

The Effects of Dance in Kindergarten Curriculum

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Abstract

In an attempt to address the marginalization of the arts, this research paper examines the effects of dance in kindergarten curriculum. This study was conducted in an economically and linguistically diverse, urban elementary school in the Chula Vista Unified School District. The study's participants consisted of two classes of 18 kindergarteners. This was a mixed methods study with both qualitative and quantitative data. Methods for gathering data included: pre-vocabulary and post-vocabulary tests, student interviews, oral surveys, teacher observations, and unsolicited parent feedback. The findings of this study suggest that the benefits of incorporating dance into kindergarten curriculum are numerous. Students' vocabulary was built in the areas of art, mathematics, and dance; both students and parents developed positive attitudes toward the discipline of dance; classroom community was increased; students' notions of *Artist* were expanded and several students showed increased confidence and risk-taking ability. Motivation for learning was increased and the teacher/researcher gleaned valuable information about a particular student's learning process. Data is corroborated with research from Gardner, Gullatt, Druyan, Eisner, Heath, McMurrer, Zeller, and Goldberg. This study suggests that efforts to bring arts education back to public schools need to be carried out at a grassroots and policy level. It is recommended that arts educators push for more instructional time for the arts as well as find creative ways to connect the arts to subjects that garner attention and funding such as mathematics, science, and language arts.

Question:

What are the effects of implementing dance into kindergarten curriculum?

Introduction:

Introduction to the Problem:

The arts are an integral part of a comprehensive and rigorous education. In order for students to be educated for life-long learning, the arts must have a substantial presence in schools, both in study and practice. Research has shown that the benefits of a comprehensive, sequential, and rigorous arts program are numerous (Heath, 1998). Few argue against this point however the arts are viewed as relatively unimportant when time and funding require that they compete with mathematics, language arts, and science. The arts are a subject in their own right, deserving in-depth study. The higher thinking skills that are developed during study of the arts permeate all subjects and foster students' imagination, creativity, and their ability to make connections across content areas.

The arts have been marginalized in public schools. In 1983 *A Nation At Risk: The Imperative For Educational Reform*, a congressional report that declared that American schools are failing miserably, was published. Stating that student achievement was declining, it called for higher and more rigorous standards across all content areas and instigated a wave of reform efforts at local, state, and federal levels. In public schools this call manifested itself as a "back-to-basics" curriculum that placed significantly more emphasis on mathematics and reading while subjects like the arts, sciences, and social studies were pushed to the back burner. Compounding the effects of *A Nation At Risk*, *No Child Left Behind* (NCLB), a controversial United States Federal Law that aims to improve the performance of public schools by establishing standards of accountability and allows parents to choose which schools their children attend, was enacted in 2001. It maintains the arts as part of a core curriculum but does not require assessment or reporting data. The current focus on accountability and standardized test scores means that any content that goes untested remains untaught. The fact that no reporting data is required for the arts serves to perpetuate the notion that the arts are unimportant, sending a message to students, staff, and administrators: this area of study is not important enough to test and therefore not important enough to fund.

Students who are considered "at risk" usually benefit the most from art instruction (McMurrer, 2007). Unfortunately they are the least likely recipients. In school districts that have at least one school identified for NCLB improvement (often schools that teach "at risk" students), the average number of minutes per week devoted to art and music is fewest out of all subject areas studied, with 97 minutes for the arts compared to 568 for reading. Thirty percent of these districts have now decreased instructional time for art and music (McMurrer, 2007). The current focus on accountability in combination with NCLB's lack of reporting data requirements for the Arts are contributing factors that have led to the Arts marginalization in public schools.

In an attempt to address the marginalization of the arts in public schools, this inquiry project seeks to discover the effects of dance in kindergarten curriculum. The study was conducted in a low-income, linguistically diverse school in the Chula Vista Unified School District. Thirty-six kindergarten students participated in the seven-week study that consisted of daily instruction in Hip Hop Dance. The project's

culminating event, the performance of a three-minute Hip Hop routine, took place at the end of the school year for the participants' families, friends and school site personnel. Data collection methods included pre-vocabulary and post-vocabulary tests, student interviews, oral surveys, teacher observations, and unsolicited parent feedback.

Literature Review:

The Importance of the Arts:

The arts are an integral part of a well-rounded education. A study conducted by Heath (1998) indicates that young people who participate in the arts for at least 9 hours per week for one full year are four times more likely to be recognized for academic achievement; participate in a math and science fair; and win an award for writing an essay or poem. They are three times more likely to be elected to class office within their schools and to win an award for school attendance. Additionally, young artists, as compared with their peers, attend music, art, and dance classes nearly three times as frequently; participate in youth groups nearly four times as frequently; read for pleasure nearly twice as often; and perform community service more than four times as often.

Gardner's 8 Intelligences:

The arts address a wide range of learning modalities. In Gardner's 1983 publication: *Frames of Mind: The Theory of Multiple Intelligences*, Gardner posits that people possess a particular intelligence or set of intelligences by which they learn. A teacher's ability to recognize and tap into a student's intelligence greatly enhances their chances for academic success. Gardner proposes 8 different intelligences: Linguistic intelligence ("word smart"), Mathematical intelligence ("number/reasoning smart"), Spatial intelligence ("picture smart"), Bodily-Kinesthetic intelligence ("body smart"), Musical intelligence ("music smart"), Interpersonal intelligence ("people smart"), Intrapersonal intelligence ("self smart"), Naturalistic intelligence ("nature smart"). Most classrooms are centered around students for whom linguistic and logical-mathematical intelligence is primary. Many students are labeled "learning disabled" or "ADD" (Attention Deficit Disorder) when in fact their particular intelligence/s or learning modalities have never been addressed in the classroom. To provide access to content for all students, it is suggested that teachers present their lessons using a variety of strategies, many of which align with strategies used in arts education. In this way the arts not only serve as an integral part of a well rounded education but they provide access to content for many students whose primary learning modalities are not addressed in the classroom.

Connections between the Arts and other areas of Study:

A report published by the Arts Education Partnership (1999) states that the arts teach children how to imagine, make connections between subject matter, express their knowledge in a variety of ways, and synthesize information. It also states that the arts teach children how to read, write and think creatively in the areas of math and science. Researchers are also finding a correlation between arts education and an improvement in standardized test scores. Additionally the arts connect students to one another, and provide further challenges for students that are already considered successful.

The National Art Education Association reports that the arts foster a celebration of multiple perspectives, teaching students to view ideas, opinions, or objects from varying view points in order to obtain comprehensive understanding. The arts also teach students that language is limited and that we

know more than we can express (Eisner, 2002). *A Nation at Risk* demands that we give all students the opportunity to “participate fully in our national life” (p. 7). This participation requires that students are “given the knowledge, skills, and attitudes to become discriminating art consumers (Zeller, p. 9)” who are able to understand and fully interact with our Nation’s cultural resources.

Teacher Experience:

To illustrate the benefits of arts education, it is helpful to look at a specific example. Griss (1998) describes a minor incident in her career that eventually became the catalyst for her life’s work: using a kinesthetic approach to teach elementary curriculum. While teaching dance at a gifted school in Poughkeepsie, New York, Griss was visited by the math teacher who told her “All the children who have had dance before math are learning the material twice as quickly as those who haven’t had you yet. What are you doing?” (Griss, 1998, p. 7). The math teacher was covering patterns at the time and Griss had just taught the students patterns of movement in her dance class. This suggests a correlation between a student’s ability to experience patterns with their whole body and their ability to identify and manipulate patterns in a math setting. Because the arts help students communicate their knowledge in ways that are meaningful to them, student engagement is increased. The skills that they acquire in an attempt to communicate are then transferred to other disciplines. Enhanced problem solving skills, thinking, listening, imagination and creativity are just a few of the positive effects the arts can have on a student’s education (Gardner, 1999, cited in Gullatt, 2007).

Purpose and Rationale:

In an attempt to address the marginalization of Arts Education in public schools and discover the effect of incorporating dance into a kindergarten curriculum, the teacher/researcher implemented a dance project that consisted of 15 minutes of daily Hip Hop instruction for seven weeks. The 15-minute sessions were comprised of two dance activities: A Hip Hop Rectangle, and a Hip Hop Dance Rehearsal. the Hip Hop Rectangle consisted of an opening section in which dance was used as a vehicle for teaching math vocabulary and an Improvisation Section in which students were invited to enter a space, surrounded by their peers, and improvise to approximately four 8 counts of Hip Hop Music. The later part of the session, the Hip Hop Dance Rehearsal, was comprised of three sections: the Theatre Blocking Terminology Section (used to teach the areas of stage), the New Choreography Section (used to introduce new dance steps), and the Rehearsal Section (used to add new dance steps onto existing dance steps and rehearse them collectively with music).

Methods:

A Mixed Methods Study:

This study was a mixed methods study with both quantitative and qualitative data. The quantitative data included pre-vocabulary and post-vocabulary tests. The qualitative data included student interviews, oral surveys, teacher observations, and unsolicited parent feedback.

Artsbridge:

This dance project/study was implemented in conjunction with Artsbridge America. Founded in 1996, Artsbridge America is a research based school-university partnership in arts education. It is dedicated to bringing high quality arts instruction to K-12 school children. Currently 22 Universities in 13 states and Northern Ireland participate in the Artsbridge Program. Through the Artsbridge Program, University

students with a background in the arts are placed in low-income, urban elementary schools to share their expertise. This dance project was carried out under the guidance of the Artsbridge Program at UCSD. The teacher/researcher carrying out the study was an Artsbridge scholar and attended weekly Artsbridge meetings during which Artsbridge scholars shared ideas for art activities and discussed their Artsbridge projects.

Instructional Context & Participants:

This study was conducted in an economically and linguistically diverse, urban elementary school in the Chula Vista Unified School District. Two classes of 18 Kindergarteners participated in the study over a seven-week period. According to their teachers, the 36 students had no previous experience with choreographed dance and/or performance in a classroom setting. One class in particular, the Morning Kindergarten Class, was chosen as a focus group because the teacher/researcher was conducting her student teaching in that classroom and had more direct and consistent access to the students.

Procedures for Collecting Data:

This study employed five methods for collecting data:

- Pre and post vocabulary tests
- Student interviews
- Oral surveys
- Teacher observations
- Unsolicited parent feedback

All of the above data was collected from the Morning Kindergarten Class. The same methods were used to collect data from the Afternoon Kindergarten Class except for the pre-vocabulary tests because the teacher/researcher did not have access to these students before dance instruction began.

The vocabulary tests tested the words: *Artist*, *Dance*, *Hop* and *Jump*. Students were given a paper with four squares and one word in each square. They were invited to *show what you know*, by drawing or writing their best thinking about all four words. The pre-vocabulary test was administered before students had been exposed to any dance instruction. The post-vocabulary test, which was identical to the pre-vocabulary test, was administered after the final performance and culmination of the dance project. After administering the pre-vocabulary test, the teacher/researcher learned that it was difficult, developmentally, for kindergarteners to express their ideas in writing. With this in mind, the teacher/researcher took dictations from the students and wrote them under their drawings on the post-test. Five student interviews were conducted on the day of the culminating performance. Three parents provided unsolicited feedback on the day of the performance. Oral surveys were administered throughout the study by the teacher/researcher and teacher observations were recorded in a data collection notebook.

Implementation:

Students received dance instruction for 15 - 20 minutes per day for seven weeks. Two dance activities were focused on during these sessions: The Hip Hop rectangle and the Hip Hop Dance Rehearsal. In addition, a discussion of discipline specific terminology took place on a weekly basis. The dance project culminated with a performance for students' families, friends, and school site personnel.

The Hip Hop Rectangle:

The Hip Hop Rectangle activity was comprised of two sections:

- Opening Section
- Improvisation Section

Opening Section:

The Opening Section of the Hip Hop Rectangle consisted of students standing on the perimeter of a taped rectangle on the floor. Students were then asked to raise their hands if they thought they were standing on a vertex of the rectangle. These students were then asked to explain the thinking behind their claim. Students were also asked to walk on the diagonal to an opposing vertex. In this way every dance session was opened with a review of math / geometry terminology: *Perimeter*, *Vertex*, *Vertices*, *Opposite*, and *Diagonal*.

Improvisation Section:

The Improvisational section of the Hip Hop Rectangle activity consisted of the teacher/researcher inviting students, one by one, to enter the center of the Hip Hop Rectangle and improvise to Hip Hop music for approximately four 8 counts. The students remaining on the perimeter of the Hip Hop Rectangle were required to give a *thumbs up* to their fellow students dancing in the middle. Students were informed that their *thumbs up* was not a reflection of their personal feelings towards the dancing taking place, but rather a sign that they “respected their [fellow student’s] dance thinking.”

Students were asked to enter the Hip Hop Rectangle strictly on a volunteer basis. While consistent efforts were made to encourage reluctant students, no students were ever forced to enter. Strategies to encourage students included student-teacher discussions at recess, the teacher/researcher volunteering to go into the Hip Hop Rectangle and dance with the student, as well as the teacher/researcher asking groups of students to go into the Rectangle (i.e. “all those wearing red go in and dance.”). The Hip Hop Rectangle also served as a warm-up for the Hip Hop Dance.

The Hip Hop Dance Rehearsal:

From the Hip Hop Rectangle, students were asked to transition into their Hip Hop dance positions. For the sake of consistency, these positions coincided with students’ daily “smart spot” positions on the rug. The Hip Hop Dance Rehearsal was an activity comprised of three sections:

- Theatre Blocking Terminology Section
- New Choreography Section
- Rehearsal Section

These three sections are explained below.

Theatre Blocking Terminology Section:

Theatre blocking terminology was reviewed during the Theatre Blocking Terminology Section. During the first two weeks of the study, the teacher/researcher stood in front of the group and pointed to various areas of the stage. Through call and response students recited the areas of the stage on a daily basis. For the latter five weeks of the study, students were identifying *Stage Right*, *Stage Left*, *Down Stage*, and *Up*

Stage, kinesthetically (pointing), and verbally. During the later 3 weeks of the study students were being asked not only to point to a particular area of the stage but also to turn their bodies to face in it's direction. During the later 3 weeks the teacher/researcher was also using the vocabulary to give directions to students like "I, please take one step down stage" instead of asking the student to step forward.

New Choreography Section:

During the New Choreography Section students were taught one or two 8 counts of new Hip Hop choreography. The choreography was taught step-by-step and count by count with the teacher/researcher in the front of the class and the students either mirroring or copying the teacher. Focus words included *Hop*, *Jump*, *Diamond*, and *Rhombus*. Students were taught new choreography reciting both the names of the moves and the counts as they performed them. Frequent references were made to the patterns and shapes students were embodying. Students were required to physically and vocally participate with the exception of the first demonstration, when the teacher/researcher specifically asked that students sit down and only watch the choreography and listen to the teacher/researcher's voice. The students were then asked to stand up. Both students and the teacher/researcher reviewed the steps several times (3 to 5) before the teacher/researcher turned on the music and had the class dance the choreography with the music. The new choreography was practiced several times (3 to 5) before it was added on to already learned choreography in the next section of the activity: The Rehearsal Section.

Rehearsal Section:

During the Rehearsal section students were asked to sit down as the teacher/researcher explained that the new choreography just learned in the New Choreography Section was going to be added on to choreography previously learned by the students. The teacher/researcher and students then marked and counted out the choreography, once without music, and then once with music. Finally the students and teacher/researcher danced the old and new choreography together several times (3 to 5), performing all of the learned choreography up to that point in time. Toward the end of the dance project, as students approached the performance, the teacher/researcher would perform with them as needed. She tried whenever possible to let the students perform the routine on their own.

Discussion of Ideology and Terminology:

Throughout the project an ongoing discussion of theatre, dance, and art terminology was taking place among the students and between the students and teacher/researcher. On a weekly basis the teacher/researcher would ask students questions such as "What is an artist?" or "What is dance?" in an attempt to capture students evolving definitions of specific theatre, dance, and art terminology. The teacher/researcher frequently told stories and gave examples of artists in various disciplines to broaden student notions of the meaning of *Artist*. In addition the teacher/researcher helped facilitate students in making connections across content areas, specifically in the area of mathematics, illustrating the point that arts can be used to help synthesize or pull information together from various disciplines.

Researcher Bias:

The teacher/researcher has a background in the performing arts and strongly believes that they are an integral part of a well-rounded education. To offset this bias, five data sets were collected and compared.

Results:

Quantitative Results:

Pre- & Post-vocabulary Tests:

Morning Kindergarten Class:

On average student scores increased by 20% from the pre-vocabulary test to the post-vocabulary test. Students scored an average of 40% on the pre-vocabulary test and an average of 60% on the post-vocabulary test. The pre-vocabulary test tested four words taken directly from the California State Content Standards for Kindergarten: Visual and Performing Arts: *Artist, Dance, Hop, and Jump*. The pre-vocabulary test was administered as a baseline, prior to students receiving any dance project instruction. The post-vocabulary test was administered after instruction ceased. This data takes into account 15/18 students in the Morning Kindergarten Class as these students were present for both the pre and post vocabulary tests. Thirteen student's scores increased anywhere from 25% - 100%. One student's score decreased by 25% and one student's score stayed the same. The teacher/researcher took dictations from the students and wrote them under their drawings on the post-vocabulary test but did not on the pre-vocabulary test. A fire alarm went off while a group of students from this class were taking the post-vocabulary test. This gave them considerably less time to finish their work. Accommodations for this incident were not made in the scoring of the test.

Pre- & Post-vocabulary Tests:

Afternoon Kindergarten Class:

A pre-vocabulary test was not administered with the Afternoon Kindergarten Class. On the post-vocabulary test, the Afternoon Kindergarten Class scored an average of 86% for the words *Artist, Dance, Hop, and Jump*. Like with the Afternoon Kindergarten class, dictation was taken by the teacher during the post-vocabulary test and written under student work.

Qualitative:

Student Interviews:

Five students were selected for interviews; S, C, K, E, and N. These students were chosen because they were available on the day the interview was taking place. Transcripts of all student interviews can be found in the appendix.

During student interviews, students demonstrated enthusiastic and motivated attitudes towards dance. They also demonstrated knowledge of dance and math vocabulary: *Artist, Dance, Hop, Jump, Perimeter, Vertex, Stage Right, Stage Left, Up Stage, Center Stage*. All students had to be prompted to use dance and math vocabulary. When asked, "What did you learn about Dance?" students demonstrated their knowledge by performing a piece of choreography first. It was only after being prompted that students used dance and math vocabulary. Student interviews are explained below.

Student Interview with S:

S demonstrated knowledge of dance, theatre, and math terminology through verbalization and demonstration. When asked the question, "What is an Artist?" S responded by saying "A painter, or a dancer, or a photographer." When asked what it means to dance, S responded by saying, "to move your

whole body.” This answer was accompanied by a demonstration in which she reenacted a portion of the Hip Hop dance. S also distinguished a hop from a jump verbally and through demonstration. When asked what the outside edges of a rectangle are called, S responded with “perimeter” and when asked what a corner of a rectangle is called, S responded with “vertex.” S was also able to identify and stand on a vertex on hop-scotch squares drawn outside on the playground. The interviewer noted that S seemed enthusiastic during the interview, “eager to share her knowledge about dance.”

Student Interview with C:

C was asked some of the same interview questions as S. The interview started off with the interviewer asking C to demonstrate a jump and hop. C demonstrated both accurately and explained that “The jump is so high and hop is so little.” C demonstrated the Hip Hop dance in response to the question “What do you when you dance?” and after some prompting from the teacher (“what do you move when you dance?”) came to the conclusion that when you dance you are “mov[ing]...your whole body.” She went on to describe an Artist as “a photographer, and a drawer painter, and a dancer.” Towards the end of the interview C stated that she was not an artist now because she was still in school and that someone could only be an artist once they grow up. The interviewer recorded that C’s attitude towards dance in general seemed to be a positive one.

Student Interview with K:

The focus of K’s interview was the vocabulary learned during the Theatre Blocking Terminology Section of the project. The interviewer proceeded to ask K what direction the students were facing when they began the dance. She correctly responded with “stage right” The interviewer then went on to describe all the other areas of stage in relation to stage right and K identified them correctly. The interviewer noted that K seemed shy and reluctant to be on camera during the interview.

Unsolicited Parent Feedback:

Three parents provided unsolicited parent feedback after the culminating dance performance.

Unsolicited Parent Feedback: J’s Mom:

After the culminating Hip Hop performance, J’s Mom approached the teacher/researcher and asked if she knew of a studio in the area as she would like to enroll her daughter in a class. She also informed the teacher/researcher that J would frequently practice the dance at home and taught it to her brother.

Unsolicited Parent Feedback: P’s Mom:

The teacher/researcher had just asked P if she would like to perform the Hip Hop Dance on her own for the camera. P agreed and performed the dance as her parents watched. When the teacher/researcher was finished filming, P continued to dance at which point P’s Mom approached the teacher/researcher and asked “Is it normal?” The teacher/researcher realized that P’s Mom was referring to P’s predisposition to movement. She was concerned because “P is moving all the time.” The teacher/researcher responded by saying that she thought it was normal and suggesting that P’s Mom enroll P in a dance class.

Unsolicited Parent Feedback: D’s Mom:

D’s Mom approached the teacher/researcher asking if she was the one that teaches them dance. The teacher/researcher said that she was and then D’s Mom informed the teacher that D “practiced at home every day.”

Oral Survey:

When given a choice about whether to participate in Hip Hop or another subject first, a majority (approx. 90%) voted for Hip Hop. When students were individually asked if they like to dance, almost all said yes and two said that they wanted to be dancers when they grow up.

Teacher Observations:

Throughout the day students frequently asked when they were going to practice the Hip Hop dance or take part in the Hip Hop Rectangle. On the rare occasion that the class was unable to practice the dance, students were visibly disappointed. During the dance project, five students who were formerly unwilling to participate in the Hip Hop Rectangle participated during the fifth week. One student asked if she could practice the dance during her choosing time while two students asked if they could stay in at recess to practice the dance. Additionally two students practiced the dance outside at recess. One student did not participate in the dance for a few weeks. During Hip Hop Rehearsals, he would stand still and stare at the teacher while his fellow classmates danced around him. During the fourth week of the project, he unexpectedly started dancing, performing almost all of the choreography accurately. From these observations, the teacher/researcher gleaned valuable information about his learning process that informed her approach to teaching him in other content areas. The teacher/researcher noted “We really feel like a group when we dance, like we all have a common goal and are working together.” The teacher/researcher also observed that students generally had positive attitudes towards dance and the arts at the beginning of the study.

Discussion:**Overall findings**

The effects of implementing dance into kindergarten curriculum were positive and manifold. Students’ vocabulary was built in the areas of art, mathematics, and dance; both students and parents developed or maintained positive attitudes toward the discipline of dance; a feeling of class community was increased during Hip Hop Rehearsal; students’ notions of who an artist is and what an artist does were expanded and several students showed increased confidence and risk-taking ability throughout the course of the study, becoming more comfortable with improvisational dance. Two students expressed interest in wanting to be dancers when they grow up; motivation for learning was increased as students frequently voted to participate in Hip Hop before other subjects or recess; on occasion students practiced the dance during recess or choosing time and valuable experience was gained by students about the rehearsal and performance process. From her observations, the teacher/researcher gleaned valuable information about a particular student’s learning process. This information informed her approach to teaching him in other content areas. Additionally, parents had a positive first encounter with the arts in a school setting and were proud of their children’s work. Below these effects are explored in greater detail.

Gains in Arts and Math Vocabulary

Dance is an effective vehicle for the teaching of vocabulary. During this project, arts, theatre, dance, and math vocabulary (specifically in the area of geometry) were focused on. The words: *Artist, Dance, Hop, Jump, Perimeter, Vertex, Stage Right, Stage Left, Up Stage, Center Stage* were the focus vocabulary words for the dance project. The Morning Kindergarten Class demonstrated an average of a 20% increase on their vocabulary scores from their pre-vocabulary test to the post-vocabulary test. A contributing factor to this increase may have been that the teacher/researcher realized that

developmentally, it was difficult for kindergarteners to express their ideas in writing. Having discovered this after administering the pre-vocabulary test, she took dictation from the students on their post-vocabulary test. While this may be a contributing factor to their rising test scores, the teacher/researcher noted that “students have a more concrete grasp on the vocabulary at the end of the project than they did at the beginning.” in her data collection notebook. The Afternoon Kindergarten Class was only able to take the post-vocabulary test. That class scored an average of 86%, demonstrating their solid understanding of the vocabulary words being tested.

The vocabulary word *Artist* was of particular interest to the teacher/researcher. Before instruction began, the teacher/researcher discovered that kindergarteners had very limited notions of who an artist could be. It is normal for Kindergarteners to have limited notions of concepts and ideas because of their limited exposure to school and life in general. During an interview with C at the end of the project, an artist was described as “a photographer, and a drawer painter, and a dancer.” During another student interview, S described an artist as “a jumper, hopper, painters, and dancer.” Compared to the pre-vocabulary tests in which almost all students responded by saying that an artist is a painter, the interview responses demonstrated a more expanded notion of the word *Artist*.

Positive Attitudes toward the Arts:

Student attitudes towards dance and the arts remained positive toward the end of the study. In addition to the contributions that the dance project made in helping students develop positive attitudes toward dance and art, other factors that might have contributed will be discussed.

Because the participants of this study were kindergarteners they had had limited exposure to any form of curriculum (in contrast to 4th graders, for example). The teacher/researcher noted that they did not have many preconceived notions about dance or the arts with the exception of the limited idea that an artist is always a painter as demonstrated on their pre-vocabulary tests. Limited notions however are common among kindergarteners as students in this age range are only beginning to construct their knowledge base. The teacher/researcher also noted that kindergarten students, developmentally, are naturally predisposed to move and that this might have had an effect on the enthusiasm that was displayed when it was time to dance. The teacher/researcher felt that having a somewhat clean slate so to speak, when it came to student’s impressions and experiences with the arts was valuable in that she did not have to teach against preconceived notions.

As students get older, many give up on the arts, believing that they are not good at them. These beliefs might stem from a variety of experiences, some of which can include negative experiences in arts classes in school. Some of these negative experiences can include environments in which the teacher openly favors students that are talented in the arts, classes in which students are asked to share their work even if they don’t feel comfortable sharing, or classes in which cookie cutter art is created and students only have the opportunity to be mildly creative. The kindergarteners did not enter the study with preconceived notions about the arts, possibly due to their limited exposure to the arts in the context of school. It should be noted that the school in which this study took place has a passionate art teacher that visits the classroom for one hour a week. Kindergarten is also the last sheltered instructional setting in the K-12 education system. With the pressures of Standardized Testing and Reporting (STAR) at a minimum, kindergarten teachers are more free to teach content in engaging and hands on ways, usually incorporating the arts. All of the reasons above might have contributed to the Kindergarteners positive or neutral attitude towards the arts at the beginning of the study.

The Building of Classroom Community and Student Motivation:

Classroom community was built as a result of the dance project. The teacher/researcher noted in her data collection notebook: “We really feel like a group when we dance, like we all have a common goal and are working together.” Students frequently asked the teacher/researcher when and if they were going to do the Hip Hop dance that day. When the teacher/researcher put on the music, students would start dancing on their own. Students often showed moves to one another without being prompted by the teacher and when the teacher conducted oral surveys asking whether students would like to participate in Hip Hop first or another subject, students overwhelmingly voted for Hip Hop (approximately 90%). One student asked if she could practice the dance during her choosing time while two students asked if they could stay in at recess to practice the dance. Additionally two students practiced the dance outside at recess. This data illustrates how dance can build classroom community and increase student motivation.

Oral surveys were also taken throughout the course of the study in which students were asked on an individual basis if they like to dance. Almost all (approximately 90%) said yes. This motivation and enthusiasm was also carried to student’s lives outside of school. Parents approached the teacher/researcher to ask about or comment on the dancing that was taking place in class. During these unsolicited parent feedback sessions, two parents reported that their children practiced the dance at home during their free time and one reported that her daughter had taught the dance to her older sibling. This unsolicited parent feedback demonstrates that dance in a kindergarten classroom can have a positive and measurable effect on student enthusiasm and motivation. The fact that students were not only practicing the dance on their own but also teaching it to their siblings alludes to the power of dance to increase student motivation inside and outside the classroom.

According to Gardner (1983), traditional K-12 classrooms cater to students for whom linguistic and logical-mathematical intelligence is primary. Unfortunately many students possess other forms of intelligence that are not usually addressed or taught to in a traditional K-12 setting. These students are often labeled as “learning disabled” or “ADD.” Teaching dance as part of a kindergarten curriculum serves students with varied learning modalities. Additionally, it addresses the fact that children have a natural predisposition to move (Griss, 1998) and channels their energy into the study of a rich discipline.

Increased student confidence:

Several students showed increased confidence and risk-taking ability throughout the course of the study, becoming more comfortable with improvisational dance. During the dance project, five students that were formerly unwilling to participate in the Hip Hop Rectangle participated during the fifth week. Students were never forced to go into the Hip Hop Rectangle however the teacher did use a number of strategies to encourage their participation. Strategies included teacher-student discussions at recess, the teacher volunteering to go into the Hip Hop Rectangle and dance with the student, as well as the teacher asking groups of students to go into the Rectangle (i.e. “all those wearing red go in and dance.”). The teacher/researcher noticed that students continually became more comfortable with improvising in the Hip Hop Rectangle as the study progressed. This data suggests a correlation between dance instruction in a kindergarten classroom and increased student confidence.

Individual Learning Processes Revealed:

During the course of the study, a student who continually struggled with social skills and academic content, did not participate in the dance for a few weeks. During Hip Hop rehearsals, he would stand

still and stare at the teacher while his fellow classmates danced around him. During the fourth week of the dance project, he unexpectedly started dancing, performing almost all of the choreography accurately. This provided valuable insight into his identity as a learner. As a result of observing G in the context of dance, the teacher/researcher was able to glean valuable information about his learning process which informed her approach to teaching him in other content areas. She concluded that G might have been the sort of learner that needed to receive input for an extended amount of time and then, when ready, would be able to produce output fairly accurately. The teacher/researcher was also G's math teacher and allowed this information to inform her approach to teaching him mathematics. This is an example of how the Arts can reveal aspects of student's personalities and learning identities that might otherwise go unrevealed.

Parents had a positive first experience with Arts Education:

For families that were unable to send their children to preschool, kindergarten is the first interaction with the public school system. That is why it is so important that it be a positive one. The culminating performance for the Dance Project also served as a culminating *What we learned in Kindergarten* presentation. Families, friends, and school staff were invited to watch as the kindergarteners sang songs about the water cycle, recited poems, and individually spoke into a microphone recounting their favorite thing learned that year. The dance was the final event of the presentation followed by cake in the auditorium and then an open house in the classroom. During the open house, J's Mom approached the teacher/researcher and expressed interest in enrolling J in a dance class outside of school. J's Mom also told the teacher/researcher that J had been practicing the dance everyday at home and had taught it to her older brother. This was J's families' first experience with arts education and it was positive one.

Arts Education can offer parents an alternative lens through which to view their child's behavior. The teacher/researcher had a conversation with a Mom who approached her asking "Is this normal?" She was referring to her daughter doing the Hip Hop dance out on the lawn, unprompted. The teacher/researcher assured her that it was normal for kindergarteners to move a lot and that she was very similar when she was P's age. The teacher/researcher suggested putting her in a dance class. P was an academically capable student that had trouble keeping her body still. A student like this has a chance of being labeled as ADD when in fact s/he might have a high energy level. Giving students an opportunity to express themselves through dance and release some of their energy might prevent them from being misdiagnosed at an early age. Dance taps into a variety of learning modalities and is a way for students to release their energy in a creative way (Gardner, 1983). Through an arts education, P's Mom was presented with an alternative lens through which to view her child's behavior: there might not be anything abnormal about P, she might just be a dancer.

Limitations/Constraints:

Limitations of the study included the teacher/researcher not having access to the Afternoon Kindergarten Class for a post-vocabulary test as well as a fire alarm going off during the Morning Kindergarten Classes post-vocabulary test. Accommodations were not made in the scoring of their tests and therefore scores might be slightly lower than they should be for the Morning Kindergarten post-vocabulary test. Interviewee selections were based on availability (many of the students were taken home by their parents after the final performance) and dictated by time constraints (the teacher/researcher was limited to one hour to conduct all interviews).

Things to change next time:

If a similar study were to be conducted it would be helpful to have a larger sample and be able to measure the effects of dance over more time. It might also be beneficial to observe the effects of dance with students at different stages of development in order to discover the stage at which dance instruction would be most beneficial. Space was also limited in the classroom. If a future study takes place it would be helpful to have adequate space to dance in like a studio or larger classroom. A studio containing mirrors would be ideal as the teacher/researcher would be able to observe the students even if her back was facing them. The teacher/researcher also acknowledges that if she had to conduct a study like this again she would simplify the choreography, as it might have been too challenging for kindergartners in light of their developing motor skills.

Why is it difficult to make a case for the arts?

While numerous studies indicate that there is a strong correlation between the arts and academic growth, it is difficult to “prove” the impact that the arts have on students. Unlike the material sciences where conditions can be precisely controlled and results duplicated, educational research deals with the complex social lives of human beings and seeks to test out new hypothesis on students and systems that are constantly in flux, effected by many conditions out of the researches control. Arts education research stands in front of the backdrop of educational research and has an even larger obstacle to overcome. Apart from testing art content, the nature of the arts does not lend itself to being tested for in traditional ways. It is impossible to precisely measure the impact that an opera might have on a child’s imagination or the benefits a painting might have on a student’s language ability or self awareness. The arts equip students with a sensibility that permeates all subjects and areas of thought. While there is little dispute that the arts benefit students in many ways, it is difficult to make a case for the Arts because it is difficult to make definitive or causal claims about their direct effects on student’s test scores.

Why teach the Arts with another Subject?

Although much research speaks to the benefits of arts education, it is difficult to make a case for the arts because their impact on students cannot be precisely measured or “proven.” Using the arts as a vehicle to teach other subjects, specifically those that garner attention and funding, is beneficial to both students and teachers. If this can be successfully accomplished, everyone who is involved wins. Students receive an arts education when they wouldn’t normally receive one and teachers are able to teach subject matter through a highly engaging medium. The arts are a subject in their own right, and deserve to be taught as such. However when funding and time are not available (which is the case more often than not), teachers must find creative ways to incorporate the arts into their curriculum, teaching with, through, and about the arts (Goldberg, 2006). This helps accomplish two goals: it enables student’s to make connections across content areas and it also, sadly, helps legitimize the presence of the arts in the classroom to a skeptical audience.

What should Arts Educators do?

Making a case for the arts must happen at a grassroots level as well as a policy level. For teachers that are passionate about the arts, having simple research based facts memorized about the benefits of arts education is useful. Teachers are often asked to justify their use of instructional time in the classroom or plan collaboratively with grade level planning teams. A teacher that is able to verbalize exactly why they are deciding to incorporate the arts into their curriculum will help other teachers understand their

perspective and enabled them to make more informed decisions about what they decide to teach and why.

It is recommended that arts educators try to find ways to connect the arts to subjects that garner attention and funding like mathematics and language arts curriculums. Until the arts receive the attention, time, funding, and reporting data requirements they deserve, arts educators need to find creative ways to bring the arts to their students.

Conclusions:

The arts are a vital component of a well-rounded education. This study sought to address their marginalization in the public school system. Through a dance project implemented in an economically and linguistically diverse urban elementary school, the effects of dance in kindergarten curriculum were uncovered. They were positive and numerous. Student's vocabulary was built in the areas of art, mathematics, and dance; both students and parents developed positive attitudes toward the discipline of dance; a feeling of class community was increased; student's notions of *Artist* were expanded and several students showed increased confidence and risk-taking ability while two students expressed interest in wanting to dance professionally. Motivation for learning was increased as students practiced the dance during their free time or at home and the teacher/researcher also gleaned valuable information about a particular student's learning process as it was physically revealed during dance rehearsals. Additionally, parents had a positive first encounter with the arts in a school setting.

Efforts to bring arts education back to public schools need to be carried out at a grassroots and policy level. The arts are a subject in their own right, worthy of comprehensive and rigorous instruction as well as a highly engaging medium through which to teach other subjects like mathematics and science. While it is difficult to "prove" their effects on students, the awareness, sensitivity, imagination, and creativity that they bring to students permeates their knowledge of all subjects. It is recommended that arts educators try to find ways to connect the arts to subjects that garner attention and funding like mathematics and language arts curriculums. Until the arts receive the attention, time, funding, and reporting data requirements they deserve, arts educators need to find creative ways to bring the arts to their students.

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Appendix:

Student Interview: S

T: Alright Ms. S! Can you show me a jump?
S: (demonstrates a jump)
T: Can you show me a Hop?
S: (demonstrates a hop on one foot).
T: So what's the difference?
S: (demonstrates while explaining) A jump is one leg and a hop is two legs.
T: Oh, ok, is there another difference too?
S: (demonstrates while explaining) Uh-huh, cause the hop is little and the jump is big.
T: Oh, I see. Excellent! Very smart thinking! What about dance? What do you do when you dance?
S: (demonstrates) Like, move your body.
T: Oh! Are you a dance artists?
S: This can be like a dance (looking at Hip Scotch squares down on the ground). Two, one, one, two, one, one, two.
T: Oh! Is that like a pattern?
S: Yeah, like a dance pattern.
T: Oh cool! Do you want to show it to me?
S: (nods)
T: Ok, go ahead.
S: (Demonstrates while saying numbers) Two! (finished demonstration) Like, it's like a Hip Hop Dance. (Demonstrates back the other way while saying numbers). Two, one, one, two, one, one, two.
T: Lovely! Are you being a dance artist right now?
S: (nods her head and begins to hop pattern again) Two, one, one, whoa! (almost falls over) I'm trying to do like –
T: Ok, meet me here
S: (Hops back toward interview and camera). Whoa! I almost did it!
T: Cool. Hey wait, S! Look up at the camera. So what other kind of artists are there?
S: Like jumpers, hoppers –
T: I'll move over here so that the suns not in your eyes.
S: Jumper, hopper, painters and dancers.
T: Are there other kinds of artists too?
S: Photographer
T: Photographers.
S: Like you are being a photographer (points at camera).
T: Oh, actually, kind of close. I am being a film-maker right now because I am making a film.
S: Oh, well that's too.
T: Do you remember our Hip Hop rectangle?
S: (nods).
T: Do you remember what the outside of the rectangle was called?
S: Perimeter.

T: Do you remember what the corners of the rectangle were called?

S: I know it's starts with a V.

T: You're right. It's a Math words that starts with a V.

S: Vertical?

T: Close. (interview begins to sound it out) Ver....

S: Vertex!

T: Vertex! Can you show me a vertex over here? (point so to Hop Scotch squares on the black-top).

S: Right here? (walks to Hop Scotch squares on black-top)

T: Yes, stand one one.

S: Hmmmm, there's a lot huh?

T: There are a lot.

S: I am going to stand on.....I know..... this one. (Runs to and hops on a Vertex).

T: So how do you know you are standing on a vertex?

S: These are two vertex (puts one foot on vertex and one foot on another).

T: Oh, there are two vertex (interviewer corrects herself) oh, vertices, right? How do you know? Can you stand on one vertex?

S: (stands on one vertex) Like the number one! (point to number one inside square with her shoe).

T: Perfect. How do you know you are standing on a vertex?

S: Cause it's the only point.

T: Oh, because it's a point, right?

S: (nods, and starts spinning).

T: Lovely! Why don't you take a bow? Thank you for sharing your smart thinking.

S: So girls go like that (demonstrates curtsy) and boys do like that (demonstrates bow).

T: Yeah, boys bow and girls curtsy but, but I mean you can really do whatever you want.

S: (curtsies).

T: Lot's of girls bow too....and some boys even curtsy.

S: Nah! (laughs).

T: Thank you!

Student Interview: C

T: What's your name?

C: C

T: C. C, can you show me a jump?

C: (demonstrates a jump)

T: Can you show me a hop?

C: (demonstrates a hop)

T: What's the difference?

C: (demonstrates) The jump is so high and the jump (corrects herself), the hop is so little.

T: Oh, I see. What about dance? What is... what do you do when you dance?

C: (demonstrates part of the Hip Hop Dance) Do like this, like the one that you showed us.

T: Oh, and what are you moving when you dance?

C: The, my whole body.

T: Oh, ok. And what about, what's an artist?

C: A photographer, and a drawer painter, and a dancer.

T: Wow! So lots of people can be artist, huh?

C: Even when you grow up.

T: Even when you grow up. Are you an artist right now?

C: No.

T: No? Really?

C: I'm at school.

T: You're at school but weren't you just a dancer earlier today?

C: Yeah.

T: So wouldn't that make you an artist?

C: Yeah (unconvinced).

T: Well I think you're an artist.

Student interview: K

T: What direction do we face when we start the dance?

K: Stage Right.

T: Oh. What direction is, like, down towards the audience?

K: Down Stage.

T: What about back behind us?

K: Upstage.

T: What about the opposite direction to Stage Right?

K: Stage Left.

Parent Interview: J's Mom:

J's Mom: I would really like to enroll J in some dance classes. Is there a studio around here that you know of? She talked about the dancing you were doing with them all the time.

T: Really? That's great! I do know of a studio actually. I'll give write the info down. So she would talk about dance at home?

J's Mom: Yeah, she was really into it. She would practice at home all the time and actually taught her brother the dance as well.

T: Really! That makes me so happy to hear. He could have performed it with us!

J: Yeah, she was really excited about it.

T: And she did an awesome job with it. She knew all the steps with all the counts. I was really proud of her.

J's Mom: Yeah, me to. I am so glad you did this with them.

Parent Interview: P's Mom:

P's Mom: Is it normal?

T: Is what normal?

P's Mom: She is always moving, all the time.

T: Well I think it is definitely normal at this age. Kindergarteners like to move. Totally normal.

P's Mom: Really? It is all the time like this (P dancing in background, going over Hip Hop Routine while reciting counts and eating a carrot).

T: Well, if this helps at all, I was like this when I was little and my Mom put me in a dance class. I don't think there is anything wrong with her. I think it's wonderful that she want to move so much. And if she has the opportunity to dance then she can also learn and move at the same time.

P's Mom: Oh, ok, it's good that this is normal.

T: Yeah. Everyone is different and some children need to move more than other but I think it's very common.

Parent Interview: D's Mom:

D's Mom: Are you the one that teach them dancing?

T: Yes.

D's Mom: Oh, D loves it. He practice at home every day.

T: Really?

D's Mom: Yes.

T: Oh, that's great. Yeah, I have noticed that he really knows all the steps.

D: Yes, everyday.

Pre- and Post-Vocabulary Test Scores: AM Kindergarten Class:

Student	Pre-test Result	Post-test Result	Difference in scores
#1	25%	100%	75% (increase)
#2	50%	100%	50% (increase)
#3	75%	75%	0% (same)
#4	25%	25%	0% (same)
#5	50%	75%	25% (increase)
#6	70%	75%	0% (same)
#7	0%	100%	100% (increase)
#8	50%	50%	0% (same)
#9	0%	25%	25% (increase)
#10	100%	100%	0% (same)
#11	50%	100%	50% (increase)
#12	25%	50%	25% (increase)
#13	75%	0%	75% (decrease)
#14	0%	0%	0% (same)
#15	0%	25%	25% (increase)

Pre-test average: 40%

Post-test average: 60%

Improvement from Pre-test to Post-test: 20%

Improved: 53.3%

Stayed the Same: 40%

Declined: 6%

Pre- and Post-Vocabulary Test Scores: PM Kindergarten Class:

Student	Pre-test Result
#1	75%
#2	75%
#3	100%
#4	75%
#5	100%
#6	100%
#7	100%
#8	50%
#9	75%
#10	100%
#11	100%

Average: 86%