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# All They Want to Do is Dance: A Study of Dance Education in K-12 Public Schools

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All They Want to Do is Dance:  
A Study of Dance Education in K-12 Public Schools

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Summer Fellows Research Project: Ursinus College

Professor Karen Clemente

14 July 2016

Table of Contents

Abstract .....	3
Research Paper .....	4
Works Cited .....	24
Appendices .....	27
• Appendix A: Annotated Bibliography .....	27
• Appendix B: Report of on-site visit #1: Philadelphia High School for Girls Dance Classroom of Dr. Joy Friedlander.....	36
• Appendix C: Report of on-site visit #2: Meeting with Dr. Jane Bonbright Founding Director, National Dance Education Organization.....	37
• Appendix D: Recommendations for Further Study.....	38

Abstract

This project involves investigating the value of dance within a student's life. The research has included a variety of facets of dance- how it is related to brain/neuroscience research and motor skills; how it is fun and an opportunity to learn in a different way; and how it enhances academics, mental stability, and social interactions. The bulk of the study included examining past and current national studies that investigated the effects of dance education within the K-12 school setting. Also included were two on-site visits pertinent to the study: one was a visit to a Philadelphia dance classroom, in which students participated in end-of semester projects; the other was an interview with the founding director of the National Dance Education Organization, who shed light on the scope of dance education research that addresses student achievement. The project culminated in a research paper connecting brain/neuroscience research to dance education and its effects on the K-12 student population, with particular attention to students-at-risk. The project has also laid a foundation for the future exploration of on-site dance curricula and practice in Philadelphia and/or New York K-12 public schools in order to observe how students express themselves and develop the artistry of dance while connecting to their overall education.

### Introduction

Jane Bonbright founding executive director of NDEO (National Dance Education Organization), and co-author of *Evidence: A Report on the Impact of Dance in the K-12 Setting* (2013), described how “Dance impacts learning, with particular attention to several areas determined to be under-researched in the 2004 Research Priorities for Dance Education” (Bonbright, Bradley, and Dooling 1). The investigation of brain/neuroscience research, one of the subject areas described in *Evidence*, leads to an understanding of how the brain is connected to the communicative and expressive aspects of dance. This connection can lead further to observations on how the general population of students within the K-12 setting, including children-at-risk, are affected academically and socially through the use of dance education. This research will investigate both past and current national studies of how brain /neuroscience research is able to create a better understanding of the use of dance education to enhance overall student learning as related to multiple academic subjects and social skills. The research will also inform the body of knowledge which specifically looks at children-at-risk, who benefit from dance education being used as a tool of engagement and motivation for academics and positive social experiences.

### Definition of Terms

For this paper, the researcher defines three terms that will allow readers to have a better understanding of the discoveries made throughout different texts. These terms are key to the research question: Does dance improve the academic and social aspects of students’ lives,

particularly students at risk? Highlighted terms throughout the bulk of the research are: Children-at-Risk, BrainDance, and Brain/Neuroscience.

Children-at-Risk, shall be defined as “a student who is likely to fail at school” (NCES). In this context, school failure is typically seen as not connecting to academics in a way that promotes learning success and grade promotion, ultimately leading to increased dropout rates before high school graduation. Other components leading to school failure are adversities in a family household, in the surrounding community, and in a child’s life. As a result, “the characteristics of at-risk students have traditionally been identified through retrospective examinations of high school dropouts’ family and school histories,” according to the National Center for Education Statistics (NCES). The NCES collects, analyzes, and defines data related to students in the United States, within K-12 public schools. In addition to the NCES definition of “at risk” as examinations of dropouts’ family and school histories, James E. Catterall, in *The Arts and Achievement in At-Risk Youth*, defines Children-at-Risk as “students who fall under low socioeconomic status” (Catterall 10).

BrainDance, is a series of fundamental movement patterns that children discover during the first year of life. The movements connect to the “central nervous system by laying the foundation for appropriate behavior and attention, eye convergence necessary for reading, and sensory-motor development” (Gilbert 36). The aspects of BrainDance, which Anne Green Gilbert describes about in her book are: breath, tactile, core-distal, head tail, upper lower, body side, cross lateral, and vestibular (Gilbert 34). The purpose of “BrainDance” is to create an understanding for how dancers and non-dancers of all ages are able to relate to the embodiment of dance concepts and how such embodiment leads to academic success.

Brain/Neuroscience in Dance Education is the study of the nervous system and how it connects to motor, sensory, auditory, and kinesthetic skills for a child within dance and a school setting. Neuroscientists continue to find clues as to how the mental and kinesthetic activities required for dance education are linked to the functions of the brain (Sousa 1).

Brain/neuroscience literature focuses on movement as cognition (Bonbright, Bradley, and Dooling 6). Brain/neuroscience as related to dance education shows how sustained attention through movement allows for students to stay engaged on tasks. Once a student is engaged, they develop more of an appreciation for a topic. Then, a child begins to develop high interest which links to motivation. Lastly, from motivation, children are more willing to sustain attention, which improves cognition (Bonbright, Bradley, and Dooling 12).

### Limitations

There are numerous aspects of arts in education that are instrumental for young learners. This paper exclusively addresses Dance Education in the K-12 public school setting. It will focus primarily on how brain/neuroscience research provides an understanding of the use of dance education to enhance overall student learning as related to multiple academic subjects and social skills. The research paper also will explore children-at-risk, a much needed area of research. This paper references the arts, but focuses solely on dance, because the researcher has been immersed in past and current dance experiences. The true benefits of dance in the researcher's social and academic life provide a useful perspective, as dance and kinesthetic learning experiences have helped the researcher become a better learner with regard to other academic disciplines.

There is a lack of dance education research regarding Children-at-Risk and brain/neuroscience literature, because according to the NDEO, *Research Priorities in Dance*

*Education: A Report to the Nation*, from 1926-1950 there was no dance education literature on the research of brain/neuroscience and Children-at-risk (30). From 1951-1964, there was no such literature of brain/neuroscience and children-at-risk within dance education, yet during this time there were 85 written texts on “arts education” as a whole (32). From 1965-1979, there were six dance education texts on Children-at-Risk, yet, there was still no brain/neuroscience research or literature as related to dance education (34). Finally, in 1980-2002, there were four recorded texts on brain/neuroscience and nine for Children-at-Risk (36).

### Brain Research and Dance Education

Throughout the course of our lives, human beings develop qualities, traits, and talents, based on inherent or day to day experiences. Without even realizing it, these experiences are the first sign of the brain being able to make connections to reality and the role of human beings as people, but how? How does the brain make these connections? There are functions in the four cerebral lobes that make connections to the visual, auditory, sensory, and motor areas within the human body (Smith 159). How does this connect to dance education? Within each of these four cerebral functions, humans make connections to artistic processes; through brain function the body naturally is able to recognize the use of rhythm, shapes, texture, and movement. The section which follows will briefly discuss each of the four cerebral lobes and their functions, ultimately relating to dance education.

#### Occipital Lobe

The first lobe to be discussed is the Occipital Lobe, which is the primary visual area. This brain function provides a connection to dance education to teach students, since it receives sensory impulses from eyes, and interprets shape, color and movement (Hannaford



83). The visual association area relates past to present visual experiences, recognition and evaluation of what is seen (Hannafor 83). This is beneficial in dance education, because teachers have the opportunity to use visual stimulation, in the demonstration or presentation of movement within their teaching in order to keep a child's attention to the lesson. An example of this is the creation of different shapes that form together to make a dance phrase. The purpose of creating shapes with the body is that an audience can visually relate to the shapes that they see, making an ever lasting impression on them. Related to dance education, if students see a teacher demonstrating with her body a tree or a bear from a literary work, it can allow them to remember and make the connection to the story to better their reading skills.

Additionally, according to Eric Jensen, in *Teaching with the Brain in Mind*, students already have the gift of what he calls "prior knowledge," because when they look at television, a magazine, or at things surrounding them, they retain that information. An example of this is a teacher showing a music video for students to connect to a math lesson; they will remember it, because it relates the lesson to their everyday life. All students will have some prior knowledge related to visual experiences, even if it is random (45). The power of prior visual representation for a child is that it can leave an impact, because the development of a child's visual knowledge goes together with the development of skills that support and express that knowledge, whether it is playing video games, using a cell phone, watching television, or dancing.

### Temporal Lobe

The next brain function related to dance education is located in the temporal lobe. This lobe is the auditory area that interprets basic characteristics of sound, pitch and rhythm. Inside the temporal lobe there is the auditory association which focuses on speech, and the vestibular

area, which focuses on balance and different type of senses (Hannafor 83). In the K-12 school setting, many teachers focus on the use of auditory learning, to help a child who needs to talk and hear in order to connect to information in the classroom. There are many uses of auditory learning in the classroom, because brain areas are developed as a child learns to sing songs and rhymes to relate to a math lesson or a science lesson (Sousa 2). Also, rhythm, sound, and speech can connect to a child's emotional/social skills, as they participate in learning activities with peers.

According to Jensen in *Teaching with the Brain in Mind*, the more a child hears words, speaks out loud, or even has normal conversations, the better, because they will have something concrete to remember by hearing it (24). This can relate to regular dance classes because dance students are used to making/understanding the use of counts in a dance phrase. Adding speech to movement allows a dancer to hear, in addition to seeing where a specific movement goes within the counts. This idea also applies to learning sequential movement and thinking during a dance phrase. Applying this to a classroom setting, students can use speech to enable sequential thinking to solve a math problem or find context clues in language arts.

#### Parietal Lobe:

The third brain function to be discussed is found in the parietal lobe, which is the sensory area that relates touch, pressure, pain, cold, and heat. Underneath the parietal lobe is the association area, which “integrates and interprets sensations--shape and texture, without visual input, orientations of objects, relationship to body parts, and past sensory experiences” (Hannafor 84). In dance education, students and teachers can relate this to contact improvisation, a process through which dancers relate to each other using touch. An

example of this is an exercise in which dancers respond to movement initiation points activated by a partner. Once a particular point on the body is touched, a dancer follows the flow of that contact in creating movement. Dancers relate the feel of touch and pressure to move their body in a particular direction. Through contact improvisation, dancers become more aware of the sensation of touch and how it enables a dialogue between partners with regard to the relationship between multiple body parts, as well as to the important sensation of weight sharing. This sensory information can also be transferred to learning anatomy in the science subject area, since students could be asked to identify body parts as they use them. Last, using touch is an important aspect of helping students to gain trust, as they are asked to be vulnerable to another human being who is there to interact with and support them physically.

### Frontal Lobe

The fourth brain function related to dance education is found in the frontal lobe, which connects motor skills through controlling specific muscles all over the body. Within the frontal lobe is the premotor area, which enables the body to learn motor activities of a complex, sequential nature in skilled movements. (Hannafor 84) This lobe connects to the basics of dance education because as discussed above, dance is known for motor activity that is performed in sequential order. This helps a dancer to know which movement comes first, next, and last. In a sequence there can be the use of repetition or the dichotomy of high and low movements. Remembering these variations shows that the use of dance within a class can help students to be sequential thinkers, while participating in a different approach to learning through movement.

Teachers especially must remember that learning for a child is not just all in their head. Understanding the relationship between the mind and body is important for a child's

learning. An important ingredient to learning is the kinesthetic approach through which students can understand and retain more information to excel academically. Thus, the importance of this section has been to highlight the mind body connection through different aspects of dance education, using visual, auditory, sensory, and motor skills. There are other techniques used to help promote the use of brain/neuroscience research when connecting with dance education. One specific approach is the use of BrainDance.

### BrainDance

According to Anne Green Gilbert, author of *Brain-Compatible Dance Education*, BrainDance is a series of activities that “wire the central nervous system by laying the foundation for appropriate behavior and attention, eye convergence necessary for reading, sensory-motor development and more” (Gilbert 36). The idea of BrainDance is that humans already develop the process when they are born, when a baby naturally learns to crawl, creep, roll, turn, walk, skip, reach, swing and many more physical actions (37). The series of BrainDance activities are a replica of how the brain develops motor function- through breath; tactile stimulation; core-distal, head tail, upper lower, body side, and cross lateral patterning; and vestibular stimulation- and the purpose of incorporating BrainDance in a school setting is to build sensory-motor skills which can be used in the classroom (Gilbert 32, 34). Accessing a student’s brain’s full function due to being active, imagining, and implementing movement activities in a classroom may keep a child engaged and always thinking. Sensory-motor skills can also help humans make connections through life, benefitting a student's social skills (Gilbert 31-32).

Anne Green Gilbert shows how using BrainDance, and its emphasis on the mind/body connection, can affect a student within the K-12 setting. BrainDance causes students to be

focused when it comes to a task, allowing for both technical and creative development. This also allows a student to become a critical thinker and start understanding how to problem solve in the real world and the classroom. Students mimic what they see and hear in their environment. Positive thoughts, words, and actions create positive results for a student, because they will begin to copy what they see and hear.

Many of Gilbert's lessons show that the use of BrainDance is beneficial to her dance students, an example being lessons in which young children from K-5 develop rhythm and language through repetition of words spoken and sung in a rhythmic pulse of pattern (Gilbert 50). To do this, Gilbert uses nursery rhymes and other children's songs, then asks the students to come up with a movement, using the BrainDance patterns, during the song/rhythm. An example of this is an activity using the song:

*"Twinkle, twinkle little star  
How I wonder what you are.  
Up above the world so high  
Like a diamond in the sky.  
Twinkle, twinkle little star  
How I wonder what you are."*(51)

By using this song, the students connected to a fundamental movement pattern, Core-Distal, which includes reaching out to all distal points, emanating from the core. One student decided to reach out (grow big) and curl in (shrink small) during alternate lines of the rhyme or reach slowly while reciting each line, then quickly getting small while saying the last word of each line (star, are, high, sky) (Gilbert 51). Here, movement helped to enable memorization of the song.

Gilbert also teaches her students the use of standing up, activating the vertical spine, while using the BrainDance aspects. Dancers use repetition connected to rhythm, in a language arts

lesson and they are also developing a sense of learning to work with balance against gravity. An example of this is in “The Itsy Bitsy Spider” activity:

*“The itsy bitsy spider  
Went up the waterspout.  
Down came the rain  
And washed the spider out.  
Out came the sun  
And dried up all the rain.  
And the itsy bitsy spider  
Went up the spout again.”(57)*

In this song, the students march in their own space, and they use their hands to “wash” their body from head to toe twice, then open their arms and turn around, and march in self-space once again. This connects the Upper-Lower aspect of the body through a BrainDance activity (57). Anne Green Gilbert has developed numerous movement activates based on the series of movements in BrainDance that enhance classroom learning.

An example of how the use of BrainDance connected dance education and academics in the classroom was a research study by Sarah Bailey and McLinda Tatum Kaiser entitled, *The Effect of the BrainDance on Student Behavior and Attitudes in Traditional Learning Environments*. This study describes the effects of BrainDance on selected, 2<sup>nd</sup> grade students in the Shanghai, China Community International School, which covers grades 2-12, with a population of 1200+students.

The study occurred in one 2<sup>nd</sup> grade class over a six-week period. Bailey and Tatum Kaiser prepared the teachers by teaching Anne Green Gilbert’s *BrainDance* movement sequences. This allowed them to explore a variety of ways they could have the students execute

the movement patterns in the classroom. The experimental group participated in the *BrainDance* sequence daily during the six-week study. The control group, which was the other 2<sup>nd</sup> grade class, took part in regular group lessons without the use of *BrainDance*. Examples of the use of the different BrainDance movements were Breath; Tactile stimulation; Core-distal, Head/Tail, Upper-Lower, Body Side, and Cross-Lateral patterning; and Vestibular stimulation. For Breath, students breathed in and out slowly and deeply to bring oxygen to the body and brain. For Tactile stimulation, students lightly tapped, brushed, and firmly squeezed or pounded all surfaces of their skin. For Core-Distal patterning, students reached out away from the body's center and curled back toward the core. In activating the Head/Tail patterning, students stretched and curled the spine, and circled the head and pelvis to align the spine. For Upper/Lower patterning, students isolated movement with the upper body while grounding and stabilizing the lower body, then reversed this. Activating the Body Side pattern, students stabilized one side of the body at a time, focusing on movement for balance and eye tracking, which helps with reading readiness. For the Cross- Lateral pattern, students reached across the mid-line of the body in various ways. Lastly, to stimulate the vestibular system, students used spinning, rocking, tipping, rolling, or tilting in place, then steadied themselves and repeated the process in the opposite direction (Gilbert 32). The overall results of the Bailey and Kaiser Study showed that BrainDance actually decreased students off task behavior during class time, meaning that the student's attention span was better within the classroom setting (Bailey and Kaiser 17).

#### General Population of Students and Teachers Utilizing Dance Education

As discussed above, research shows that the different compartments of the Brain have different functions that allow a person to utilize specific skills that are related to academic achievement. Research also promotes a better understanding of brain function as related to

dance education. Brown and Parsons, in “The Neuroscience of Dance,” state that “...dance has a strong capacity for representation and imitation, which suggests that dance may have further served as an early form of language” (Brown and Parsons 83). This can apply to teachers who need to find new ways to educate their students that don’t depend on language. The next section of the paper provides impressions of dance education from both students and teachers’ perspectives. Key questions are: Why is it so important to integrate dance education in schools? How does the study of dance contribute to student achievement and success? (Ruppert 1).

### Dance Education in K-12 School

In 2001, the U.S. Congress, under President George W. Bush, passed the No Child Left Behind Act, which allowed for the arts to share equal billing with reading, math, science, and other disciplines as “core academic subjects, which contributes to improvement in student learning outcomes” (Ruppert 3). Overall, dance within the K-12 public school setting is important for students, because they are gaining the opportunity to learn and experience dance as both a distinct subject area and as another avenue for understanding other core subjects. Students are proving the positive effect of dance education within schools, because they are becoming more creative in different ways. According to Eric Jensen in *Arts with the Brain in Mind*, one result is that they are having more awareness of self-concept, meaning that they are gaining greater control and mastery over their lives (Jensen 77). Additionally, connecting skills of choreography and literary vocabulary skills allows students to understand compositional structure within all areas of learning. Dance students also have an ability to put things in sequence and collaborate with other people within a classroom setting. Several successful examples of the use of dance education in the classroom follow.



Dance education provides for improved learning. The value of moving in a class was exemplified in *Champions of Change*, edited by Edward Fiske (1999), which described that a kindergarten class “danced their way through prepositions with the background rhythm from a Nigerian percussionist” (qtd. in Jensen, *Arts with the Brain in Mind* 77). The same study described a 4th grade class, in which a teacher had students create a huge playground map of the United States and had them run from state to state, creating an avenue for students to learn to identify the states through movement (qtd. in Jensen, *Arts with the Brain in Mind* 77). The reason both of these activities worked, is because they connected movement to learning. Not only that, but dancing is fun, and students, especially children in K-5 public schools, love to have fun.

In another study done by Anne Green Gilbert, 3rd grade students studied language arts through dance activities, which increased their Metropolitan Achievement Test reading scores by 13 percent in six months. The students who did not learn language arts through dance had their reading test scores decrease by 2 percent (Gilbert 1997).

Another study that shows how dance in the K-12 setting benefits students was done by Susan McMahon, author of *Basic Reading through Dance Program: The Impact on First-Grade Students' Basic Reading Skills*. She evaluated the use of a dance based educational program, in which she implemented a program in the curriculum that was solely based on reading for first grade students. The study took place in Chicago public schools where a total of 721 first-grade students were used for the study. 328 of the students, from six schools, utilized the program, while 393 students, from nine schools, served as controls. The result of this study showed that the students who took the program, improved significantly in all reading skills more than the control group of students. The 20 sessions focused on the students using their bodies to

physically represent the alphabet symbols for various sounds in the English language. The students who received the dance program received 13.3 hours of danced based learning while the control group learned without the use of dance (McMahon 2003).

Dance education works. Research has shown that there is overall significant success for students when implementing dance within the curriculum. Students are succeeding in school, test scores are increasing, and there is learning through a more interactive medium. Ultimately, classroom teachers are the ones who are asked to provide dance education in classrooms. This is due in part, to the lack of faculty positions for dance specialists in the schools. Though important, this phenomena is beyond the purview of this paper. Therefore, the question is: How are general classroom teachers accepting and implementing dance education within schools?

### Teachers in K-12 Schools

Students being positively affected by the use of dance education is wonderful, but to complete the process, teachers, must be on board with this style of teaching. For general classroom teachers to use dance in the classroom, requires a level of personal motivation and willingness to take risks (Oreck 2). Teachers have to tap into the ability to try something new, because they are learning a whole new way to connect and reach their students. When it comes to using dance education, teachers must be open to discover and learn to encourage the creative side of every single child in the classroom.

Barry Oreck, author of *The Artistic and Professional Development of Teachers: A Study of Teachers' Attitudes toward and Use of The Arts in Teaching* states, "teachers must understand the instructional purpose, recognize the benefits, and feel confident in the skills required to teach it" (2). Teaching dance education is not easy, but it is an important tool to engage students

cognitive, motor-sensory, auditory, and kinesthetic skills. To understand more about Barry Oreck's approach in his research study, readers have to understand that states are free to adapt or adopt national dance standards, but most decisions are ultimately made at the local level- LEA (Local Education Agency). Local districts may choose to interpret standards as they wish. There are about 15,000 local school districts in the U.S; therefore, nationwide, offering dance education is not consistent across all districts. (Bonbright, Interview).

Barry Oreck discovered that dance is valued by teachers as part of the educational experience of students, regardless of other constraints, concerns, or external pressures that limit their use of dance education (5). The importance of this result is that it shows that teachers are willing to utilize the art form when it comes to teaching in the classroom. A deterrent to the use of dance education could be self-image or self-efficacy. A teacher might ask, "How do I look demonstrating in front of the class" or "artistically am I capable of actually using dance education to solve a problem within social studies, mathematics, or language arts?" Other results in the study showed that teachers are willing to support students when it comes to trying out dance education within the classroom, by giving them a more fun and creative approach (6). This is especially true for teachers within the K-3 environment, because they feel that using dance education in early grades can be a more effective way of teaching the students, making foundational connections, earlier rather than later, in middle school and high school.

An interesting part to this study gave teachers the ability to say specifically how they felt when it came to using dance education in the classroom. One teacher stated, "For myself, the arts are the most stimulating activities that I undertake. Approaching life through movement and new ways of seeing expand me and allow me to be a more creative and effective person and teacher" (9).

Another example of using dance in the regular academic classroom was described by Claudia Cornett, in the book, *Creating Meaning Through Literature and Arts: An Integration Resource for Classroom Teachers*. Judy Trotter, who teaches at the Ashley River Creative Arts Elementary School, reads to her first graders about African-American history, and how slaves ran from their captors when they try to escape and get free. At the end of the book “*Barefoot*,” she told her students to stand up and said, “Ok, show me walking in place - barefoot” (Cornett 2). The kids started walking, dragging, shuffling, sliding, and tiptoeing around the room. She put on some music for them to move to, and then a few minutes later, she told them to stop and recite the characters in the story. All of the students in the class began talking about slave hunters and other people who were portrayed in the story. Lastly, she asked her students to pantomime the feelings of the characters in the story. Around the room, the children started doing interpretive dance and showing emotions of sadness, fear, and nervousness. Judy Trotter is one teacher of many who utilized the benefits of dance education for her students, and she has proven that it actually helps with the students’ memory and attention span in the classroom. (Cornett 2, 4).

When teachers begin to use dance education, they can look at students’ past test scores, students’ excitement, and focus, and the unique curriculum instruction to see that it works. They can see a student's passion for mathematics, social studies, language arts, or science through the teaching of dance. Dance affects all types of students, but it is especially important for Children-at-Risk. This population can benefit most from dance in the classroom as related to academic achievement and emotional stability.

#### Children-at-Risk in Dance Education

Claudia E. Cornett’s book, *Creating Meaning Through Literature and Arts: An Integration Resource for Classroom Teachers*, looks at how many students lack the motivation to

go to school and learn due to many different adversities that can take place within their social life and at home. Dance education can develop internal motivation because those children now have a purpose to fulfill, which is fully focusing on work inside and outside of the classroom. Fun is stripped away for many children when they come to school, so applying the idea of fun or play in a classroom is engaging a student “through movement, novelty, challenge, surprise and group work” (31).

Through dance, Children-at-Risk will be able to express and understand some of the struggles that they are facing throughout life. Dance education can allow a child to have a support system, in their “at-risk community. What does an “at-risk” community look like? Chell Parkins author of *Dance Media Collaborations: Engaging “At-Risk Youth,”* described an at-risk community as students who are surrounded by violence, poverty, and drug addiction (4). Parkins, being a dance educator, wanted to involve dance education in her students’ lives, to expose them to something meaningful in their life. She described the struggle of being a dance educator surrounded by an at-risk community, where students are more wary to trust her as a teacher, or even respect her. She described how she pushed and fought to gain trust and respect, by creating a drill team, in which students would participate in contact improvisation, learning trust through sensory engagement. Her journey with her students started by her asking them about the mean names that they had been called in the past. Then, she challenged her students and asked them to make full body gestures to represent each name that they had been called (5). Parkins then asked her students to perform the movement phrase silently or with words, to add onto the emotion that was being felt. The final request was that she asked them to record the movement to create a video. This exercise was important, because the students had the ability to work through emotional struggles through dance. When human

beings face adversities, it is helpful to find some way to channel that energy, to make those adversities easier to deal with. For these students especially, it was shown that through the use of contact improvisation, they were able to rely on each other for support. Parkins gave the students an opportunity to learn that they were not alone academically and socially, and that they had many supporters around them, as long as they were able to trust them enough.

Chell Parkins is just one example of incorporating dance education with at-risk youth. At the end of her experience with her students, the feedback surrounded being able to now have a platform in which students could stand up for themselves and share their experience of empowerment while building a more positive community (6). Sandra Ruppert states, “Students who participate in arts learning experiences often improve their achievement in other realms of learning and life” (Ruppert 10). Chell Parkins’ story shows the physical and mental transformation of the class as they improved in the respect that they had for her as a dance educator, because at first they did not like or respect her. In the end, the students responded well through a different learning approach- dance – that gave them lessons about life.

Likewise, James S. Catterall found that socially and economically disadvantaged children and teenagers who have high levels of arts engagement or arts learning showed more positive academic outcomes, rather than their low arts engaged peers (Catterall 24). The interesting fact about his study, is that when Children-at-Risk had dance education in their schools, they succeeded better than students who had not received it. Many of the at-risk youth in the study strived to overcome challenges for high school, college, and job opportunities.

Specifically for Children-at-Risk, school may not always be the best way to reach a child, because there is a disconnect between at-risk youth and school. There is a distrust of the school community, because their home community is not self-satisfying for them. Also, the experience

of a child may not allow for real world connections at school during academic situations. Dance education reaches students who may not be motivated in the classroom, because it is giving a child a reason to be engaged in the classroom. If that connection is not made for students in school, students will risk not having any community in which to make that connection (Fiske 11). For Children-at-Risk, the idea is to transform or change the learning environment. It becomes no longer boring, the same, or repetitive, because now the possibility is there for it to be a life changing experience through dance education.

Children are kinesthetic learners as infants and toddlers; movement is how they navigate and find their way into different subjects in school. Adding kinesthetic learning in school allows specifically Children-at-Risk to experience a chance at better grades and social life. Through dance education, teachers are giving children hope that many may have not seen in their life due to their home situation, which may include poverty, abuse and violence. According to the *Evidence Report: A Report on the Impact of Dance in the K-12 Setting*, Children-at-Risk spend their entire school day in a heightened “fight or flight” mode, a natural response to the stresses of their after school lives. As a result, they are often more likely than their peers to be disruptive, violent, and unable to concentrate and learn.” (Bonbright, Bradley, and Dooling 42) James Catterall noted that, “Children-at-Risk benefit from arts-rich experiences in that they earn higher grades, are more likely to graduate from high school and further their education, and become engaged learners and citizens” (Bonbright, Bradley, and Dooling 9). Knowing this, it is imperative to continue adding dance education into the lives of Children-at-Risk, enhancing their educational experiences and their lives.

### Conclusion

This research paper investigated both past and current national studies of how brain/neuroscience research is able to create a better understanding of the use of dance education to enhance overall student learning as related to multiple academic subjects and social skills. The research also informed how the body of knowledge specifically looked at Children-at-Risk, who benefit from dance education being used as a tool of engagement and motivation for academics and positive social experiences.

Dance education is the chance to better public school education for students who need another avenue for being engaged within learning. When auditory, visual, kinesthetic, and sensory-motor skills are used within a classroom setting they allow for students, teachers, parents, and other educators to understand the beauty of dance education. Overall, education in the 21<sup>st</sup> century is changing and needs a new approach; a positive way to keep up with change is to provide the opportunity for all students to experience dance education in K-12 public schools.



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Appendix A:

Annotated Bibliography

Bonbright, Jane, and Karen Bradley. "Evidence: A Report on the Impact of Dance in the K-12 Setting." *Evidence: A Report on the Impact of Dance in the K-12 Setting* (2013): 1-65. Web. 5 July 2016.

*Evidence: A Report on the Impact of Dance in the K-12 Setting* looks at recent articles under different subject areas on how dance impacts learning. These areas include Creative Process, Neuroscience/Brain Research, Student Achievement, Affective Domain, Students Performance, Equity, Cultural and World Dance, and Children-at-risk. Within the articles researched provided insight into multiple evidence of how dance impacts teaching and learning in today's generation.

The purpose for *Evidence: Report on the Impact of Dance in the K-12 Setting*, is to provide different subject areas that describe the importance of dance within the curriculum. These subject areas allow for a broader understanding on the impact on dance in education. The evidence within the report shows the value of research within the subject of dance, to highlight the benefits of arts education, for people looking into Children-at-Risk, Neuroscience/Brain, Cultural, World Dance etc. The benefits include students performing better on standardized testing, watching less TV, participation in community service, and participation within school. For academics, the many articles within the Evidence Report show how dance benefits Reading and Language Skills, Mathematical Skills, Thinking Skills, Social Skills, Motivation to Learn, and Positive School Environment. The report not only looks at the benefits, but also looks at Kinesthetic Learning within each of the different areas presented, Creative Process, Neuroscience/Brain Research, Student Achievement, Affective Domain, Students Performance, Equity, Cultural and World Dance, and Children-at-risk.

The evidence report is a great resource for my research, because it helps for me to understand the ways dance can benefit different subject areas of society. Specifically, the Evidence Report allows for my research to have a specific direction. This direction includes the subjects of Neuroscience/Brain, Children-at-Risk, and Creative Process. These subjects connect to each other because brain function enables an understanding of how dance benefits children-at-risk. Children-at-Risk can benefit from arts education through explaining their feelings and emotions in the Creative Process.

Catterall, James S., Susan A. Dumais, and Gillian Hampden-Thompson. *The Arts and*

*Achievement in At-risk Youth: Findings from Four Longitudinal Studies.* 2012

Web. 14 June 2016

James S. Catterall's report examines the correlation between students and their participation in an arts education programs; which shows positive academic and social outcomes. The report follows students who have received intensive arts exposure, compared to students who have not. The point of this comparison is to fill the gap of knowledge which studies the impact of arts education on a student. To complete this study, the report used four databases, with resources which showed unique strengths and weaknesses in regards to arts involvement, academic progress, and social participation. The study concluded that disadvantaged children who are engaged in arts, show more positive involvement within schools and in their social life, than students who are not involved in the arts. At-risk teenagers and young adults who have an extensive background in the arts exceeded the gains of the general population of students who benefited academically and socially from the arts. Lastly, the study found that the positive outcomes of students socially and academically only happened to the population of students who were at-risk youth or, disadvantaged children.

Catterall offers a basic understanding of at-risk youth, and how arts education allows for positive outcomes socially and academically. The main idea of the study was interesting, because the author's definition of an "at-risk" child, is a child who shows poor outcomes in school performance, health, mental health due to family or life circumstances. Therefore, it was interesting to see that students were able to improve in many of these areas due to the addition of arts education within the school's curriculum, after school opportunity, and/or outside program. This resource would be helpful in the summer research project, because it adds validity to the research. I am researching students within the classroom, who show the positive effects of arts education. I never thought to research "at-risk" students who are affected by arts education. This allows for more research looking at students who are in school, but are more troubled because of other risky situations in a child's life. Many dance teachers can attest to the fact that students tend to share their issues from home, through the use of arts.

Cornett, Claudia E., and Claudia E. Cornett. *Creating Meaning through Literature and the Arts:*

*An Integration Resource for Classroom Teachers.* Upper Saddle River, NJ:

Merrill/Prentice-Hall, 2003. Print.

*Creating Meaning through Literature and the Arts* focuses on the trend of integrating arts education within the curriculum. The overall understanding of this book is for teachers to grasp why it is important to integrate arts education, who is benefiting from the integration and how does it actually work. This book provides evidence that instant integration develops a student's ability to make meaningful connections to other core subjects, themselves, and reality. The book is a model for teachers to start implementing arts learning within the classroom. This form of integration is also meant to integrate culture for students, and readers can see this throughout the different stories in the first 2 chapters, which are about teachers and schools implementing arts learning, seeing the outcomes for the students, and seeing the structure of how arts integration is achieved. The book delves into the philosophies and theories for the support of integration, plan of actions, understanding mission statements for schools etc.

Chapter one of the book explains how a teacher, Judy, implements movement within her literacy and social studies class and how students are able to retain information. It gives meaning to the whole purpose of integration, because naturally students have the ability to connect with something that they prefer to do. In Chapter 2, looking through the eyes of Terry Bennett, helps readers to grasp the strength and the plan of action as to why he would want to integrate arts education within his school. His ability to notice that it benefits creativity, people, and teachers is evidence to the fact that it can work anywhere if it can work within his school.

This book brings a deeper understand for how arts actually benefits students, because the stories throughout the book, can give my research background evidence from people who actually have implemented arts within their curriculum. The book was written 2003, so this is proof that even in the recent past, this was something that was important to teachers and many people, because they saw a correlation in how it benefits their children or students. These stories inspire more research, because I would like to compare and contrast stories from the number of schools that actually implemented arts education between the past and the present.

Gilbert, Anne Green., Bronwen Anne. Gilbert, and Alecia Rossano. *Brain-compatible Dance*

*Education*. Reston, VA: National Dance Association, 2006. Print.

*Brain Compatible Dance Education* describes how adding movement linked to brain function helps students to learn. Movement plays an important role in brain development, because it allows for students and teachers to be engaged in learning. Throughout the book the author uses her experiences and teaching methods as a guide for teachers and students inside and outside of the classroom (in a dance studio). Geared mainly towards dancers and teachers within the dance profession, this book teaches different dance lesson plans starting from the different warm-ups to the end of the dance class. Anne Green Gilbert displays motor and sensory skills, which are able to progress movement behavior within students. In her teaching of the different motor and sensory skills, she relays back to National Dance Standards that are a basis for each class. Throughout all of the chapters the common theme to remember is dance is a powerful art form.

The text breaks down into sections that explain the basic elements of a lesson plan, how the body connects to brain function when dancing, and for teachers how to plan, present, and evaluate brain compatible lessons for dance students. “Gilbert developed “BrainDance”, which is described as breath, tactile, core-distal, head tail, upper lower, body side, cross lateral, and vestibular dance exercises. Dancers of all ages are able to relate to this, because they are taught to embody dance concepts when they see, hear and say the words while describing movement.

This book is a great resource for my research project, because it focuses solely on dancing. It starts with the basics of what dance is and how it comes to be. The eight concepts that create the foundation for dance allow for dance to connect to academics or to reality. The book also looks at dancing through the point of view of teachers, because at the end of the day, they are the ones who have to teach students the basics of connecting dance to other core subjects. The important part of dancing for a child is the ability to connect it to something, or it becomes pointless for

them. This is the same understanding with learning. In a classroom setting, dance adds to understanding material in a completely different way, helping students to retain information.

Hannaford, Carla. *Smart Moves: Why Learning Is Not All in Your Head*. Arlington, VA: Great Ocean, 1995. Print.

*Smart Moves* presents the body's role in thinking and learning. It offers a diverse understanding of why we need to move to promote healthy learning in math, science, and language. Three sections, "Making Connections, Movement, and Moves that Improve", show how study in the arts has the ability to awaken and activate certain parts of the brain, and its mental capacities. The brain has certain compartments that separate sequential thinking, arts, image, emotion, meaning, and feelings. These three chapters tie together why students need this set of connections to understand the world and themselves.

This book provides an understanding of how the brain actually works. When we dance, sing, act, or play an instrument, we do not easily understand why the brain is able to compute a movement or song. In addition to this, we do not easily understand how this can connect to Math, English, or Science. Carla Hannaford, author of *Smart Moves*, breaks down the understanding of the brain, and then connects this specifically to movement. She makes the connection that every number and letter has a movement to it, making it easy for students to understand.

This book is important to the research, because it shows visual images of how the brain and each compartment produces movements, auditory, or kinesthetic learning. Carla Hannaford breaks down how movement actually allows for a child to understand certain academic subjects, which gives proof to the study's belief that dance does influence a student to have positive outcomes within their lives and academics. *Smart Moves*, presents a diverse background for other researchers to understand how movement can help in public schools, and the different steps to take to help promote positive growth.

Jensen, Eric. *Arts With the Brain in Mind*. Alexandria, VA: Association for Supervision and Curriculum Development, 2001. Print

The overall point Eric Jensen makes in this book is that the arts promote learning, because they nourish, as well as provide motor capabilities and thought processing for students. *Arts with the Brain in mind*, breaks down chapters 2-4, which discusses the theories for how musical, visual, and kinesthetic arts promote healthy growth. Healthy growth within this book, is defined as seeing arts reaching student that rarely get reached within a school based setting, being able to connect to each other better, changing the environment to discover new things, challenging students of all levels, connecting students to the real world, and having at-risk students benefit much more from arts education than those in a higher socioeconomic class. Eventually this affects a student's dropout rate, racism, can re-ignite the love in learning within a classroom, and students can find their own place in a class or within society. They can also learn to become self-starters, and lastly, gifted programs has the ability to reach many students.

This book benefits teachers by providing examples of enabling students to learn. One example is that the book discusses kinesthetic arts (Dance, physical education, and movement) having the ability to enhance learning, but specifically enhancing cognition, emotions, and motor skills. Eric Jensen provides proof that kinesthetic arts deserve a strong, place in the curriculum for every single K-12 student. *Arts with the brain in mind* shows that kinesthetic arts keep a student alert and the brain constantly working. Once students are affected in this way, it gives them the opportunity to continue wanting to find new and creative ways to learn.

Eric Jensen's book is a helpful resource to have for my Literature Review, because it addresses that students are able to start realizing their capabilities within the K-5 setting, because this is where they begin to ask questions and analyze. The questions that this books recognizes helps for the questionnaire portion of my research, because it provides a strong foundation for what I would like to ask students and teachers about the role of arts within education. The book discusses a balanced education for students, because they have learned to connect reading skills with movement or mathematical skills with dance through numbers. This type of understanding is exactly what I am looking for in the research project.

Jensen, Eric. *Teaching with the Brain in Mind*. Alexandria, VA: Association for Supervision and Curriculum Development, 1998. Print.

*Teaching With the Brain In Mind* has enabled teachers to apply neurological research to teaching in a classroom. The author of this book, Eric Jensen, applies the basic understanding of how the different parts of the brain affects learning. Within the book, he explores many different topics that shed light on the importance of certain strategies which allow children to learn effectively. One of these topics focuses on "Movement and Learning" holding the idea that lecturing students is not the only way children are able to learn. It looks at the questions: Do dance, theater, recess, and physical education belong in the curriculum? Can we afford to keep them in the budget? Are they frills or fundamentals? What does brain research tell us about body and mind?

One particular chapter within Jensen's book looks at the connection between physical education, movement, and arts and how it strengthens learning, improves memory and retrieval, and enhances learner motivation and morale. To answer the questions, Jensen discusses image techniques, cognitive evidence, functional evidence, and the benefits for special needs learners, and supporting play within students. Overall, this leads to the understanding that there is a strong connection to movement and learning. Movement within schools is a necessity just as "book work" is. Educators should use this when teaching to benefit students.

This books allows for a better understanding of the research. The questions stated within the book are the core of the research. The idea is that even if we cannot afford arts education within the budget, it does not mean that there are no other opportunities for putting arts education in a student's life. Opportunities such as after school programs or outside programs give as much arts education to students as it would if it was in the curriculum. Regarding the question on whether or not it belongs in the curriculum, it does, because it is the opportunity to further a child's life experience as well as further the knowledge and success of teachers and teaching. It gives them



understanding and validation for adding it into the curriculum. Lastly, addressing whether arts education is within school frills or fundamentals, the beauty of arts education is that it is both; it is meant to be fun and to have meaning behind it. The purpose of arts education is to encourage a student's growth through many different avenues.

McMahon, Susan D., Dale S. Rose, and Michaela Parks. "Basic Reading Through Dance

Program: The Impact on First-Grade Students' Basic Reading Skills." *Evaluation*

*Review* 27.1 (2003): 104-25. Web.

This study evaluates the use of an arts based educational program, called, "Basic Reading through Dance." This is a 20 session program that is implemented in curriculum based reading for first grade students. The study takes place in a Chicago public school where a total of 721 first-grade students are used for the study. 328 of the students, from six schools, utilized the program, while 393 students, from nine schools, served as controls. The response of this study showed that the students who took the program, improved significantly in all reading skills more than the control group of students. The reading skills that were assessed in the study were alphabet sounds and separating letter sounds within spoken words.

The text offers an understanding of the innovation of teaching strategies that focus on reading skills through an arts education. The study did a very good job of showing the actual effect of the program and how it raised the students' test scores by 30 points between the time of the pre-test and the post-test. This visual representation of these positive outcomes, meaning the use of their bodies to physically represent the alphabet or a combination of sounds in words, benefited the study to show that the use of dance actually works.

This study benefits my research because it is a study that shows quantitative proof that an arts educational program helped first graders in their reading skills. Something that is informative about this study, is that it shows how arts tackles an academic subject area, which is essentially what the foundation for my research is. The explanation of the actual dancing involved in the research show what teachers in programs like these do when they work with students over a long period of time. This helps with the field experience aspect of research, to gain an understanding of questions that can be asked of students, as well as presenting opportunities to use dance as a learning experience in other academic areas.

Oreck, Barry. "The Artistic and Professional Development of Teachers: A Study of Teachers'

Attitudes toward and Use of the Arts in Teaching." *J Teacher Edu Journal of Teacher*

*Education* 55.1 (2004). 55-69. Web. 14 June 2016

Oreck's study looks at the general population of teachers within the United States, who speak on the use of arts in education and the use of art in their teaching practices. The teachers in this study believe that the arts are important, but many teachers do not use them due to the mandated curriculum. Teachers are placed under intense pressure to teach what is in the curriculum. Many of the teachers in this study are aware of the diversity within the student population and the need for "improved motivation," which can take a form in the arts. It was stated in the research that the arts adds motivation and enjoyment in learning for a student.

The article looks at another side of the use of arts education through a teacher's point of view. It sheds some light onto why some schools do not have arts education embedded within their curriculum. This study shows the need for arts in the educational system, especially when the teachers are able to see that students can be motivated with it. The text delves deeply into the point of view of why teachers want to use the arts within the curriculum.

This article helps in the understanding of the hardships that teachers have encountered because they have no control over the curriculum within the educational system. It also gives an opportunity to understand why and how dance is not implemented in many schools. This allows the research to be different, rather than just blaming the teachers; there is a chance to understand what really goes on within schools, at staff meetings and through professional development.

Ruppert, Sandra. *Critical Evidence: How the ARTS Benefit Student Achievement*. Washington, D.C.: National Assembly of State Arts Agencies in Collaboration with the Arts Education Partnership, 2006. Print.

The National Assembly of State Arts Agencies, begins the article with two basic questions: Why is it so important to keep the arts strong in school? How does study of the arts contribute to student's achievement and success? To answer these two questions, the article looks at academic achievement and a student's success through the understanding of what art can naturally do for any student within or outside of a classroom setting. It also reports on the multiple benefits that are associated with students' learning experiences in the arts.

This article discusses the benefits of arts within education. The two questions that are used to start the study gives a better understanding of why it is important to keep the arts in schools and how the arts actually contribute to achievement and success for a student.

The purpose of this article is to give additional documentation in educational research and the educational benefits, as a resource, along with the other articles within the study. Many of the other articles look at implementing programs and providing opportunities within and outside of schools. The article allows for a better understanding of the reasons why dance provides a better learning experience.

Smith, Alistair. *The Brain's Behind It: New Knowledge About the Brain and Learning*. Stafford: Network Educational, 2002. Print.

*The Brains Behind It* provides evidence on how the brain and learning have a positive correlation. Specifically, this book looks into “Movement, Play, and Learning”. The meaning of “play” is a child's ability to move around and get active. With the idea of “play,” the question Alistair Smith asks is, “How important is play to your child or to the children you teach in your school? The books delves into answering the question, but then asks, “What is the purpose?” Lastly, Alistair Smith, author of the book, looks into the creativity test within three aspects; Affect in Fantasy Task, Alternate Uses Test, and a Storytelling Measure. The purpose of this part of the chapter is to measure a child’s thinking and explore a child's problem solving, showing that a child has the adaptive ability to be creative in cognitive functioning when learning in academic areas through movement and play.

This text analyzes one of the important aspects of a child’s life, which is playing. Children grow up playing, because it is what they learn how to do from birth. Many people believe that playing does not help cognitive growth, but this is where they are wrong. Playing actually benefits a child’s learning and thought processes, because they learn rules which heighten the brain to prepare it for learning. The brain gets a chance to make connections that it needs, but the only way to make these connections is depending on the duration and level of physical stimulation the brain receives from the child. Playing allows the generation of problem solving and affects the thinking.

This book is a great addition to the research, because it takes the most important aspect of a child's life that can comprehended, and uses it to connect activity to learning. It shows that the basic necessity in a child’s life can equate to cognitive growth. It sets the stage to imagine what arts education can do if basic playing benefits a child's opportunity to think and learn. Compared to the other books, Smith gives simple details about how the brain works using the creativity test, which is proof that a child can get attached or adapt to what they are learning in interactive education. This is the basis of the study that can then overlap in different departments of arts education, in a child’s life.

Sousa, David. *How the Arts Develop the Young Brain*. Retrieved June 10, 2013. *The School*

*Administrator*: 10 June 2013. Web

This research is from a neuroscience point of view that confirms that physical activity such as dance or other arts are helpful to brain functions. It focuses on how music has the ability to help certain parts of the brain respond. Drama has the ability to make a human focus on language and emotions, while visual arts excite certain parts of the brain. It focuses on how and when children learn to play, dance, and sing from birth, allowing students to engage all of the senses, which helps with successful learning. The study looks at neurological implications and shows how art activities within a school setting should be continued to enhance motor skills and

the emotional well-being of a student. The study then breaks down the different types of art and connects how neuroscience is connected to each within a school setting.

The study helps with the understanding of why dance is important for the brain. It allows for more cognitive reasoning on dance, music, and theatre and how the brain reacts to the use of each art. The article shows that music is a cognitive skill from the minute we are born, because babies are able to differentiate between two melodies when they are played. This example on how an art can help a student's brain function can apply to dance, theatre and other visual arts.

This study is perfect for this research, because the scientific research shows the relationship between the brain and learning in the arts. This evidence then can relate brain functions to the arts activities involved in a classroom setting.

Stinson, Susan W. "Searching for Evidence: Continuing Issues in Dance Education Research

(2015)." *Embodied Curriculum Theory and Research in Arts Education Landscapes: The*

*Arts, Aesthetics, and Education* (2016): 187-98. Web.

This paper analyzes the value of dance education within the public schools. To do that the paper looks at two groups; National Dance Education Organization (NDEO) and Centre for Educational Research and Innovation (CERI), whose research proves that dance increases benefits within the schools. It looks at both proposals on how these organizations want to implement and fix dance within the public schools. It teeters back and forth on which organization is better and why.

This study helps with understanding of the different programs that are out there to promote dance education. It develops an understanding of the different organizations out there, which actually care about arts education within the different public schools. Each organization stands for something different, and the fact that they care is what makes this paper viable. It shows an understanding of why students can benefit from the arts, and the positive outcomes it can create within their lives.

This article benefits the research, because it identifies organizations that are advocating for dance education. It shows how to extend the research and look for other public organizations with the same or a different message that benefit students within the school districts.

## Appendix B:

## Report of On-Site Visit #1:

Philadelphia High School for Girls Dance Classroom of Dr. Joy Friedlander

June 2, 2016

Upon arriving at Dr. Joy's Friedlander's class in Girls High School, I was excited to finally see dance integrated within the curriculum. Growing up, the only chance that I got to see something like this was in Junior High. Dr. Joy taught two classes which were both mixed level classes (9th-12th), and both classes had to create a dance game for their final. Throughout the course of the year the class focused on the concepts of time, force, body, space, and movement. Within the first class many of the students created games that involved, "Simon says," forming shapes with the body, and mirroring. Many of the students created games that can teach kids to focus on the task at hand; realizing and remembering the names of different body parts; learning to understand one's own body throughout space, whether inside or outside a classroom; and mirroring, helping students to copy social cues and keeping their attention. The games also helped with listening skills.

The second period of Dr. Joy's day focused on games that used vocals throughout a dance. Being able to connect speech to dance helps with the skill of repetition for a visual learner. Another game was flocking, being able to start off in a small flock, and then potentially grow into a bigger group flock. Flocking benefits social communication among a group of people. Communication is used through speech in this sense to get an idea of what movement is happening next. The third game was another type of "Simon says," which incorporates a form of listening and communication that affects a person visually. This game included an abstract nature and discovery of dance. The last game involved communication, in which students had to talk to someone that they didn't really know socially. They each had to tell the other person a story, and then they had to dance it out. Interestingly enough, many of the students connected to deep emotions and feelings within their lives.

After looking at both classes games, I had the chance to ask students questions about dance within their curriculum. Some of girls stated that Dr. Joy's dance class helps with patience in the classroom, coming out of one's comfort zone, creativity, expression, increasing physical and mental strength, and building confidence. I asked the students if they have dance outside of the classroom and many of the girls said, "Yes, but not this kind of dance." They were referring to structured dance as opposed to dance at parties. One girl stated, "We don't eat, breathe, and sleep dance, so we aren't going to come to class and eat, breath, and sleep this." Dr. Joy responded, "you do not eat, breath, and sleep math, science, and history, but you go to those classes and work hard, so why not here?" Overall, the visit to the Philadelphia High School for Girls was a wonderful window into a current dance classroom.

Appendix C:

Report of On-Site Visit #2:

Meeting with Dr. Jane Bonbright Founding Director, National Dance Education Organization  
June 30, 2016

The beginning of the meeting with Dr. Jane Bonbright focused on her background as a dancer for the Radio City Music Hall Ballet and the Metropolitan Opera Ballet. She also discussed her years as a doctoral student when she was mentored by Sarah Hilsendager, the Chair of Temple University's Dance Department. The discussion then transitioned into how NDEO (National Dance Education Organization) was formed. According to Jane, NDEO focused not only on dance as physical education, but on dance as art. Also, dance education should include the processes of Creating, Performing, Responding, and Connecting.

The conversation then led to a discussion of *Evidence: A Report on the Impact of Dance in the K-12 Setting*, a 2013 study that mined information from three sources: DELRdi, a Dance Education Database, having to do with learning in dance; Americans for the Arts records; and the FRSS (Fast Response Survey System), which looked at true trends. NDEO also focused on Standards for Dance Education. States are able to adopt national dance standards, if they choose to, but most decisions are made at the LEA (Local Education Agency).

The next part of the conversation focused on my research and my next steps. The conversation with Jane allowed me to narrow down my research project to focus solely on how dance improves the academic and social aspects of students' lives, particularly regarding Children-at-Risk. Also, my research would investigate how brain research is related to dance education, and why dance education is an important factor in a student's overall education. For my future independent research project, I will focus on observation of Philadelphia and New York dance classrooms. Jane encouraged me to use the DELRdi Data Base, the NDEO Research *Priorities for Dance Education*, and *The Dancing Brain* by Rima Faber and Sandra Minton, when published this fall, 2016, as well as numerous other sources. Overall, my experience with Jane Bonbright was a pleasant and informative one, because I was able to understand more about my intended research.

Appendix D:

Recommendations for Further Study

1. Develop a questionnaire for Philadelphia and New York City Dance Educators that investigates current dance practice in K-12 schools.
2. Observe dance teachers in Philadelphia and New York City dance classrooms.
3. Develop an independent research study that investigates, first hand, the effects of dance education on academic achievement in selected dance classrooms.