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Full Length Research Paper

Using dance to tap into the kinesthetic learning capacities of young English Language learners in the United States

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This study reports on the kind of school leadership style that best suits for promoting teachers' job satisfaction in primary schools in Tanzania. The study employed cross sectional research design with samples of 200 teachers from 20 selected primary schools in Songea and Morogoro districts. Interviews, documentary analysis and questionnaires were used to collect data. The data were analyzed both qualitatively and quantitatively using tables, frequencies and percentages. It was found that the democratic leadership style was the most dominant in best performing primary schools. It is therefore suggested that there is much to be learnt with democratic leadership style as a copying strategy in least performing primary schools. Moreover, level of teachers' job satisfaction was reportedly high in best performing schools compared to least performing schools. The findings commended that democratic leadership style is the one which promotes high teachers' job satisfaction among teachers in primary schools.

Key words: Leadership, leadership styles, primary schools, teachers and job satisfaction.

INTRODUCTION

This article focuses on the use of dance and creative movement to transcend language barriers in early elementary classrooms where many of the children speak a language other than English at home. Throughout history, dance has been used to educate, celebrate and symbolize. We will explore how creative movement can provide limited English-proficient students with opportunities for vocabulary building and social-emotional development, regardless of their level of language proficiency or cultural background. Dance will be investigated both as a form of artistic literacy and as a powerful means of interpersonal communication. Globalization has increased the flow of international migration in recent years. Currently, there are approximately 168 million international migrants; about 60 percent of these have moved from developing nations to industrialized nations. This has created challenges for schools in the receiving nations, where children may arrive at school speaking many different languages. This article describes the pressures created by demographic change and looks at how the kinesthetic learning capacities of young children might be used as a cultural bridge. We will explore how creative movement provides young limited English-proficient students with opportunities for vocabulary building and social-emotional development. To provide an example of how dance and creative movement might be utilized to transcend language barriers in early elementary classrooms, the San Diego Teaching Artist Project in Southern California will be explored. This project uses dance and theater to boost the English language development of children who speak a language other than English at home. Teacher interviews, observations, and test scores will be utilized to evaluate the success of this strategy.

The impact of demographic change

As the 21st century begins, United States is facing a rate of demographic change that it has not faced since the early years of the 20th century. According to U.S. Census Bureau statistics, in 1970 immigrants made up less than 5 percent of the U.S. population; in 2008 their share of the total had passed 12 percent. Between 2000 and 2010, immigration accounted for roughly one-third of U.S. population growth. Nearly one-fourth of children now have at least one immigrant parent. At the same time, immigration to the United States has shifted away from Europe and toward Latin America and Asia.

Serving this diverse immigrant population presents difficult challenges for American public schools. Between 2000 and 2008, the Hispanic population of the United States grew by 31 percent, with much of the increase coming through immigration; 80 percent of Hispanics lived in the nation’s 100 largest metropolitan areas, which also housed 74 percent of the nation’s Blacks and 88 percent of Asians. Yet, only 60.8 percent of Hispanics held high school degrees, compared to 80.7 percent of Blacks, 85.1 percent of Asians, and 90.1 percent of Whites.

The impact of these differences in educational attainment is made clear by employment rates. In 2008, employment rates for college-educated Americans were fairly constant across the 100 largest U.S. metropolitan areas, varying between 80 and 90 percent. In contrast, 2008 employment rates for workers with no more than a high school diploma varied widely from city to city, from 55 to 76 percent. When the deep economic downturn of 2009 hit these differences were exacerbated. Between December 2007 and November 2009, the unemployment rate increased by 2.7 percentage points for workers with a four-year degree; by 5.3 points for workers with some college or an associate’s degree; by 5.7 points for workers with only a high school degree; by 7.4 points for workers without a high school diploma.

Given projections that European American will represent less than half of the nation’s working-age (25 to 64) population in 2050, these widely divergent educational outcomes by race and ethnicity have become a matter of great national concern. How might public schools effectively educate limited English-proficient students both native born and immigrant? Despite this increased concern, the research literature provides no solid conclusion on how best to educate children who speak a language other than English at home.

Surprisingly, given the many millions of initially non English-speaking children who have acquired literacy in English in the United States, and given the many millions of dollars expended on efforts to evaluate bilingual education programs, straightforward, data-based answers are not available (Snow et al., 1998).

According to the California State Department of Education (CDE) there were 1,553,091 English language learners (ELLs) attending K-12 schools in California in the 2007-2008 school year. ELLs comprised 25% of the California kindergarten population. Yet, despite the increasing number of English learners served, many teachers lack the support, training and experience to effectively teach ELL students. As a result, the likelihood of English learners being able to meet the linguistic and academic criteria required to be reclassified as fluent English proficient – even after 10 years in California schools – is less than 40% (Parrish et al., 2006). This article looks at innovative, movement-based approaches to promoting the English language development of limited English-proficient students during their first three years in California public schools.

Motor behavior and psychological development

The San Diego Teaching Artist Project (funded by a federal grant) sends professional dancers and actors into early elementary classrooms to build cultural bridges through creative movement and drama. These activities, in which children simultaneously hear new words and imitate, have proven successful in boosting English language acquisition as measured by the California English Language Development Test (CELDT). The program is based on research showing the contribution that motor behavior makes to psychological development.

Even as very young infants, children are highly motivated to explore, gain information, attend, and engage their physical and social environments (Gibson, 1987). As Gibson (1988) explains: “We don’t simply see; we look.” Once young children have learned to crawl and walk, they spend roughly half of their waking hours involved in motor behavior – approximately five to six hours per day (Adolph and Joh, 2007). Perception and motor behavior play a key role in children’s experiences and psychological processes (Thelen, 1995).

Bertenthal (1996) has proposed that perception and motor action are interrelated rather than autonomous processes. The interrelation of perception and motor behavior becomes clear when one watches young children in action. On a daily basis, infants who have learned to walk "take more than 9,000 steps and travel the distance of more than 29 football fields. They travel over nearly a dozen different indoor and outdoor surfaces varying in friction, rigidity and texture. They visit nearly every room in their homes and they engage in balance and locomotion in the context of varied activities" (Adolph and Berger, 2006). As they move from room to room, toddlers are taking in, organizing, and interpreting sensory information.

Throughout their early years, much of learning children experience takes the form of imitation. Long before they learn to speak, infants are predisposed to imitate facial and manual actions, vocalizations and emotionally laden facial expressions (Bard and Russell, 1999). Such imitation involves perception and motor processes (Meltzoff and Moore, 1999), making possible the imitation games in which adult and infant mirror one another's vocalizations and behavior. Imitation is crucial in the acquisition of cultural knowledge (Rogoff, 1990) and language.

Glancing into a classroom

The San Diego Teaching Artist Project uses processes similar to those by which children first learn language in order to help English language learners (ELLs) acquire a second language during their first years of school. Before discussing the structure of the program and how it was evaluated, it may be helpful to provide a glimpse of a teaching artist working with children. This class took place in a diverse San Diego kindergarten classroom during the fall semester.

Before starting the lesson, the teaching artist shows children how to avoid collisions with classmates by creating their own personal "body bubble." Each child pretends to blow a soap bubble large enough that he or she can stand inside it with arms outstretched. To keep the bubble from popping, each child must stay far enough away from other children so that their bubbles do not touch. This not only avoids collisions but also enhances each child's awareness of space.

As the music starts, children mirror the teacher's motions. Today the focus is on the concepts of comparison and contrast. Awareness of contrast is amplified by reaching high and bending low, or by wiggling and then freezing. Following the movements of the teacher, the children experiment with ascending movements (moving upward like smoke, a flower, a bird) and descending movements (melting, sinking, spiraling). At the same time, children learn the basic vocabulary of dance by carrying out movements that are "high," "middle," and "low" with respect to the floor. They also do *axial* movements where the body stays in place (swinging, swaying, wiggling, bending, and stretching).

As they become more comfortable with participation in group movement, the children are invited to experiment with *locomotor* movements in which they walk, hop, slide, bounce, shuffle, skip, etc. This allows for a greater level of creative spontaneity. By second grade, this locomotor activity will be turned into a grammar lesson by expanding the discussion to the pairing of verbs and adverbs. Any locomotor movement can be modified, at the teacher's suggestion, by matching it with an appropriate adverb such as *quietly*, *angrily*, *happily*, *smoothly*, *sluggishly* (e.g. *shuffle sluggishly)*. But the kindergarteners are focused on vocabulary building.

What the kindergarteners are not aware of is the gradual enhancement of their kinesthetic awareness as they engage in weekly dance activities. Kinesthetic awareness is the ability of the central nervous system to communicate and coordinate parts of our bodies with each other. It encompasses the body's abilities to coordinate motion as well as the body's awareness of where it is in time and space. When you see a troupe of ballet dancers moving together it is largely kinesthetic awareness that allows them to move in harmony instead of bumping into each other. In an energetic kindergarten class, this wordless communication builds group cohesion.

The structure of the dance classes provides an opportunity for children to both experience the movements and gain a deeper understanding of the words used to describe the movements. The physicality of dance provides a scaffolding tool to help student build on what they already know. Although ELLs might feel intimidated when called upon while sitting at their desks, such was the atmosphere cultivated in the dance classes that the ELLs readily joined in when asked to perform during a dance lesson, even when they felt uncertain about their abilities.

MATERIALS AND METHODS

The lesson described in the vignette above was developed through a partnership between the University of California, Irvine (UCI) and the San Diego Unified School District (SDUSD). The goal of the project is to provide K-2 teachers with professional development that will enable them to integrate arts instruction with the existing language arts curriculum. Each teacher co-teaches 14 standards-based dance lesson and 14 drama lessons with a teaching artist. The next year teachers implement the same lessons by themselves, without the support of a teaching artist. Teachers also participate in professional development workshops that assist them in integrating these arts-based lessons with the English language arts curriculum.

This article focuses on the dance lessons because the powerful impact of these lessons, especially for kindergartners who entered school with little or no knowledge of English, was a revelation to many participants. Fifteen elementary schools serving high-poverty neighborhoods in San Diego will take part in the project. This article focuses on the five schools that began the project in 2010-11. The lead teachers at each grade level at each school (15 teachers) were interviewed about the effect of this experience on their pupils. The interviews were transcribed and analyzed, looking for themes. Classroom observations were made at participating schools. Student scores on the California English Language Development

Test (CELDT) were compared to a matched control group. The CELDT is a state-mandated, standardized test given annually, at the start of the school year, to English language learners in California. Test scores in the experimental group (267 students; 89.5 percent Latino) and control group (2981 students; 86.2 percent Latino) were analyzed utilizing a gain scores analysis approach. To insure fidelity to the treatment, all teaching artists implemented the same set of lesson plans. In addition, streaming videos (Kindergarten Dance Lessons: http://www.class.uci.edu/dance.html Grade 1 Dance Lessons: http://www.class.uci.edu/dancefg.html; Grade 2 Dance Lessons:http://www.class.uci.edu/dancesg.html) of an expert teaching each of the first 9 lessons in dance and drama at each grade level were made available on-line so that teachers could refresh their memories (Please see on-line lesson plans and classroom videos at the end of article).

RESULTS

Four broad themes emerged from the analysis of teacher interviews: 1) Before receiving the TAP professional development, most teachers rarely taught standards-based arts lessons and/or did not feel comfortable implementing the arts in their classroom; 2) Teachers indicated that the opportunity to gradually increase their participation in co-teaching arts lessons with a teaching artist contributed to their content knowledge, confidence, and skill in teaching ELLs; 3) Teachers reported that children enjoyed the lessons and that they contributed to group cohesion; shy children often “blossomed” during dance lessons, showing another side of themselves; 4) Teachers reported benefits specific to the English language acquisition of ELLs.

Social-emotional development

A typical teacher’s comment about the dance lessons was: “There are some techniques in dance that were really good and I use them in all areas. I use them to settle the kids down or to quiet them or to refocus them.” A dance strategy that K-2 teachers universally found useful was the personal “body bubble.” This activity, in which children imagined themselves surrounded by a delicate soap bubble they must not pop, helped them become more aware of their bodies in space—and in relation to others around them. The sense of personal space developed during dance lessons also transferred to activities such as walking in a line and sitting on the carpet during group time. Another useful strategy was derived from the Freeze Dance. When the class got a little over-excited, the teacher could just say “Freeze!” and all action stopped.

Another observation heard over and over in the interviews was “the shy children really had a chance to use their talents or skills.” Passive and introverted children found the courage to express themselves during the dance lessons—and often afterwards. One first grade teacher described in considerable detail the effect of the dance lessons on one struggling reader who had been retained two years in kindergarten:

He was truly talented and felt comfortable during the acting and dance… He would get so into it, he’d kind of stop and look around and would start laughing. That was something I had never seen from him. I do feel like it made him more part of the group… I do feel like students saw his personality in dance and theatre, which they didn’t see at other times because reading creates stress for him.

However, some teachers pointed to the calming effect dance had on more aggressive children:

My challenge was with the boys I had this year. They don’t like being told what to do by other people. But, with drama and dance, you have to listen to each other and cooperate. Otherwise it doesn’t work. The last day with dance, I was really impressed with the boys. They had to come up with a folk dance. They really had to listen to each other and cooperate. I was impressed.

Enhanced students’ engagement

Many teachers commented that their pupils looked forward to the weekly dance lessons and stayed focused during the activity, often mastering skills beyond the level of expectation. Teachers’ observations included:

1. They were super fired up for dance. “Ooh, dance! Is it dance today?”
2. I asked them this morning: “All right, guys, I want to know which one you preferred (dance or drama).” And they said “Dance!” almost overwhelmingly.
3. I put a writing prompt on the board: “What did you like better: dance class or theatre class? Why? Give details.” Eighteen students put dance. Only five put theatre.

These observations were in line with the findings of a study of the pilot project upon which the current version of the Teaching Artist Project is based. This study measured the impact of a similar arts program (which included visual art) on student engagement by comparing attendance on days when arts lessons were offered to attendance on days with no arts lessons. Across the five schools and three grades (K-2) involved at that time, the artists were present in the schools for 293 days; whereas they were not in the schools for 1,727 days. Across the days with an artist, the average attendance rate was 94.41 percent. Across the days without an artist, the average attendance rate was 93.49 percent. Therefore, a first estimate of the effect of the artists on attendance was the difference in these rates, 0.92 of a percentage point. To provide the best estimate of program effect, a regression was run that controlled for school, grade, and month. We found that, on average, student attendance was a statistically significant 0.65 percentage points higher on days and in locations where the teaching artists were present. When we consider that in these schools and grades, attendance on days with no artist already averaged 93.49 percent (a 6.51 percent absence rate), the increase of .65 meant a 10% reduction in absences on days when the teaching artist was present.

Impact on English language learners

A theme that came out clearly in the teacher's interviews was that, while English learners do face many additional challenges, it is pivotal that teachers strive to teach them the same cognitive skills that are typically taught to English-proficient students. Unfortunately, there was widespread recognition among teachers that their efforts had not always met with. The dance lessons were valued because they enabled ELLs to learn by doing. A teacher observed:

I felt like that was very powerful. My students have a set of vocabulary words that they wouldn't have had otherwise. They are able to use it and understand. For me that was pretty cool. They have this whole set of very appropriate vocabulary words that I hadn't given them access to before this year --complex words that they've absolutely got under their belts. I saw that as a huge change.

Dance activities both provided a non-threatening environment that invited students to explore and also allowed them a means to show what they knew that was not dependent upon English vocabulary. Teachers also reported that the cohort of students who had participated in the dance lessons reached more advanced stages of language development earlier in the school year than previous cohorts. The teachers all had examples of how they integrated dance. In the following quote, a second grade teacher described the benefits her class derived from dance:

The dance terms really transferred into our curriculum, like 'high,' 'medium,' and 'low,' also 'fast,' 'slow,' 'heavy,' and 'light.' Those are also all math terms that they act out in a kinesthetic way. So, when we actually get to terms like 'heavy' and 'light' in math, they already know it and understand it because they used their bodies to understand the terms rather than just hearing them.

A first grade teacher commented:

Dance fit in really well with what we were doing this time of year. We were studying animals, and so it lent itself to talking about what kind of energy and movement an animal would have.

A kindergarten teacher explained:

After dance, the discussion was, "Can we move from the rug to line up for recess in tiptoe? Can you do it twirling?

Measuring English Language development

The teachers interviewed felt that the effect of the program, in terms of English language development, was significant. But how accurate were their perceptions? To determine the impact of the K-2 Teaching Artist Project on student listening and speaking skills, a quasi-experimental study was designed. The California English Language Development Test (CELDT) was used to measure increases in student language abilities. When the study began, the participating schools had been randomly selected from 40 diverse schools. This section describes the analysis of Year 1 data from five experimental schools and 13 randomly selected comparison schools.

CELDT data for the fall 2010 and fall 2011 administration were provided by the San Diego Unified School District (SDUSD), along with demographic data that could be linked to each student participant. These files represent students who could be matched across two CELDT scores from fall 2010 to fall 2011 representing students in first, second, and third grades for the fall 2011 CELDT administration. The study included an experimental group consisting of 267 students and a comparison group consisting of 2981 students.

ANOVA was utilized to look at baseline differences between comparison and experimental students on CEDLT listening and speaking scores for fall 2010. The only significant difference was ethnicity, but it should be noted that both samples of comparison and experimental students are more than 85 percent Hispanic. The difference lies in the 15 percent of students in the comparison and experimental groups with the comparison group having a significantly greater number of Asian, Pacific Islander, and Filipino students than the experimental group.

The analysis of the CELDT fall 2010 and fall 2011 listening and speaking score analysis utilized a gain scores analysis approach. Using this approach the fall 2010 listening and speaking scale scores were subtracted from the fall 2011 listening and speaking scale scores to produce a gain score between the two years. The gain score was then converted to a Z-score (Rogosa and Willett, 1983), which is a commonly used approach for multi-year analysis using an ANCOVA framework. The analysis showed a significant positive difference in both listening and speaking for the experimental group when controlling for the 2010 scaled scores.

DISCUSSION

In the United States, nearly 70 percent of limited English proficient (LEP) students are enrolled in only 10 percent of elementary schools (Cohen, 2005). In these predominantly urban schools, LEP students account for almost half of the student body (on average). Since these schools tend to be located in neighborhoods where most residents speak a language other than English at home, these children may have limited opportunity to learn oral English in informal settings. Therefore, opportunities to interact with adults at school and receive feedback are crucial. The dance and drama activities in the Teaching Artist Project allowed teachers to verbally interact with many children at once. Watching their responses, teachers were able to 1) assess a wide range of student learning and 2) quickly and informally correct misunderstandings.

Throughout history, dance has been used to educate, celebrate, and symbolize (Hanna, 2008). Dance helps to enhance our understanding of the power of a part of the human toolkit that we too often ignore. For young children, both ELLs and native English speakers, dance provided a means of transcending the limitations of their linguistic knowledge. Teachers involved in the Teaching Artist Project repeatedly commented that the dance lessons had revealed aspects of the personalities of the children in their classes that they had never glimpsed before. Although the focus of this article has been on addressing the challenges faced by ELLs, increased awareness of the signals we continually send to one another through movement, gesture, posture, and facial expression could provide clear advantages for teachers.

During initial implementation of the project, many teachers showed a strong preference for the drama activities. As one teacher pointed out, “Theatre felt more natural. Dance, I’m still not comfortable with. Dance language and movement are still not intuitive to me.” This was because the drama activities were closely aligned with the reading curriculum. Acting out scenes from stories as a way to help children better understand plot and character made intuitive sense to teachers; whereas, teachers associated dance with the folk dances taught in physical education classes. However, over time, the children’s enthusiasm for the dance lessons won the teachers over. The skills learned in the theater lessons may have transferred more easily to classroom literacy activities; they did not generate the same level of engagement.

Conclusion

Non-verbal communication has long been known to promote human development, learning and knowledge (Corballis, 2002). Greenland (2000) points out that movement conversations are the first conversations we have. If you watch a baby in its mother’s arms, you will see the mother communicates her approval or her adoration of the baby, by mirroring the tiny movements the baby makes. She will communicate disapproval through movements that oppose the baby’s, that show difference. She tunes into and communicates with the baby through movement. Mother and baby do this unconsciously; it is part of the human package. We continue to use the same methods of tuning in, communicating agreement and disagreement, all our lives. We have movement conversations with one another, even though we may choose to ignore them. For teachers, the challenge is learning to see and act upon movement signals.

In *Origins of the Modern Mind*, Donald (1991) outlined stages of human cultural development that he called Mimetic, Mythic, and Theoretic. He argued that, before the invention of language, human beings possessed imitative capacities that enabled them to collectively invent and maintain customs and skills; therefore, each member of the social group did not have to reinvent the knowledge and skills on which survival depended. This way of looking at human development differs markedly from the fashionable view that human understanding is essentially language understanding, that we are “incarnated vocabularies” (Rorty, 1989). Still, it is a view for which the research cited earlier on the role of motor behavior in development – along with casual observations of infant development – provides support.

There is much evidence to suggest that dance taps into something beyond language, a kinesthetic relationship to the world that is foundational to all later understanding. All children may therefore benefit from integration of creative movement into the school literacy curriculum. However, for children entering a classroom where the language they speak at home is not understood, the opportunity to fall back on an alternative language of movement has special importance. For them, dance can open a doorway to understanding.

On-Line Resources for Teaching Artist Project

Kindergarten Dance Lessons: http://www.class.uci.edu/dance.html
Grade 1 Dance Lessons: http://www.class.uci.edu/dancefg.html
Grade 2 Dance Lessons: http://www.class.uci.edu/dancesg.html

Conflict of Interests

The author(s) have not declared any conflict of interests.

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