenge children to justify their thinking, and focus on the expression of ideas (Hart & Risley, 2009). Dialogic reading, which is an important part of shared reading is also suggested as useful by the authors. This includes sentence completion tasks, recall and open-ended questions, wh- questions such as who, what, when, where, why to teach vocabulary, and distancing or bridging prompts to help the children relate ideas in the book to life experiences beyond the story. Engaging in

phonological-awareness games and activities (such as reading books to children that focus on rhyming, alliteration, singing songs, chanting nursery rhymes, and using musical instruments to clap out words and syllables) can also promote oral language skills.

Research by Kempen (2009) examined the impact literacy-enriched dramatic play had on Kindergarten students' literacy achievement. The sample of 5 children attending a Wisconsin elementary was pretested and post-tested using running records, letter and sound recognition, and an expressive vocabulary test. The students were treated in a literacy-enriched dramatic play setting for three weeks and interaction was recorded using a researcher-designed checklist. The findings revealed that the students had more literacy interactions when in the literacy-enriched dramatic play setting and there were gains in their expressive vocabulary. These findings suggest that dramatic play has an impact on expressive language development. In similar research, De la Cruz (1995) investigated whether a drama program with an emphasis on specific social and oral language usage would lead to increases in social and oral expressive and receptive language skills of 35 children with learning disabilities. The children participated in a 12-week creative drama program and were pretested and post-tested on the Walker-McConnell Scale of Social Competence and School Adjustment (1988), Test of Language Development-2, Primary (1988), or Test of Language Development-2, Intermediate (1988), and a self-developed scale of specific social and language skills. Results showed that the children in the experimental group had a significantly higher gain in social skills and oral expressive language than those in the control group.

Therefore, the research discussed is evidence that shared reading, dialogic reading, engaging in phonological awareness games and activities, dramatic play, and creative drama impact the development of expressive language in preschool children. For this reason, these

activities should be incorporated into school curriculum at the preschool level to enhance development.

DEVELOPMENT OF EMOTIONAL REGULATION

According to Galinsky (2010), regulating one's thinking, emotions, and behavior is critical for success in school, work, and life. In a classroom, "improved learning and behavior requires strong self-regulation skills" (Florez, 2011). Since children develop the foundational skills for self-regulation in the first five years of life (Galinsky, 2010), early childhood teachers play an important role in helping young children regulate their thinking and behavior (Florez, 2011). However, Florez (2011) doesn't think teaching self-regulation requires a special curriculum. Instead, it should be modeled and scaffolded during ordinary activities with adults and capable peers. She states that there are three teaching strategies, which are critical for scaffolding children's development of self-regulation: modeling, using hints and cues, and gradually withdrawing adult support. Modeling refers to teachers demonstrating appropriate behavior, which in turn shows children how to accomplish a task and how to use the selfregulation needed to complete it. Teachers also use simple directions, gestures and touch to provide young children with cues about how and when to regulate their emotions, attentions, and behavior. By gradually withdrawing adult support, teachers turn over more of the regulating responsibilities to the children's control while still monitoring their progress and intervening when necessary.

According to Webster-Stratton (1995), techniques for parents and teachers to help children learn emotional regulation are to provide as much stability and consistency as possible, accept the child's emotions and emotional responses, talk to the children about your own

feelings, and encourage children to talk about their feelings. Other techniques suggested are to model emotional regulation, teach children positive self-talk about an event, identify typical situations which result in emotional explosions and use them as springboards to teach problem solving. An interesting technique is to teach them the "Turtle Technique" which is where the child is asked to imagine she has a shell, like a turtle, that she can retreat into. She is then asked to go into her shell, take three deep breaths, and say to herself, "Stop, take a deep breath, Calm down." She is then instructed to focus on her breathing and to push the air into her arms and legs so she can relax her muscles. Next, she is told to tell herself, "I can calm down. I can do it. I can control it. I can stay out of fights." Finally, she is encouraged to stay in her shell until she feels calm enough to come out and try the situation again. More techniques include helping children be aware of the stages in the build up of tension, use time out for inappropriate emotional angry out-bursts, children should be taught an appropriate expression of negative feelings, and the children's efforts to regulate emotions should always be praised.

According to Joseph & Strain (2010), "Controlling anger and impulse is perhaps the most difficult task of emotional literacy" (p. 1). Children who learn to cope with their emotions constructively have an easier time with disappointments, aggravation, hurt feelings, and have an easier time relating to other children and adults at home, in school, or on the playground (National Research Council and Institutes of Medicine, 2000). Some teaching strategies include modeling remaining calm; cognitive behavioral interventions; preparing children for disappointing situations before they occur; recognizing and reinforcing when children remain calm; and involving parents and other care providers. Joseph & Strain (2010) also mentioned the "Turtle Technique" as an exercise for children to carry out when upset or angry. The High Scope Preschool Curriculum Comparison Study (Weikart, 1998) compared the effectiveness of three

preschool curriculum models when used with children at risk for school failure. The curriculum provides children with opportunities to make choices about their activities by identifying goals and making plans to achieve them. Students are also encouraged to recall or reflect upon different experiences they have had during the day, taking time to consider ideas and concepts they have discovered and discuss what they might do to build on or extend what they have learned. This model was found to assist in the development of self-regulation.

Research by Elias & Berk (2001) tested Vygotsky's assumption that sociodramatic play in early childhood contributes importantly to the development of self-regulation. 51, 3- 4-year olds were observed in their preschool classroom. During freeplay they were observed in the dramatic play areas of housekeeping and block building. The play elements measured were imitative role play, make-believe with objects, make-believe in regard to actions and situations, interaction with another player, verbal communication, and persistence in the play period. After freeplay they were observed during clean-up where they would put away toys and other materials. They were also observed at circle time, which was a regularly scheduled period in which children sat either in a circle or in a teacher-prescribed grouping, listening and responding as the teacher read stories or taught a lesson. Self-regulation was assessed during clean-up periods and during circle time. Results showed that the children engaged in greater frequency and persistence of creative sociodramatic play showed better future self-regulatory performance during clean-up time. Findings were consistent with Vygotsky's theory and suggest that sociodramatic experiences may enhance development of self-regulation.

According to Leong & Bodrova (2011), "listening to a book without interrupting the reader requires children to exercise their social-emotional self-regulation as well as cognitive self-regulation (p. 2). Therefore, an activity that develops self-regulation involves children

reading together. For example, each child is given a picture of an ear or a picture of lips. The child with the ear listens while the child with the lips is the one to picture-read. Through this activity of picture-reading to one another, children are learning to regulate themselves by taking turns and working together.

In conclusion, there are many techniques for a teacher to employ in order to help children develop self-regulation. Also, according to the research described, the activities of sociodramatic play and picture-book reading help enhance the development of self-regulation in preschool children as well.

CONCLUSION

The purpose of the present investigation was to explore the theoretical underpinnings and scientific basis for Arts Alive!, a multi-modal arts program designed to enhance a variety of developmental skills in children and adults. Research regarding the role of dance/creative movement, drama, music and art shows robust findings to support these activities as valid learning modalities for preschool and early elementary-age children. In addition, research endorses the early acquisition of social skills, fine motor skills, receptive language, expressive language, and emotional regulation skills as essential in children's capacity to engage the learning process.

References

- Arnold, D. H., Lonigan, C. J., Whitehurst, G. J., & Epstein, J. N. (1994). Accelerating language development through picture book reading: Replication and extension to videotape training format. *Journal of Educational Psychology*, 86, 235-243.
- Bloch, S. D. (1977). *Me and I'm great: Physical education for children three through eight.*Minneapolis, MN: Burgess Publishing Company.
- Block, M. E., & Davis, T. D. (1996). An activity based approach to physical education for preschool children with disabilities. *Adapted Physical Activity Quarterly*, *13*, 230-246.
- Boucher, B. H., & Doescher, S. M. (1992). Influencing preschool children's motor development:

 A comparison with two groups. *Early Child Development and Care*, 77, 67-76.
- Carter, S. (1993). The forgotten entity in art education. *Art Education*, 52-57.
- Case-Smith, J. (2000). Effects of occupational therapy services on fine motor and functional performance in preschool children. *American Journal of Occupational Therapy*, *54*, 372–380.
- Christie, J. F. (1990). Dramatic play: A context for meaningful engagements. *The Reading Teacher*, 43, 542-545.
- Conard, F., & Asher, J. W. (2000): Self-concept and Self-Esteem Through Drama: A Meta-Analysis. *Youth Theatre Journal*, *14.1*, 78-84.
- De la Cruz, R. E. (1995). The effects of creative drama on the social and oral language skills of children with learning disabilities. *ProQuest Dissertations & Theses*.
- Defoor, D. (1993). *Recognizing Excellence: Briefing Paper Series*. Reston: National Art Education Association.
- Edelman, M. (1997). SMART START The Parents' Guide To Preschool Education. Facts on File.

- Fields, M. V., & Hillstead, D. V. (1990). Whole language in the play store. *Childhood Education*, 67.2, 73-76.
- Fleming, G. A. (1976). *Creative rhythmic movement*. Englewood Cliff, NJ: Prentice-Hall.
- Florez, I. R. (2011). Developing Young Children's Self-Regulation through Everyday Experiences. *Young Children*, 46-51.
- Furman, L. (2000). In Support of Drama in Early Childhood Education, Again. *Arts and Young Children*, 27.3, 173-178.
- Gabbard, C., Rodrigues, L. (2008). Optimizing Early Brain and Motor Development Through

 Movement. Earlychildhood NEWS-Article Reading Center. Retreived February 24, 2012,

 from

 http://www.earlychildhoodnews.com/earlychildhood/article_view.aspx?ArticleID=360
- Gale Research. (1998). Gross motor skills. In *Gale encyclopedia of childhood and adolescence*.

 Retrieved February 24, 2012, from

 http://www.findarticles.com/g2602/0002/2602000281/p1/article.jhtml2012.
- Galinsky, E. (2010). *Mind in the Making: The Seven Essential Life Skills Every Child Needs*.

 NAEYC special ed. New York: HarperCollins.
- Gardiner, M. F., Fox, F., Knowles, F., & Jeffrey, D. (1996). Learning improved by arts training.

 Nature, 381, 284.
- Gilbert, A. G. (1992). *Creative dance for all ages: A conceptual approach*. Reston, VA: American Alliance for Health, Physical Education, Recreation, and Dance.
- Grauer, K. (1984). Art and writing: enhancing expression in images and words. *Art Education*, 37, 32-34.

- Gromko, J. E., & Poorman, A. S. (1998). The Effect of Music Training on Preschoolers' Spatial-Temporal Task Performance. *Journal of Research in Music Education*, 46.2, 173-181.
- Hanna, J. L. (1988). Dance and stress. Resistance, reduction, and euphoria. New York: AMS Press Inc.
- Hart, B., Risley, T. (2009). *Preschool Curriculum: What's In It for Children*. The Albert Shanker Institute.
- Henderson, L. C., & Shanker, J. L. (1978). The use of interpretive dramatics versus basal reader workbooks for developing comprehension skills. *Reading World*, *17*, 239-243.
- High Reach Learning. (2007). Training Module: Large Motor and Development for Infants and Toddlers. Retrieved February 24, 2012, from https://docs.google.com.
- Ignico, A. A. (1991). Effects of a Competency-Based Instruction on Kindergarten Children's Gross Motor Development. *Physical Educator*, 48.4, 188-191.
- Jay, D. (1991). Effect of a dance program on the creativity of preschool handicapped children.

 *Adapted Physical Activity Quarterly, 8, 305–316.
- Johnson, M. (2008). Developing Verbal and Visual Literacy through Experiences in the Visual Arts. *Young Children*, 63.1, 74-79.
- Joseph, G. E., & Strain, P. S. (2010). Helping Young Children Control Anger and Handle Disappointment. *The Center on the Social and Emotional Foundations for Early Learning*, 1-5.
- Joyce, M. (1994). First steps in teaching creative dance to children. Mountain View, CA: Mayfield Publishing Company.
- Kardash, C. A. M., & Wright, L. (1986). Does creative drama benefit elementary school students? A meta-analysis. *Youth Theatre Journal*, *1.3*, 11-18.

- Karff, J. (1969). Dance in the urban school. *Journal of Health, Physical Education and Recreation*, 50, 43.
- Kempen, T. L. (2009) Literacy-Enriched Dramatic Play in Kindergarten. Web. 29 Feb. 2012. < learning and teaching.org/Research/Papers/2010/Kempen_Tara.pdf>.
- Landy, R. J., & Borisoff, D. J. (1987). Reach for Speech: Communication Skills through Sociodrama. *The English Journal*, 76.5, 68-71.
- Leong, D. J., Bodrova, E. (2011). "Staff Workshop Teacher Handout: Self-Regulation in the Early Childhood Classroom." *Scholastic.com*. 2011. Web. 2 Mar. 2012. http://www.scholastic.com/teachers/article/staff-workshop-teacher-handout-self-regulation-early-childhood-classroom.
- Lobo, Y. B., & Winsler, A. (2006). The Effects of a Creative Dance and Movement Program on the Social Competence of Head Start Preschoolers. *Social Development*, 15.3, 501-519.
- Mahoney, Ann. "Fine Motor Skills Developmental Milestones: Early Childhood Activities." *Education.com.* Early Childhood Center, 2012. Web. 24 Feb. 2012.

 http://www.education.com/reference/article/Ref_Ready_Fine_Motor/.
- Marr, D., Cermak, S., Cohn, E. S., & Henderson, A. (2003). Fine motor activities in Head Start and kindergarten classrooms. *American Journal of Occupational Therapy*, *57*, 550–557.
- McHale, K., & Cermak, S. (1992). Fine motor activities in elementary school: Preliminary findings and provisional implications for children with fine motor problems. *American Journal of Occupational Therapy*, 46, 898–903.
- McIntire, J. M. (2007). Developing Literacy through Music. *Teaching Music*, 15.1, 44-48.
- McKean, B., & Sudol, P. (2002) Drama and Language Arts: Will Drama Improve Student Writing? *Youth Theatre Journal*, 16.1, 28-37.

- Mills, J. C. (1972). The Effect of Art Instruction Upon a Reading Development Test: An Experimental Study. *ProQuest Dissertations and Theses*.
- Moyeda, I. X. G., Gómez, I. C., & Flores, M. T. P. (2006). Implementing a Musical Program to Promote Preschool Children's Vocabulary Development. *ECRP*, 8.1, 1-12.
- Murillo, F. (2007). Critical Teaching: Drama as an approach to communicative learning and development. *Teaching Research Project Report*.
- Neville, H., Andersson, A., Bagdade, O., Bell, T., Currin, T., Fanning, J., et al. (2008). Effects of music training on brain and cognitive development in under-privileged 3- to 5-year-old children: Preliminary results. *Learning, Arts and the Brain: The Dana Consortium Report on Arts and Cognition*, 1, 105–116.
- Oden, S., Asher, S. R. (1977). Coaching Children in Social Skills for Friendship Making. *Child Development*, 48.2, 495-506
- Parham, L. D., & Primeau, L. (1997). Play and occupational therapy. In L. D. Parham & L. Fazio (Eds.), *Play in occupational therapy for children*, 2–22. St. Louis, MO: Mosby Year Book.
- Pellegrini, A. D., Dupuis, D., & Smith, P.K. (2007). Play in evolution and development.

 Developmental Review, 27, 261-276.
- Pellegrini, A. D. (1980). The relationship between kindergartners' play and achievement in prereading, language, and writing. *Psychology in the Schools*, *17*, 530-535.
- Phillips, R. D., Gorton, R. L., Pinciotti, P., & Sachdev, A. (2010). Promising Findings on Preschoolers' Emergent Literacy and School Readiness In Arts-integrated Early Childhood Settings. *Early Childhood Education Journal*, 38, 111-122.
- Pierce, D. (1997). The power of object play for infants and toddlers at risk for developmental

- delays. In D. Parham & L. Fazio (Eds.), *Play in occupational therapy for children*, 86–111. St. Louis, MO: Mosby Year Book
- Pinciotti, P. (1993). Creative Drama and Young Children: The Dramatic Learning Connection.

 Arts Education Policy Review, 94.6, 24-28.
- Podlozny, A. (2001). Strengthening Verbal Skills Through the Use of Classroom Drama: A Clear Link. A Summary of a Meta-Analytic Study. *Beyond the Soundbite : Arts Education and Academic Outcomes*, 99-107.
- Poole, C., Miller, S. A., Church, E. B. (2005). How Children Develop Motor Skills. *Early Childhood Today*, 19.7, 22-25.
- Rauscher, F. H., Shaw, G. L., Levine, L. J., Wright, E. L. Dennis, W. R., & Newcomb, R. (1997). Music training causes long-term enhancement of preschool children's spatial-temporal reasoning. *Neurological Research*, 19, 2–8.
- Reilly, M. (1974). Play as exploratory learning. Beverly Hills, CA: Sage.
- Salmon, A. (2010). Using music to promote children's thinking and enhance their literacy development. *Early Child Development and Care*, *180.7*, 937–945.
- Samuels, S. (2002). A Dramatic Approach to Enhancing Reading Comprehension Skills in the Elementary Classroom. *ProQuest Dissertations and Theses*.
- Schlaug, G., Norton, A., Overy, K., & Winner, E. (2005). Effects of Music Training on the Child's Brain and Cognitive Development. *New York Academy of Sciences*, 1060, 219-230.
- Shore, R. A. (2010). Music and Cognitive Development: From Notes to Neural Networks. *NHSA Dialog: A Research-to-Practice Journal for the Early Childhood Field*, 13.1, 53-65.

- Smith, L. L. (1999). Effects of Discipline-Based Art Education and Interdisciplinary Art

 Education on Artistic Development and Production, Higher Level Thinking, and

 Attitudes Toward Science and Social Studies. *ProQuest Dissertations and Theses*.
- Spinka, M., Newberry, R.C., & Bekoff, M. (2001). Mammalian play: Training for the unexpected. *Quarterly Review of Biology*, 76, 141-168.
- Stinson, S. (1998). *Dance for young children: Finding the magic in movement*. Reston, VA: The American Alliance for Health, Physical Education, Recreation, and Dance.
- Thomas, K. T., & Thomas, J. R. (2008). Principles of Motor Development for Elementary School Physical Education. *The Elementary School Journal*, 108.3, 181-195.
- Wagner, B. J. (1988). Does classroom drama affect the arts of language. *Language Arts*, 65, 46-55.
- Wang, J. H. (2004). A Study on Gross Motor Skills of Preschool Children. *Journal of Research* in Childhood Education, 19.1, 32-43.
- Wasik, B. A., & Bond, M. A. (2001). Beyond the Pages of a Book: Interactive Book Reading and Language Development in Preschool Classrooms. *Journal of Educational Psychology*, 93.2, 243-250.
- Wasik, B. A., Bond, M. A., & Hindman, A. (2006). The Effects of a Language and Literacy Intervention on Head Start Children and Teachers. *Journal of Educational Psychology*, 98.1, 63–74.
- Webster-Stratton, C. (1995). Helping Children Learn to Regulate Their Emotions. *Parenting Insights*, 11.
- Weikart, D. P. (1998). Changing early childhood development through educational intervention.

 Preventive Medicine: An International Journal Devoted to Practice & Theory, 27.2, 233-

237.

Whitehurst, G. J., Falco, F. L., Lonigan, C., Fischel, J. E., DeBarsyshe, B. D., Valdez-Menchaca,
M. C., & Caufield, M. B. (1988). Accelerating language development through picture-book reading. *Developmental Psychology*, 24, 552-559.