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The Value of Dance Movement in General Education:

A Literature Review

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**THE VALUE OF DANCE MOVEMENT IN GENERAL EDUCATION:  
A LITERATURE REVIEW**

The assumption that artistic skills insignificantly affect students' general educational performance ignores recent research indicating that arts education and general education share intersecting sets of important developmental skills and are thus inherently symbiotic. A complete general educational system is, ideally, a community of sorts, composed of people working to develop social collaboration, personal expression, academic and physical skills as well as cultural reflection and aesthetic appreciation. Dance movement and other interdisciplinary arts develop creative thinking and social skills within the educational system, interfacing with all aspects of the complete educational community.

This literature review will investigate recent arts education research to review the current placement of dance movement in education, and then ask, what is the value of dance movement in general education? The responses to this question are as diverse as the US cultures and come from a variety of artistic, scientific, philosophical and humanistic sources.

The ongoing popular dialogue about the primary value of dance movement in education rises from two general viewpoints: first, art for art's sake, sometimes articulated as education *in* the arts (specifically, here, dance movement for its own sake); and second, art as a means of transfer of skills, sometimes described as education *through*

the arts (particularly, here, dance movement as a means of transfer of skills to academic areas).

There is, however, a third and relatively less well documented but equally important reason dance movement should be an integral part of the educational discussion. Dance movement is inclusive of every person in its use of the body for nonverbal personal and social expression. Dance movement education provides an environment where all students, regardless of academic, artistic, linguistic, athletic or socio-economic background, body type or intellect can participate and earn benefits.

These benefits may be collected into five general, overlapping categories. For the purpose of this literature review, the benefits are personal self-expressive, social-collaborative (cooperative), cultural reflective, academic (subdivided into transfer of skills and transmission of information), and physical. These benefits, in turn, affect all three voices in the discussion of dance movement in education. This literature review will consider the importance of the first two approaches to the value of dance movement in education and will then explore the third position.

For the purpose of this discourse, the term “dance” is defined as creative, stylized movement used as a personal and cultural form of non-verbal expression and communication. Dance is a three-dimensional visual art, similar to sculpture and architecture, as well as a kinesthetic art similar to athletics and martial arts. Dance is also an art form requiring visual literacy, which, as described by Debes (1969, p. 27) is the ability to recognize and understand visual gestures, symbols and objects, and to use them in communication as reported by the International Visual Literacy Association (IVLA,

2010). “Dance movement” is a term which accentuates a complete range of technical or formal dance training as used in this paper.

The question, what is the value of dance movement in education, rises in response to a discrepancy between apparent governmental support of arts education and the reduction of funding used to create and maintain arts education.

The “Improving America's Schools Act of 1994” Title X, Part D--Arts in Education advocates for the value of arts in our national education system, and supports the arts as unique ways by which to understand, to represent, and to communicate about life. An expanded update of this came in the form of The No Child Left Behind Act of 2001 (NCLB).

The NCLB includes the arts as core subject areas with math, science, language arts, history, etc.; and decentralizes education, so that in order for schools to receive Federal funding for the arts, other core subject areas such as reading and math must reflect annual increases in test scores (NCLB, 2001). Further, the NCLB requires that all core subject areas are validated through science-based research. This research must be peer-reviewed in order for the subject (art form) to qualify for funding. Teachers for the core subject areas must have specific education qualifications as well. School requests for funding (arts programs) for areas of lower economic means are given priority, with the caveat that if adequate yearly progress (AYP) in math, language arts and science is not measurable, funding can be withdrawn.

The Arts Education Partnership (2005) summarizes the NCLB, adding the following: “In 1997, the National Assessment of Educational Progress (NAEP) arts assessment was developed with separate assessments in dance, music, theater, and visual arts. The report

notes that “the dance assessment was not administered because an appropriate sample of students could not be identified” (p. 6). This is one reason dance movement is not present in the school arts curriculum.

Unfortunately, the NCLB pressure on schools to unconditionally guarantee adequate yearly progress (AYP) in certain core subjects disregards the degree of student and community diversity in the US. This diversity is multi-faceted and includes an increasing range of students with dissimilar social, economic and cultural backgrounds, and abilities.

The Policy and Programs Study Service (PPSS) points out in its 2004 report that it is unrealistic to expect schools in disadvantaged areas where there are inadequate materials, facilities, teaching resources and transportation to make AYP. In a report entitled “The Funding Gap 2005: Low Income and Minority Students Shortchanged by Most States”, Randolph-McRee and Pristoop, having investigated 14,000 public school districts, conclude that states spend approximately 900 dollars less per child per annum in school districts serving low income families than on districts serving middle and high income families. Due to many similar situations, there is a professional backlash by teachers and parents against the unrealistic expectations of NCLB, especially as school districts feel the unfair distribution of tightening fiscal constraints.

In these educational and economic discussions, proponents of our competitive capitalistic society where innovative technologies lead to financial success argue that math and science education are supremely important. However, “The Secretary’s Commission on Achieving Necessary Skills (SCANS) Report” (describing the most desirable job skills) by the US Department of Labor (2000) does not focus on basic math and science information but rather on thinking skills, organization, creativity, problem-solving, “seeing things in the mind’s eye” , and social qualities such as communication

and teaching others and “working well with cultural diversity”(p. 1). In spite of this, public education persists in preparing students for tests which severely limit a variety of teaching and learning styles. Eisner (2002) in his article “What Can Education Learn from the Arts about the Practice of Education?” explains the cultural reflection of this educational system, saying “Ends are held constant and always are believed to precede means” (p. 6).

Culture and cultural trends play a major part in the hierarchy of arts in education. Recently, there has been a popular recognition of dance both as a vibrant visual art form which embodies fantasy and as a good investment (as reflected in the US through films, such as “The Black Swan” and in TV programs such as “Dancing with the Stars”). Parallel to this cultural rejuvenation, dance movement has slowly been gaining momentum in educational settings. This progress of dance movement education is due, also, to a two-pronged approach advocating for dance as an integral part of educational curricula: first, scientific brain-based research, and second, innovative successful arts-in-education programs. However, dance movement is still not offered in many schools. According to the National Center for Education Statistics (2002) entitled “Arts Education in Public Elementary and Secondary Schools”, in the US, an average of 93% of elementary and secondary schools offer music and visual arts, 33% offer drama, and only 17% offer dance during the school day, although 60% offer after school arts programs. The priorities of the arts in education are clear in these statistics; however, as school budgets decrease, music and visual arts also decrease, leaving funding for only math, science, reading and writing, without adequate creative or social channels for students.

In an NCLB product-oriented factory model of US education, students are assembled, labeled, stamped with a diploma and sold in various educational and vocational job markets. Acknowledging the problems of a one-size-fits-all approach to education, Eisner (2002) states: “The forms of thinking the arts stimulate and develop are far more appropriate for the real world we live in than the tidy right angled boxes we employ in our schools in the name of school improvement”(p. 11). Defending funding for the arts, Hurley (2004) points out in an interview with Martin Rayala, art consultant for the Wisconsin Department of Public Instruction, that when schools cut art programs, delinquency increases. Art consultant Rayala asserts that the funding needed to compensate by hiring disciplinary and security professionals to address the social and material damage costs more than the (laid off) art teachers’ salaries.

Rayala speaks further about arts and education, citing seven means by which to communicate: words, numbers, movement, sounds, images, objects and spaces. Under the constraints of NCLB budget changes and test focus, he points out, only two of these seven means of communication are consistently used in schools: words and numbers, used in reading, writing and math. Communication and creative expression through movements, sounds, images, objects, and spaces as developed through the arts are the first to be cut. Reviewing these funding cuts we may ask: What is the value of creative expression beyond words and numbers – art for art’s sake?

The original *l’art pour l’art*, the idea of art as being pure and separated from political, emotional or other themes has changed. Current perceptions of the concept encompass artistic involvement with topics and sentiments. Hawkins (1992), in his book *The Body is a Clear Place*, expresses the belief that art in its first function uses materials for their own

sake; and in its second function expresses ideas through those materials. (p. 115-116)

Bamford (2009), in her analysis of arts education research has described the current viewpoint of l'art pour l'art in her statement that the arts are historically and culturally significant because they “are ways of knowing, representing, presenting, interpreting and symbolising human experience”(p.10). Hanna (2010) also believes that dance stands on its own, when she states in *Ä Nonverbal Language for Imagining and Learning: Dance Education in the K-12 Curriculum*, that it is “intellectually, emotionally and physically challenging, “ (p. 497) and adds that it needs no other reasons for validation.

. Fenner, (2008) proposes the idea that an artistic experience is not complete unless the imagination and memory are stimulated. (p. 45). Extending the artistic experience to include society, Nikitina, (2003) directs our attention to the ways in which art bonds the artist to society where there is a forum for considering various aspects of experience (p. 56).

These same elements of artistic expression are related, through dance movement, to the whole body, including the brain and the heart, literally and figuratively. Building the argument for dance education from a non-scientific, experiential foundation, McCutchen, (2006) explores the benefits of “educational dance”, in her book *Teaching Dance as Art in Education*. She looks at dance in education as related to the National Standards for Dance Education from the National Dance Association, and explains how educational dance helps a child to better understand”dance, the world, the arts and the self” (p. 4). This book details steps to becoming an educational dance specialist for grades k-12, focusing on dance as an art form rather than a medium for transfer of skills. Davis (2007)

, in *Why Our Schools Need the Arts*, sums up l'art pour l'art in education by saying that the arts must have equal time and depth as other core subject areas in the schools (p. 6).

In contrast to the current concept of art for art's sake is an anthropological and philosophical criticism that the notion of art for art's sake is a Eurocentric concept. This point is explained by Haviland et al (2010) in *Anthropology: The Human Challenge*. The authors explain that from the typical Western viewpoint the arts are not connected to the practicalities of life, that they are entertainment for the elite, and that they are solely for aesthetic pleasure.

This classist perception of the arts renders them at once inaccessible and vulnerable. It is one possible reason that funding for the arts is eliminated from educational curricula. Haviland et al (2010) point out that contrary to the Western view, in the historical continuum, arts serve an important purpose whether it is related to religious burial, for example, the Egyptian tombs, or to aid work, such as the sea chanteys which set rhythms for rowing. In addition, these authors explain, symbols on pottery, baskets and carpets identify social values within a culture, as do fashion and body decorations. Within a cultural context, they may be considered art for life's sake. Highwater (1992), in the book *Dance: Rituals of Experience*, bridged the gap between the two views of art as he observed that we see the song, dance and objects of people in other cultures as art before they see their own cultural traditions that way. (p. 24)

In education as well, the cultural traditional placement of dance movement and of dance movement education within the development of the children affects the ways in which children understand dance and themselves. Hawkins (1992) speaks to this when he speaks about teaching dance, explaining that young people need to be taught “ in the

movement of the body. Human beings have to be taught to use their bodies according to the exact reality of scientific laws of movement, that is, according to nature, the nature of things” (p. 7). This might be considered dance education for life’s sake.

Smith-Autard, in 2006, explains the cultural shifts in the educational philosophy of dance, pointing out in *Dance Composition*, that several decades prior, dance education was focused on the children as expressive creators, partially under the influence of Laban. Then the focus swung toward the technical perfection of professional performers, which was an unrealistic goal for many students; and recently, dance in the educational setting has moved to encompass both by reaching children through role models, and by encouraging children to learn dance as an aesthetic art form at their own levels. However as we have noted, in the US, dance in the schools is rare. Gilbert (2005), in *Creative Dance for All Ages*, decries the separation of dance from the student in the typical school. She references Gardner’s bodily, kinesthetic intelligence (Gardner, 1999) as an important learning method, and cites the educational potential of using emotions blended with kinesthetic participation. (p. 9). Gilbert acknowledges that dance is an important and often unopened door to learning about core subject areas, even as she advocates for the essential, inherent role of dance for its own sake. She expressly points out that the two perspectives on dance and education need not be mutually exclusive. In order to increase the engagement of dance in the schools, every door must be opened.

In an effort to facilitate the entrance of dance movement into the formal educational system, there are increasingly studies which show evident relationships between specifically designed dance and movement activities and significant advances in particular skill areas. Seven of these studies are analyzed in a compendium of research

entitled *Critical Links: Learning in the Arts and Student Academic and Social Development*, developed by the Arts Education Partnership in 2002, in essays selected by Catterall, Winner and Hetland, and edited by Deasy. The analysts in this work agree on three difficulties with respect to dance education research: first, a lack of research in kinesthetic intelligence and dance, second, the need for a common language with which to describe dance movement, and third, the challenge of proving a transfer of skills.

Hetland (2000), commenting on Minton's (2000) study "Assessment of High School Students' Creative Thinking Skills: A Comparison of the Effects of Dance and Non-dance Classes", cites Salomon and Perkin's (1998) observations that proving a transfer of skills across subject areas is problematical. Although transfer of skills is difficult to prove, Rose's (1999) study "The Impact of Whirlwind's Basic Reading Through Dance Program on First Grade Students", where students made letter shapes with their bodies and sounded the letters they were making singly and in combinations, was analyzed by Bradley (2000) who concluded that the dance activities had noticeably strengthened the students' early literacy skills. Further skills which show valuable applications to academic areas are put forth by Petitto (2008), reporting the outcome of her research team in the article, "Arts, Education, the Brain and Language". She concludes, as a result of a three year series of studies involving dance and cognition that learning dance at a young age may facilitate a transfer of skills developed through dance instruction such as the ability to focus and ignore distractions from outside sources to other areas. (p. 4).

These effects of early dance education on attention and focus might be particularly beneficial to children with various attention deficit disorders.

In a more controversial report, The College Entrance Examination Board (CEEB), Profile of College-Bound Seniors National Report for 2000, 2001, and 2002 findings concluded that students who study the arts scored 30-57 points higher on the verbal portion and 17- 41 points higher on the math portion of the Scholastic Aptitude Tests than students who had no classes or previous arts experience (CEEB, 2002). This would seem to imply that arts education shares developmental and cognitive skills with academic education. However, Winner and Hetland (2008), in “Arts and Academic Achievement: What the Evidence Shows” argue that the methods employed in the above CEEB studies and assumptions made regarding the conclusions that arts education raises test scores are erroneous, that the Hawthorne Effect (subjects of research know they are being observed and change their behavior) may play a part in some of the studies and that other studies confuse correlations with causes. Winner and Hetland feel, moreover, that the arts have a great deal to offer in their own right (art for art’s sake), and that if the arts boost test scores, that is an added bonus, not a reason in and of itself to include or exclude the arts in education. Hanna (2010) does not directly address transfer of skills, here, as she points out, in *A Nonverbal Language for Imagination and Learning: Dance Education in the K-12 Curriculum*, that integrating dance with other areas of study affirms its “power and scope” (p. 498). In this concept of interdisciplinarity and integration, the question of transfer of skills may not be suitable.

Transfer of skills is only one rationale for increased test scores in schools with arts programs. A second possibility is that students of more educated (and possibly wealthier) parents are given more opportunities to engage in the arts; and that these students receive academic as well as artistic support from their parents. This view, as well as the next one,

is underlined in an Australian (Garrett, 2011) report of research targeting a program for underserved, economically disadvantaged populations, in the article “Arts Curriculum Can Boost Student School Experience”. The study shows that students tend to remain in school and attend their less favorite classes in order to participate in their preferred arts classes. By thus being present in the academic classes, perhaps these arts-oriented students gain information needed for the tests. This view may also support Israel’s (2009) statistics in his report, “Arts Education and New York City High School Graduation Rates”, correlating the graduation rates in two hundred New York City schools with the amount of arts education in the same schools, the schools with the highest graduation rates also being the schools with the highest art teacher per student ratio.

A third plausible reason that arts programs appear to boost test scores may be because some students who are alienated by various aspects of the academic subjects are captivated by the arts, an example of the personal and social benefits of the arts in education.

The questions concerning how and whether or not arts education boosts test scores remain unanswered for many school administrators, thus school budgets do not reflect an appreciation of the value of arts in educational settings. Boren (2007) in the “CRS Report for Congress” records that the Bush administration attempted to eliminate “Arts in Education” of its funding in both 2006 and 2007. Implicit in this situation are both the hierarchical view of transferable skills over social and personal benefits from the arts in education and the vulnerability of the arts. “Arts in Education” is now under Title V Part D, subpart 15, which delineates funding for arts research and development in educational settings, with a focus on lower income students.

Another look at school districts shows that after supplying the academic subject areas, school budgets show a preference toward support of after school sports instead of arts when arts and sports are vying for funds. In support of sports, The American Academy of Pediatrics (2001) in the article “Organized Sports for Children and Pre-adolescents” has listed specific benefits of sports in education. They are basic motor skills, increasing physical activity levels, learning social skills necessary to work as a team, learning good sportsmanship, and having fun. Schools and parents realize that whether or not sports contain transferable academic skills, sports are inherently satisfying and positive for students. This assumption does not seem to be true of the arts in the US educational system, although the attributes listed for sports apply equally well to dance movement with the notable addition of creativity, which is a feature transferable to academic areas. In a comparison of the effects of sports and those of arts, Catterall (2009), in his book, *Doing Well and Doing Good by Doing Art*, concludes, from his 12 year study of students in 100 schools, that high school youth involved in the arts are more likely to go to college and have higher academic achievement and social success than those who are involved in athletics. Youth involved in athletics, however, are more likely to be engaged in physical activity throughout their lives. This was true for all students, regardless of cultural or socio-economic background. His study focused on music and theatre arts in the schools.

For the purpose of its importance relevant to academic skill areas, dance is usually accompanied by music or words. As Gazzaniga (2011) concludes from his research in *Learning, Arts and the Brain*, when accompanied by music, dance has educational value related to spatial-temporal reasoning, which is utilized in geometrical learning, as well as

to long-term and working memory and sequencing (p. 8). Rhythm, a focus of both dance and music, is a mathematical measure of beats and time, and may be translated into mathematical concepts such as fractions. Jonides (2008), researching the effects of musical rehearsal on the brain, concludes in the article “Musical Skills and Cognition”, that musical instruction helps to develop the cognitive skill of rehearsal, which is used in verbal memory, and thus has implications for “cognitive tasks” in other areas. (p.12). Gazzaniga (2011) summarizing 3 years of neuroscience dance research in his contribution, “Arts and Cognition: Findings Hint at Relationships”, adds that an interest in dance, music, and other performing arts motivates students to focus on practice and improvement, a skill which can transfer to other areas of study (p. 7). Dance by itself has been shown to encourage students to fine tune their observational skills (Gazzaniga, 2011), and reference is made to a possible transfer of observational skills to non-arts areas

An academic written description of dance, motif writing uses symbols or icons which have meaning and are then decoded by the dancers and “read” as kinesthetic actions (Gibbons, 2001). The literacy connection of motif writing is direct and obvious, and there are many ways to introduce the concept, several of which are included by Gibbons in her book *Teaching Dance, The Spectrum of Styles*. Gibbons, inspired by a “spectrum” of eleven styles of teaching as developed by Muska Mosston and Sarah Ashwoth, explains each style and how it may be used to teach dance in formal educational settings as well as in the private dance class. Gibbons suggests that watching and mirroring are an important aspect of learning new ways to move, and this approach is supported by recent

research, such as that presented by Asbury and Rich(2008) in *Learning, Arts and the Brain*, a report from the Dana Consortium.

The Dana Foundation functional Magnetic Resonance Imaging fMRI research indicates that similar parts of the brain are highlighted whether a person is watching dance or physically dancing. Grafton and Cross (2008), authors of “Dance and the Brain” explain that the major connection between learning movements by watching dance and learning movements by actively dancing provides insight into new ways of teaching. As brain-based research becomes more focused on the neural changes resulting from specific aspects of the arts, the particular skills improved by students involved in dance and music are becoming more apparent. The general consensus is that these skills probably are transferable to other domains both educational and vocational.

Defining educational and vocational skills in the present and anticipating the future, Asian educators contribute another influence for the transfer of skills developed through the arts. Within the educational setting, they see the value of arts education as related to the job market. In the UNESCO report *Educating for Creativity: Bringing the Arts and Culture into Asian Education* (2004), an interesting premise for increasing the arts in education states that to stay current in the job market, employees need to have “be creative, innovative and adaptable and have advanced communication and social skills”(p.10). The report points out that qualities such as creativity, adaptability and communication are found in the development and mastery of the arts. Social skills and collaboration are essential to success in all aspects of life, and are vital elements in the classroom. According to this report, therefore, arts education should be supported in the classroom. This reasoning is supported, in turn, by the US Department of Labor (2000) in

the list of primary job skills which include collaboration, creativity and communication. The perspective of social skills and creative problem solving as being reasons for including dance movement and other arts in education to prepare for the future is affirmed by Eisner (2000) when he speaks of life as not having only single correct answers to limited questions, but rather that issues in life are fluid and complex, and that imagination, intuition, reflection and reassessment are necessary in addressing those issues. The above viewpoints are practical, forward-looking approaches to the validity of the arts in the classroom; however, they are rarely heard in the schools themselves.

Contrary to the mainstream of US public education, there are teachers who continue to explore innovative ways of instruction. The use of movement in the classroom takes many forms, not all of them described as dance, per se. Following are three distinct approaches to the use of movement in the classroom. Each method focuses on its own particular objective in language instruction. Bongiorno (2001), in an article entitled “Dance: An Inspiration for Language in the ESL Classroom” describes the many roles of dance movement as a way of dissolving social and linguistic barriers, as a way of building self-confidence, and as a central focus point from and about which students can describe their responses. She includes student responses to the use of dance in the classroom. From both her explanation and the students’ reactions and analyses, it is evident that she feels dance movement can be an important asset to communication and expression within the educational setting. Her use of dance encompasses the personal self-expressive, social-collaborative and cultural-reflective approaches to dance, in addition to some aspects of a transfer of skills.

A very different approach to movement in the ESL classroom is described by Kelen (2000) in his article “Perpetual Motion: Keeping the Language Classroom Moving”. He alleges that because language is related to movement, and learning is inherently related to novelty, that a dynamic classroom is one where there is frequent movement. In order to ensure this, Kelen arranges the classroom in a particular way: the students are seated in two circles, one inside the other, the students from one circle facing those of the other to practice speaking. Every so often, the students from the inner circle stand, move one space to the left, and sit down facing a new dialogue partner. Kelen feels that this movement allows optimum novelty and discussion practice, utilizing a social-collaborative viewpoint as well as a personal self-expressive one.

In a third, related but separate approach to movement and language learning, Diaz (2005), working with students with dyslexia who were learning English theorizes that in order to make language acquisition available to all students regardless of their learning disabilities, TPR (Total Physical Response) is the best method. TPR is a system of teaching language which was developed in the late 1960’s by researcher Dr. James Asher, who was studying language skills related to the surgically bisected hemispheres of the brains of people with epilepsy. After exploring how aspects of language are transmitted throughout the brain as well as observing the naturally physical ways young children learning vocabulary from their parents, Asher (2001) designed a physical response means of early language learning, where students begin to learn by actively following commands such as “stand up”, “turn around”, etc. which utilize the right side of the brain (as well as the left side). Asher asserts that the right side of the brain, used in moving, is essential for the acquisition of language. Asher’s TPR technique follows the

natural progression of language learning as evidenced by infant-adult communication, the infant responding physically to the adult's verbal expression. He suggests that a progression from comprehension to production is the natural (and best) means of language acquisition; and that TPR is an approach to language (and other academic) learning which has a high (up to 95%) retention rate. This physical, developmentally-based method of language learning combines a transfer of skills from language development with transmission of information, both of which are used in this academic approach.

In researching further the connection between the arts and languages Rabkin and Redmond in their article "The Arts Make a Difference" (2006) describe several schools where the skill overlap from integrated arts programs enabled high-risk students to perform better on assessments than did similar students at nearby schools without arts in education programs. As an example of how dance is integrated into academic curricula, Rabkin and Redmond describe how students learn about letters by dancing the shapes of the letters (p. 2). In a different style, McDonald and Fisher (2006), in their book *Teaching Literacy Through the Arts*, also recount anecdotal reports from teachers who are using dance in education. The authors describe the procedures to develop the skill sets for reading and for math shared by dance activities and academics as well as analyzing the success of each endeavor. These authentic experiences indicate some of the skills common both to academic subjects and to dance, the implication being that time spent doing one reinforces the same skills used in the other. This is a distinct advantage in teaching kinesthetic learners. The mutual reinforcement of the oral language and movement are expressed (p. 84).

One of the pioneer programs in arts education in the US is the Chicago Arts Partnership in Education (CAPE) program, which approaches arts education on all levels, including research, professional artists in the schools, afterschool arts and parental involvement. The CAPE mission statement includes a commitment to education in and through the arts, which non-partisan viewpoint serves to increase the opportunities for educational engagement on many levels. The mission statement alludes to the results of research pertaining to academic achievement as a result of arts in the schools, and accents the benefits of creativity and inclusion. This multi-dimensional method of addressing arts in education is essential to increasing arts in the schools.

Hetland and Winner (2004) in their article entitled “Cognitive Transfer from Arts Education”, argue against the value of a transfer of skills as a valid reason to include arts in education, from the perspective that the importance of the arts as academic support is small and even unstable. Harvard University’s School of Education Project Zero hosted “Reviewing Education and the Arts Project”(REAP, 2000), a program of research studies which found specific areas where arts showed major or minor effects on traditional academic areas. Winner and Hetland, in the Executive Report from REAP state that validating the use of the arts through their effects on academics is an unsound position. This is not only because in many instances the arts do not have sufficient transferable skills to warrant using arts to learn language or math (as opposed to the benefits of focusing specifically on language or math). It is also because the arts should be considered as important to education as separate areas, for their own integral value within a good quality of life. As the REAP summary points out, academic validity for the study of history does not rest on skills transferable from history to math or science. As the

REAP authors indicate, cultures are known and appreciated for their arts, the arts are reflections of their cultures, and the arts help students to develop unique ways of interpreting and expressing life and the world. This supports the l'art pour l'art reasoning.

The value of education in and through the arts is an ongoing debate; however, there is a separate, compelling reason for the arts in education. A unique feature which has not been adequately explored and the third voice in the discussion of dance movement education is its inclusionary aspect. A student does not have to be academically oriented nor artistically talented to enjoy and benefit from dance movement education. The integrated classroom utilizes all lenses in assessing the benefits of dance movement. In contrast to current trends in homogeneous academic groups, several studies show that diverse student groups outperform those of similar ability levels both academically and socially.

In groupings reflecting the range of the ethnic, economic, and multi-able society comprising the general population, Boaler (2007) reported for the University of Sussex, in "Ability Groups Harm Children's Education". Boaler, in a study following 700 US teenagers for four years, found that all students gained on assessments, and that the high achieving students gained the most because they had to understand the information more thoroughly in order to communicate it to the lower achieving students. All of the students also exhibited more respect, tolerance, and responsibility, and less anti-social behavior than students in homogenous groups. In addition, says Boaler (2007), diverse groups build communication skills, self-esteem and cooperation, and encourage a variety of perspectives. Focusing on the liveliness of dissimilar viewpoints, Greene (2000), in her essay "Imagining the Future: The Public School and Possibility", suggests that the arts

should be given time equal to that for other subjects, that all students should be exposed to the arts, and that the arts help students to interpret the world in different ways. She views the arts as places where “diverse views can find expression and diverse hopes take form, energized by shared arts experiences” (p. 12). Supplying practical applications of the above concepts, Kingore (2009), in her book entitled *Differentiation in Mixed Ability Classrooms*, describes strategies, methods and activities to promote effective teaching in a diverse group situation. She supports mixed groupings, and her writings have contributed successful approaches to teaching in a variety of settings with students of dissimilar backgrounds and ability levels.

Social merits, as described by the “Improving America's Schools Act of 1994” include the assertion that student involvement in performing arts activities has proven to be a successful approach in the inclusion of people with disabilities in mainstream environments. This policy has been backed by governmental funds, such as those given to the VSA (2010) (formerly Very Special Arts, now The International Organization on Arts and Disabilities) first organized in the US by Jean Kennedy Smith. The VSA funds programs for artists and audiences who are people with disabilities or differing abilities. The philosophy of the VSA is that everyone should have the opportunity to learn about and participate in the arts (including dance). One such participant is Benjamin (2002), dancer and co-founder of the CandoCo Dance Company, who began exploring integrated dance movement with a disabled person who came to one of his classes. He has written about this experience in *Making an Entrance: Theory and Practice for Disabled and Non-disabled Dancers*. His philosophy is “to know how our bodies work, to understand and be comfortable with how they may differ, and to seek in everybody the fullest

possible expression of what it means to be human”(p. 6). Benjamin details the political, physical, communicative, and technical aspects of integrated dance movement, with substantial focus on contact improvisation. His writing includes other internationally renowned integrated dance companies such as The Moving Company, Dancing Wheels, The Blue Eyed Souls Dancing Company, Axis Dance Company and Touchdown Dance, funded by the VAS at the Kennedy Center for the Arts. The public education which is implicit in the success of these companies gives rise to hope regarding the possibilities of dance movement within our educational institutions. The accomplishments of integrated companies show that dancers and audiences are able to understand the transcendence of the arts. This is summarized by the philosophy of the Dancing Wheels dance company on their website: “If dance is an expression of the human spirit, then it is best expressed by people of all abilities”(2010) .

The Arts in Education section of the “Improving America's Schools Act of 1994”, and consequently NCLB (2001), in addition to advocating for arts in education for people with and without disabilities as an integral part of the national educational standards, specifies that arts in education funding may be used to inspire students labeled “at risk” to be more involved in other educational endeavors. This point is supported by Davis (2007), in her book *Why Our Schools Need the Arts: The Case for Arts in Education*, describing a disruptive child who was able to focus on dance and was then able to transfer that focus to other aspects of school. (p. 45) However, she questions the validity of the need to constantly evaluate the arts in terms of their contributions to academics. Instead, says Davis (2007), the empowerment of the students as creators of works of art, the social merits of the arts as pathways to empathy and self-esteem, and the benefit of

understanding the value of multiple viewpoints are regarded as vital reasons to include the arts in schools.

Similar to Davis in a philosophy of the personal self-expressive and social-collaborative benefits of dance movement, Koshland and Wittaker (2004) have analyzed and evaluated PEACE through Dance Movement, a program designed to decrease school violence and piloted in grades 1-3 an urban elementary school in the southwestern US. They concluded that while pre-social behaviors did not increase, the program significantly decreased disruptive behaviors in children in the school. This noticeable decrease was reported by teachers, students, and families. These examples of the results of dance movement seem to indicate that in a differentiated classroom, where some of the students are at-risk due to social or emotional issues, dance movement activities are effective in specific social ways, perhaps more so, due to their collaborative kinesthetic nature, than other art forms. These and other studies show that concerns rising from children's difficulty in coping with diversity in society can begin to be addressed through dance movement in the public education setting.

As is evident above, through personal self-expression and social collaboration, dance movement can be beneficial to students considered to be at risk for anti-social behavior. This is understandable from a physiological viewpoint. Sherwood (2006), in her book *Soul Education: Inspiring a New Passion for Sustainable Learning*, explains our initial physical, nonverbal response to emotions describing how people's emotions are physical responses before they become verbal. According to Sherman, "We sense the knots in our stomach, the lump in the throat, the bad feeling in the stomach," (p. 5). She articulates the need for teaching children to understand these responses, rather than

letting them be overlooked or discounted. This supports programs and studies in which dance movement has a therapeutic role.

One example of this is described by Hetland (2002) in “Critical Links: Learning in the Arts and Student Academic and Social Development”, commenting on a study entitled, “Art and Community: Creating Knowledge Through Service in Dance” (Ross, 2000). Hetland(2008) points out that one reason dance is beneficial to disenfranchised adolescents is that physically aggressive behavior and dance are both non-verbal means of expression, but differ in their objectives: dance, a familiar cultural form of recreation to these particular participants, releases stress in a cooperative, expressive way, unlike the combative method of sports. Hetland (2002), remarks that dance movement encourages self-expression within a group, and is used as a means to build self-confidence in situations where peer pressure is strong. The specific advantages of dance in this study were its social collaborative, personal self-expressive, physical, and cultural- reflective benefits.

The arts as therapeutic agents are included in some special education programs for schools in the US, but rarely for children in typical classrooms. However, they are common in some European schools. According to Karkou (2010) in *Arts Therapies in Schools: Research and Practice*, dance movement therapy is found in most public schools, and is the most widespread form of art therapy in schools in the UK (p. 12). Dance itself is standard in 40 percent of the schools; and arts therapists, who are also certified school teachers work with other teachers and families.

Karkou (2010) explains that creative and interpretive dance activities are used to help children learn physical control related to emotional and social issues. She observes

that attending to students' emotional or social needs is considered essential to the students' healthy learning environment; and further, that the dance movement therapy helps in the cognitive domain(p. 14). Karkou differentiates arts therapy from arts education by defining the goals of each; however, she suggests, there is inevitably an overlap in the dance movement activities, although the activities themselves may be interpreted differently by an art therapist and an arts educator. Dance is a means of self-expression, she points out, therefore teachers gain valuable insight into the feelings of the dancing students. Karkou advocates for dance therapy in general as well as specialized educational settings. Her philosophy combines the therapeutic aspects of nonverbal personal self-expression and communication with the cognitive advantages.

In the diverse classroom, the creative gestures of dance movement are a means of non-verbal social bonding for students who have hearing impairments, autism, emotional issues, speak a different language, or are pre-lingual. According to Iverson & Goldin-Meadow (2005), in their article, "Gestures Pave the Way for Language Development," movement allows children to express thoughts and feelings they are not able to express verbally. Brown and Parsons (2008), in their paper "The Neuroscience of Dance", agree with Iverson and Goldin-Meadow (2005) , in their article "Gesture Paves the Way for Language Development", that gesture may well be a developmental precursor for verbal language. Other nonverbal forms of communication, such as facial expression also contribute to meaning. Mehrabian (2009), in a BBC interview with Hartford, speaks about his studies which show that facial expression is more evocative of feelings than the actual words being uttered to describe an emotional point. Mehrabian's work, in accordance with that of Goldin-Meadow and Brown and Parsons, shows the power of

nonverbal communication over words received in an emotional situation. We may conclude that the non-verbal, expressive, sometimes involuntary gestures of the body are essential to effective expressive and receptive communication.

Given the primacy of non-verbal communication, it follows first that dance movement is an inclusive way by which to communicate, as suggested by Brown and Parsons(2008), in their report “The Neuroscience of Dance”, and second that dance movement is distinctive among the arts, as it precedes development of visual arts skills and music skills. Brown and Parsons (2008) from their research, feel that dance is different from music in that dance is able to express concepts visibly, and was probably one of the first forms of language (p12). A complementary view of language is expressed by Eisner (2003) when he says, “The limits of our cognition are not defined by the limits of our language” (p. 8).

Sociologist Boydell (2008), and choreographer Jackson, in the article “Dancing with Research”, indicate that their dance movement program for adolescents with mental health issues has been highly successful. They attribute this success, in part, to the medium of dance movement, which circumvents social hurdles and is effective in therapeutic settings. Working together, these professionals observe that dance is a powerful way to portray subject matter related to mental health, reports Fraser (2008) for the Canadian Medical Association.

Taking advantage of dance to transmit messages, several other dance companies are using dance to communicate about social issues and to disseminate information. One example of this is the Liz Lerman Dance Exchange (2010), which is explaining the philosophical and scientific manifestations of the human genome project through a dance

entitled “Ferocious Beauty Genome”. Lerman has worked with scientists, philosophers and dancers to present a collaborative study which culminates in an audience-participatory performance. Fraser (2008), reports that dance movement is being used by other companies to disseminate information about HIV AIDS and other health issues in schools worldwide; and CandOCO Dance Company, Gallaudet Dance Company and others impart information about the social issues facing people with various differences.

Perhaps neuroscience is the meeting point for advocates for the personal-expressive, the social-collaborative, the academic transfer of skills and the physical value of arts through education with advocates for the value of art for art’s sake in education. Recent findings were publicized in an article in *Scientific American* entitled “The Neuroscience of Dance” by researchers Brown and Parsons (2008), who studied the complex pathways highlighted through imaging in areas of the brain affected by dance. Of particular interest was the involvement of an area on the right side of the brain homologous to Broca’s area on the left side of the brain. Broca’s area is involved in language (speech production and the representation of the hands). Brown and Parsons postulate that, due to this similarity on the right side of the brain as well as other findings from their research, the evolution of dance is tightly connected to that of both language and music. Brown and Parsons point out that dance differs from music because dance is symbolic and mimetic, which, they suggest, indicates that dance may have pre-linguistic origins (p. 82). They reason that the language emerged from gesture, as does dance. This last estimate is supported by Goldin-Meadow (2006) in her article entitled “Talking and Thinking with Our Hands.” She notes the universality of gesture which, when it is used instead of spoken language, develops with its own syntax; and observe that when gesture

is used as a language, it is similar in different cultures (p. 38). It follows that if dance is the precursor of languages, it would contribute to the personal expressive and social skills essential to success in the educational setting.

Gesture, spoken language, music and dance share the attributes of speed, emphasis, rhythm, and pause, possibly due to an overlap of the neural areas engaged in the reception and production of these means of expression and communication. This has important implications for further research exploring the educational significance of these interactions. Neuroscience studies by the Pettito (2007) team entitled “Arts, Education, the Brain and Language” have shown a link between music and language acquisition as well as dance and the working memory of motion. Pettito adds that dancers exhibit a resistance to “competing signals” when they were compared to other student who had not been trained in the arts (p. 123). Patel (2005), drawing conclusions from his studies of the brain engaged in music and language, suggests, in his paper entitled “A Personal Note: Brain Matters”, that the prosody of music reflects that of its specific regional and cultural context. Patel concludes that our culture is affected by our language (p.3). The implicit consequence, then, is that music affects the dance of a participating culture.

Brown and Parsons (2008) assert that the close relationship of dance and music is not only a natural, interdisciplinary means of expressing a narrative but also a significant process for social bonding: “dance demands a type of interpersonal coordination in space and time that is almost nonexistent in other social contexts” (p.81).

According to Brown and Parsons (2008), it follows that dance movement, as a form of storytelling, self-expression and communication, has practical, brain-based cognitive skills transferable to language and academic areas, as well as value in the creativity

required to express the infinite nuances and ideas in and beyond verbal language. In addition, as an evolutionary success, evidenced through its continuation in human interaction, dance movement continues as a noteworthy and permanent group of social skills, a means of bonding in all cultures.

Utilizing the neuroscientific information shown in these studies, the value of dance movement across the spectrum of educational systems is obvious. Within the brain itself, dance movement displays connections which demonstrate that it is, as Brown and Parsons (2008) point out, “a fundamental form of human communication” (p. 81).

The reason that the arts such as dance movement are intrinsic to the fulfillment of all people, regardless of their social, cultural, economic, physical, educational, or intellectual status, is explained from another viewpoint by Dissanayake in her work, *What is Art For?* She suggests that the arts are biological and intrinsic to being human. Dissanayake suggests that the arts, as they have endured throughout our evolution as humans, must be important to our brains and to our evolutionary success as are tools, symbolism, language and the development of culture. Dance, music and visual arts, according to Dissanayake, are ubiquitous, integral to many cultural activities, and are a source of pleasure. That is why they have survived, in a Darwinian sense. According to Dissanayake, the arts are a fundamental, evolutionarily successful part of human biology. It follows, then, that the arts (dance movement) are appropriate means of expression for all human beings, regardless of age or background p. 606). Brown and Parsons (2008) agree, explaining, in “The Neuroscience of Dance” that the instinct for dance is an “evolutionary novelty” (p. 78).

The research above demonstrates that the value of dance movement education does not rest on whether it should be in the schools as education in dance movement or education through dance movement for cognitive, artistic, social, psychological, cultural or health benefits. The value of dance movement in education encompasses all of these.

In summary, there are three perspectives on dance movement and other arts in complete education. The first is that the arts should be appreciated for their own merits (*l'art pour l'art*). The second is that the arts support academic skills and are powerful ways to transmit information. And the third is that the personal-expressive, social-collaborative, cultural-reflective and physical skills arising from participation in dance movement hold great value for all students. These three concepts must coexist with mutual support and active advocacy in order for dance movement in education to increase. .

The primary value of dance movement in education is its flexibility as an interdisciplinary, multi-modal means of learning, whether its function is a neuro-kinesthetic transfer of understanding, transmission of information, cultural reflection, personal self-expression, social bonding or physical activity.

Whether we hold that the value of dance movement in education is, as Eisner (2002), McCutchen (2006) and Hawkins (1992) indicate, its intrinsic merit of art for art's sake; dance movement for its usefulness as a transfer of skills as advocated by researchers (Petitto, 2007), Rose (1999) and (Gazzaniga, 2001) its significance as a non-verbal, meaningful connection among diverse individuals as perceived by (Benjamin, 2002) and Kingore (2009), or simply a healthful form of physical exercise as

indicated by the American Academy of Pediatrics (2001), we all acknowledge that dance movement in general education is invaluable. At the same time, we can acknowledge that it is minimized in the public view as reflected in most US public school budgets. This lack of appreciation is common in spite of extensive evidence of the multiple uses and benefits of dance movement in educational settings.

The juxtaposition has been reviewed, and we have seen the responses through the perceptions of many educated experts to the question, what is the value of dance movement in education? For the future of dance movement in education, several distinct questions must be asked: First, given the evidence, why do we not immediately include dance movement in the US public schools? The answer to this question may be found by asking the next two. How do our assumptions regarding dance movement interact with our socio-cultural confusion concerning our bodies and sexuality? And how does our capitalistic, competitive culture view an art form which is collaborative and cooperative? I would propose an in-depth inquiry into the roots of unease with which the US cultures view dance movement in education.

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