Every day in one multi-age, fully inclusive classroom, students are meaningfully engaged in learning through movement—they move to learn science, social studies, literature, and math. Through this unique use of creative movement and dance, classroom teachers are addressing the No Child Left Behind ([NCLB] 2001) legislation and its associated mandate to achieve Adequate Yearly Progress (AYP) across all subgroups of children. NCLB has made the development of new teaching methods imperative. To achieve or exceed the required progress, creative strategies and interventions are needed that will reach all learners—especially those students who are at greatest risk for school failure.

In increasingly diverse classrooms, using creative movement and dance techniques is one way to reach many of these children who do not learn through more typical instructional formats.

In this and other classrooms, dance and creative movement have been implemented successfully (Skoning 2008). Examples are readily available in language arts (Grant 1985; Kim 1995; Smith 2002; Pica 2006), math (Kim 1995; Werner 2001; Pica 2006), science (Kim 1995), and social studies (Griss 1994; Kim 1995; Nilges and Gallavan 1998). In many of these accounts, researchers reported that students demonstrated increased understanding, improved behavior in the classroom, and better attitudes toward school. Creative movement and dance strategies in the classroom also have been documented to increase students’ self-esteem, emotional expression...
and self-regulation, and social function (Theodorakou and Zervas 2003; Meekums 2008). With so much support for the use of movement activities in the classroom as effective strategies, educators should consider using creative movement and dance as a way to reach those students who might otherwise be left behind.

**Example Classroom**

In the classroom referenced earlier—in a suburban elementary school in a north-central state—the use of movement emerges as particularly effective for the inclusion of students with various backgrounds and abilities. Because of its student makeup, this multi-age 4/5 grade classroom of 27 students is a solid setting for the implementation of dance and creative movement as instructional strategies. Nine students in this class have disability labels including learning disability (LD), emotional or behavioral disability (EBD), cognitive disability (CD), and autism. Also, three students are English Language Learners (ELLs). About 30 percent of these students qualify for free or reduced lunches.

The special and general education teachers supporting this classroom are challenged to effectively meet the needs of this diverse group of students. No matter how frequently class materials are read, discussed, and reviewed, some students do not understand the information or remember it when asked to recall information later. While bright, the students with language-based learning disabilities struggle to retain and recall words and ideas when presented through oral or written language. Similar struggles exist for the students who are English Language Learners. Students still learning English have difficulty retrieving the correct word in English or do not understand the words their teachers use to define new vocabulary.
These students with special needs are part of a classroom that wiggles, fidgets, and moves throughout the school day. The teachers spend a large portion of their time managing the behavior of their students to keep them at their desks and focused on the task at hand. To more constructively harness movement that otherwise might be halted, the teachers actively engage all students in movement experiences that help them remember and retain content.

When the class engages in physical activities, the teachers note fewer behavior problems. Movement becomes an expected activity and an integral part of the learning process rather than a problematic behavior. Teachers implement kinesthetic strategies throughout the academic day. For example, after reading a novel, groups of students are assigned characters. Each group discusses an assigned character and the way that character might move at different points within the novel. Then the students combine these movements into phrases that represent their character and perform their dances for the rest of the class. Using this technique, the students who struggle with language and comprehension are able to remember the characters and basic plot lines better and experience increased success in the classroom.

Incorporating kinesthetic approaches supports the learning needs of diverse students. They are able to remember the things their bodies did and connect the language with those movements. Many students have shared how much more they learn when they move in class—including those students who are gifted and talented. One fifth-grade girl identified as gifted stated, “When I move the way the character would move, I can see more what she’s like. Then, I can make better predictions about how the character will respond to different things later [in the story].” Teaching through movement helps everyone in the class develop deeper conceptual understanding.

These highly motivating activities engage all students. Everyone looks forward to these activities, and refusal to participate has not been an issue. The success these students experience raises the question, “why is this method of teaching effective for such a variety of children?” The literature on constructivism, cooperative learning, multiple intelligence theory, brain-based learning, and the teaching of foreign languages through total physical response lends support and a philosophical base to teaching through movement and dance.

**Constructivism**

A constructivist approach to teaching is one in which students develop their own understanding of the ideas and concepts addressed in the classroom. The classroom becomes a place where students’ perspectives are valued and their suppositions are continuously challenged (Brooks and Brooks 2001). Teachers follow their students’ lead and use scaffolding to help them reach higher levels of understanding. The emphasis in constructivist classrooms is not prescribed curriculum, but rather solving problems and answering real and meaningful questions. The curriculum, then, is built around each classroom of students and what is important to them.

The addition of movement gradually creates an increasingly constructivist environment that fully engages students both mentally and physically. While still following district curriculum guidelines, teachers stop telling students what to do. They do not follow a model-lead-test or other scripted format to teach concepts, as teachers would in a more behaviorist setting (Marchand-Martella, Slocum, and Martella 2004). Instead, teachers ask questions and begin to follow their students’ lead. Problem-solving becomes a stronger classroom focus. Students engage in activities in a way that makes sense to them.

In the example classroom, as students use movement to create their own explanations of characters, concepts, and vocabulary, they are more engaged in classroom activities, more likely to remember concepts later, and report that they enjoy class time more than in the past.

**Cooperative Learning**

The literature on cooperative learning lends additional evidence to support the effective use of movement as described here. Cooperative group work is comprised of five basic elements (Johnson, Johnson, and Holubec 1988): (a) positive interdependence; (b) individual accountability; (c) focus on social skills; (d) small face-to-face groups; and (e) processing the group’s effectiveness at the end of each activity. Because students work on both academic skills and social skills, cooperative groups are an effective way to simultaneously increase self-esteem, retention, achievement, and attitudes toward school (Bennett, Rolheiser, and Stevahn 1991). Additionally, students with skills in different areas can work together to support one another’s learning (Gargiulo and Metcalf 2009).

As students in the example classroom work in small, cooperative groups to develop their definitions for words using movement, they problem-solve together and support one another’s success. Within cooperative groups, students focus on an academic task as well as develop needed social skills such as solving problems, taking turns, and resolving conflicts. Students from diverse backgrounds and experiences learn how to work together, set group goals, and succeed as a group. Not wanting to miss group activities, students with emotional and behavioral disabilities begin to take risks and participate positively in their groups, know-
ing they will be supported by their classmates and teachers. Prior to the use of movement, one fourth-grade boy labeled EBD and ELL rarely participated in classroom activities or engaged in any activities requiring him to work with other students. After introducing movement into small cooperative groups that focus on social skills in addition to academic content, he slowly began to participate in these activities and to develop friendships with other students. This boy now takes many more risks in the classroom, supports his peers, and contributes positively to group projects and outcomes. Similarly, he has learned that his peers will support him as he learns new skills and attempts new tasks.

**Multiple Intelligence Theory**

To identify the many ways children are smart, developmental psychologist Howard Gardner (1983) described a number of intelligences for educators to consider. Gardner also suggested that individuals possess all of the intelligences to varying degrees and not in fixed quantities (Armstrong 1994). Through experience, individuals can gain strength in different areas and can use one intelligence to gain access to others (Council for Exceptional Children 2005).

Schools teaching with a focus on multiple intelligences (MI) have reported that their students’ academic scores have improved and achievement gaps have narrowed (Campbell and Campbell 1999). Yet many schools focus primarily on verbal-linguistic and logical-mathematical skills and abilities. Changing this focus to include other intelligences can benefit many children whose strengths are not in these two intelligences.

At least two large studies (n>500) documented the effectiveness of using movement to teach basic reading and reading comprehension strategies (McMahon, Rose, and Parks 2002; Block, Parris, and Whiteley 2008), demonstrating the need to provide students with additional avenues for learning. Through the addition of movement and dance as an instructional strategy in the example classroom, students learn and express linguistic concepts through their kinesthetic intelligence. Students who struggle to demonstrate understanding through language are able to demonstrate understanding through movement. Often, students in this class who struggle to explain a concept on paper easily explain it with their bodies. Some of these students are able to write a response as long as they have “moved” it first. One intelligence is used to help strengthen another.

Prior to the implementation of movement and dance in the example classroom, a fifth-grade boy, with labels of LD and Attention Deficit/Hyperactivity Disorder (ADHD), often was difficult to manage in classroom settings. His body was always in motion. He had difficulty writing and was viewed by many in the school as a behavior problem. Requiring students in this classroom to move allowed him to use his strengths and demonstrate his understanding of concepts in a new way. Through the use of movement as a teaching and learning technique, he emerged as a leader and strong choreographer. He recognizes the preferred movement styles of his classmates and organizes groups to plan dance performances for himself and others.

**Brain-Based Learning**

As more is learned about the brain and how it works, a connection between mind and body emerges. Ways to use this connection to enhance learning also are developing. Movement is an important key in using this connection more effectively in classrooms. Jensen (1998) described the link between movement and learning, and explained many benefits to increasing the amount of movement in which students are engaged throughout their day. One benefit of increasing movement and blood flow is the positive impact on brain function. In a more recent study of overweight children, Davis et al. (2007) discovered that aerobic exercise improved their cognitive functioning. Beyond general improved brain functioning, Wolfe (2001) suggested movement and simulations as effective means to take advantage of the mind-body connection; he found that simulations improve both understanding and retention. One example of a simulation is having students “become” parts of a food chain or web, and then “become” factors influencing the web. In this exercise, students must physically interact with one another to determine the appropriate outcomes.

Additionally, Sprenger (1999, 75) described a range of strategies that support improved memory: “Anything that involves movement will enhance procedural memory.” Further supporting the benefits of movement and dance, Kentel and Dobson (2007) conducted a cross-cultural comparison of movement literacy and reported that children participating in dance, games, and other forms of movement throughout their school day experienced joy while learning. Both Jensen (1998) and Sprenger (1999) emphasized the importance of emotional state in learning and described the need for a strong emotional connection to the content being learned so that it can be retained in memory. For some students, movement and dance experiences can provide this emotional connection to important content.

This mind-body connection is evident in the example classroom when written tasks follow movement experiences. Each time understanding is assessed through students’ written responses, several students move at
their desks the way they moved when engaged in prior kinesthetic activities. These students stop at different points to record their answers on paper. They use muscle memory to trigger the more cognitive memory of the concepts and words required for their written responses. They repeatedly engage in the movement and dance activities as a way to understand the concepts cognitively.

For one fourth-grade boy with an identified language-based learning disability, this connection is particularly powerful. While he can read a novel at grade level, he is unable to recall any of the characters or events when he finishes the book, even after many class discussions. However, when asked to move the way a particular character in the novel would move, and after developing a representative movement theme for the character, he can describe that character and many events in which that character is involved. When his group is assigned the main character, the process of creating a dance that represents the character and several points in the plot in which that character is involved allows him to recall the basic plot line of the story.

Total Physical Response

When considering how adding movement could help students who are ELL, the research on Total Physical Response (TPR) provides some answers. This method—which requires students to respond physically to words—is successful in teaching students foreign languages because it assumes that children are able to understand language before they can produce it—following a pattern similar to first-language acquisition in children (Asher 2000). Using the TPR method, students follow directions and perform actions given to them in a foreign language before they learn to say the words themselves. An action or movement is performed for each new word or phrase, giving the students a clear meaning upon which to link new words.

The students who are ELL in the example classroom understand concepts and explanations because of the physical responses required. They act out their explanations and then pair the new vocabulary with these experiences. This method leads to improved understanding of concepts and assists students with their acquisition of English vocabulary. Students create movement phrases to represent science concepts and then connect terms to their movement definitions. Students who are ELL no longer memorize definitions using other words they do not understand to define new vocabulary. Instead, they link new terms directly to the concepts being taught.

Closing Thoughts

Further empirical evidence is still needed if creative movement and dance are to be considered research-based instructional strategies. Many questions remain unanswered regarding the use of movement. These questions include: Are there disciplines for which the addition of movement is better suited? Are there children for whom the use of movement is more or less helpful? How much improvement in academic and social skills can be expected when compared to other teaching methods?

Adding movement to one 4/5 grade classroom effectively improved academic and social outcomes for a variety of students and supported their learning across curricular domains. This example classroom adds further anecdotal evidence and a theoretical framework to support the use of creative movement and dance in the classroom.