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Extending Our Vision

Access to Inclusive Dance Education for People with Visual Impairment

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ABSTRACT Environmental, organizational and attitudinal obstacles continue to prevent people with vision loss from meaningfully engaging in dance education and performance. This article addresses the societal disabilities that handicap access to dance education for the blind. Although much of traditional dance instruction relies upon visual cuing and modeling, evidence suggests that dance can be successfully taught to blind students by integrating verbal and tactile modes of instruction. There is a need for professional development to train teachers in inclusion dance methodologies that specifically address the learning needs of students with vision loss. There is a further need for a significant paradigm shift towards the acceptance of blind people as dance students and performers with full capacity to experience, appreciate and expand the current boundaries of the art form. We surveyed fifteen parents of dance students with vision loss to assess their perceptions of the importance of dance education and the challenges of accessibility. Thematic content analyses indicated that parents perceived benefits in health, socialization, and dance literacy. Parents also perceived a lack of accessibility to dance for students with vision loss. This article provides evidence of successful dance inclusion for the blind. We recommend integration of dance pedagogy specific to the needs of people with visual impairment in the training of our teachers and the teaching of our students. Spotlighted techniques include: somatic approaches, tactile modeling, physical guidance, oral description, and one-to-one partner teaching.

ACCESS TO DANCE EDUCATION FOR THE BLIND

Defining the Disability

The social model of disability identifies three types of barriers that prevent people with disabilities from playing an active part in society: environmental, organizational, and attitudinal (GOV.UK 2015). Researchers note societal disabilities in the provision of dance and physical education for the blind, including limited programming, lack of professional training, and negative attitudes toward people with disabilities (Sherrill, Rainbolt, and Ervin 1984; Skaggs and Hopper 1996; Lieberman, Houston-Wilson, and Kozub 2002). This article offers evidence of the importance of dance education for the blind and problems of accessibility. We present successful inclusion models that have vaulted over social barriers.

Our investigation begins with careful consideration of the language used to refer to people with visual impairment. Many in the blind community reject the universal application of person-first language as in “person with blindness” rather than “blind

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person.” Some believe that this practice brings shame to what should be a source of positive identity and pride (National Federation of the Blind 1993). A Presidential Proclamation declaring equal rights, opportunity, and respect for the blind does not use person-first language in the title Blind Americans Equality Day (The White House 2014). While honoring cultural and political language preferences, we also feel it is important to acknowledge impairment as an “important aspect of people’s lives” (Shakespeare 2013). This article uses person-first and disability-first language in our best efforts to objectively and respectfully address the issue of access to dance for the blind.

According to the World Health Organization (WHO), more than 285 million people in the world are visually impaired. Of this population, 39 million are blind and 246 million have moderate to severe visual impairment (WHO 2014). It is predicted that without extra interventions, these numbers will rise to 75 million blind and 200 million visually impaired by the year 2020 (WHO 2014). As seen in Table 1, WHO defines *blind* as being “totally without sight.” The term *legal blindness*, however, refers to the criteria used to determine eligibility for government disability benefits (American Foundation for the Blind 2008), and does not necessarily correlate to a person’s ability to function (see Tables 2 and 3). This article identifies a range of vision loss as “low to no vision,” signifying performing visual tasks at a reduced level, to being totally without sight.

TABLE 1 Degree of Vision Impairment

Category	Definitions
Low vision, severe	Performs visual tasks at a reduced level
Low vision, profound	Difficulty with gross visual task
Near blind	Vision unreliable
Blind	Totally without sight

Note: Information adapted from World Health Organization (2014).

TABLE 2 Functional Definitions of Visual Impairment

Impairment	Definitions
Loss of visual acuity	Inability of a person to see objects as clearly as a healthy person
Loss of visual field	Inability of an individual to see as wide an area as the average person without moving the eyes or turning the head
Photophobia	Inability to look at light
Diplopia	Double vision
Visual distortion	Distortion of images
Other	Visual perceptual difficulties or any combination of the above features

Note: Information from Mandal (2013).

TABLE 3 Definition of Legal Blindness

Legal blindness	Visual acuity of 20/200 or worse in the better eye with corrective lenses (20/200 means that a person at 20 feet from an eye chart can see what a person with normal vision can see at 200 feet) or Visual field restriction to 20 degrees diameter or less (tunnel vision) in the better eye
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Note: Information adapted from American Foundation for the Blind (2008).

We refer to vision loss and vision impairment interchangeably. Functional and legal definitions of vision impairment only serve as a pale backwash for the brilliant spectrum of human learning styles and capacities on which we can scaffold an expansion of educational practices. Illuminating vision differences draws critical attention to specific needs for accommodation by educators. Evidence of successful engagement and of the multiple benefits derived through appropriate accommodation support a fundamental belief that dance can and should be made accessible to the blind.

Needs for Accessible Dance Education

Individuals with visual impairment face more psychomotor difficulties and challenges than their sighted peers (Skaggs and Hopper 1996). A systematic review of literature identified consistent findings of significantly lower physical fitness and motor performance in people with visual impairment as compared to people with normal vision (Skaggs and Hopper 1996). Individuals with impaired vision displayed lower cardiovascular endurance, muscular endurance, flexibility, and balance. They also exhibited delays in object control, manipulation skills, and play and social skills (Skaggs and Hopper 1996; O’Connell, Lieberman, and Petersen 2006). Researchers suggest several possible explanations for the decreased levels of physical fitness observed in people with visual impairment. Teachers confront barriers to teaching students with disabilities, including limited class time, budget constraints, and absence of adapted equipment. Physical educators also feel unequipped to serve students with disabilities due to lack of training (Lieberman, Houston-Wilson, and Kozub 2002). As a result, many physical educators are unable to provide an appropriate and inclusive curriculum for children with disabilities (Lieberman, Houston-Wilson, and Kozub 2002). Multiple studies note that there is limited availability of adequate public physical education, recreation programs, and facilities for individuals with vision loss (Sherrill, Rainbolt, and Ervin 1984; Skaggs and Hopper 1996; Lieberman, Houston-Wilson, and Kozub 2002). There is also little to no professional training for physical and dance educators in how to teach students with visual impairments (Lieberman, Houston-Wilson,

and Kozub 2002). Prejudice and societal ignorance present further significant obstacles to creating and providing adequate physical education and recreation programming for the blind (Sherrill, Rainbolt, and Ervin 1984). Many people with visual impairment attribute their inability to appreciate arts and sports to a deficit in public accommodation to their needs (Duckett and Pratt 2001; Kleege 2014). Lack of access excludes the blind from many cultural and recreational activities. This prevents people with vision loss from interfacing with others and becoming actively involved with the world (Sherrill, Rainbolt and Ervin 1984; Lieberman, Houston-Wilson, and Kozub 2002). The negative impact affects both physical fitness and social interaction, resulting in a lower quality of life.

To enhance their access to physical and creative activities, some dance programs for the blind have integrated pedagogical techniques that have proven effective in physical education (Paxton and Kilcoyne 1993; Seham 2013). These techniques include tactile modeling, physical guidance, oral description, and one-to-one partner teaching (Seham 2013). To better evaluate the effects of dance education and problems of accessibility, we surveyed parents of blind dance students enrolled in the National Dance Institute (NDI) program at Lighthouse Guild International in New York City.

CARETAKERS' PERCEPTION OF DANCE EDUCATION

Program Description

NDI in partnership with Lighthouse Guild International provides weekly 45-minute dance classes for children and youth with visual impairment. The program runs for 28 weeks of the school year and includes a midyear presentation and an end-of-year culminating event. In these events, students perform for an audience of predominantly family and friends. At the time of our parent survey, the program offered two classes, one for younger students, ages 8 to 12 and one for teens and youth, ages 12 to 21. The first author of this study serves as a dance instructor in this program that incorporates several dance education techniques—somatic approaches, tactile modeling, and physical guidance—to teach dance and accommodate the specific learning styles of the students (Seham 2013). Each of the participating blind students dances with a sighted peer partner. Partners help facilitate learning through physical modeling and verbal description under the guidance of the lead teacher. The lead teacher conducts group and individual instruction and supervises the work of the peer partnerships during periods of dyadic learning and practice (Seham 2013).

Data Collection

We distributed to the parents of 22 students enrolled in the program, two survey questionnaires. The first questionnaire

inquired about the observed effects of dance on their children and the perceived availability of dance education for students with visual impairment. Parents were asked to freely respond to questions such as these:

1. What do you think your child needs the most from a dance program?
2. How do you think the dance program at the Lighthouse affected your child's experience of dance?
3. Did you observe any effects on other aspects of his or her life; that is, physical and emotional health?
4. Can you recall any part of the dance program that was particularly helpful? If so, how did it help?
5. What does your child say is the favorite part of dance class?
6. How difficult or easy was it for you to find a suitable dance program for your child?

The second questionnaire consisted of five yes or no questions asking about their experience of finding a dance program for their children:

1. Did your child take dance classes before participating in the Lighthouse dance program?
2. Did you try to find dance classes for your child prior to participating in this program?
3. If yes, were you able to find a dance class or activity that addressed the needs of a child with visual impairment?
4. Has your child been excluded from physical activity or dance because of his or her visual impairment?
5. Do you know of other dance programs or classes that include students with visual impairment?

At the time of the survey, families resided in the five boroughs of New York City and northern and central New Jersey. Thirteen of the students were female and nine were male. A parent volunteer and an administrative assistant of the music school distributed the questionnaires to parents during lunch or student pick-up and drop-off periods. Fifteen parents completed and returned both questionnaires.

Results

We conducted a thematic content analysis on the results obtained from the first essay-style questionnaire. In accordance with deductive approaches (Burnard et al. 2008), we structured thematic categories based on our research interest and findings from past literature. We then identified parental responses that supported the content of predetermined thematic categories. Table 4 illustrates the findings from our qualitative analysis. As for the second yes or no questionnaire, we calculated the ratio of yes and no answers per each question. The results are presented in Table 5.

TABLE 4 Thematic Content Analyses of Parents' Responses to the Dance Program

I. Importance of dance education	
1. Physical benefits	"My son had very poor posture. He also had a way of walking where he would slant to one side. The other day I noticed him walking with a nice even stride that seemed very natural."
Coordination/control	
Balance	
Body awareness	"He has been able to be more in-tune with his body—sort of learn his body better."
Increased physical activity	"Dance allows him to be physical and move to music, which he also loves."
Freedom of movement	"He is more active, happy, and has lost weight in his stomach."
2. Psychological benefits	"Became more confident in expressing self."
Happiness	"Emotionally, she feels well-treated, and her self-esteem is better."
Improved self-value	"My son is more motivated now. He has better motivation." "My son is very proud of the fact that he is enrolled in a dance class. Many people would not see this as a possibility but he has been able to accomplish this and feels proud of it."
3. Social/interpersonal benefits	"Found ways of socializing and working as a group and has used these methods with peers to educate them on how things are done differently in her learning environment."
Inclusion	
Friendship	
Social support	"Cooperation and friendship with her dance partner." "He was recently invited to a Sweet 16. He had no hesitation going on the dance floor with the rest of his friends. This is a great accomplishment in inclusion."
4. Dance literacy	"It's helped her have a better background and understanding of dance. Instead of just 'futzing around,' there's actual choreography." "Freedom and the energy of music put together with body movements."
II. Lack of access	
1. Lack of programs	"[A suitable dance program for my child] is very difficult to find. I have looked, and not found anything."
2. Lack of accommodations and teacher training	"Many programs are afraid to have a blind student (student who is blind) in their class. They cannot even imagine the possibility of teaching dance to someone that is blind."

TABLE 5 Accessibility of Dance Programs for Students with Visual Impairment

Questions	Yes	No
Did your child take dance classes before participating in the Lighthouse (LH)/National Dance Institute (NDI) dance program? ^a	14.3%	85.7%
Did you try to find dance classes for your child prior to the LH/NDI program?	53.3%	46.7%
If yes, were you able to find a dance class or activity that addressed the needs of a child with visual impairment? ^b	12.5%	87.5%
Has your child been excluded from physical activity or dance because of visual impairment?	60.0%	40.0%
Do you know of other dance programs or classes that include students with visual impairment?	13.3%	86.7%

Note: A total of 15 parents participated in this questionnaire.

^aOne parent did not know the answer, so only 14 responses were counted.

^bOnly 8 parents who answered "yes" on Question 2 responded to this question.

Discussion

Benefits of Dance Participation

Parents reported that the dance program helped their children improve their posture, coordination, and balance. With increased physical activity and freedom to move, some

students lost weight and became more comfortable with their bodies (see Table 4). Literature on the benefits of physical education and dance movement therapy describes similar findings. Physical education incorporating dance instruction serves an important function for people with disability in developing spatial awareness, motor skills, and

muscular coordination (Reber and Sherrill 1981; Chin 1984; Ritter and Low 1996; O'Connell, Lieberman, and Petersen 2006). Dance also serves as a medium for communication and human connection with the potential to significantly increase interpersonal skills.

Most of the parents who completed our survey reported that their children became more confident, motivated, and expressive. Improved self-values enabled the youth to perform better in other areas of their lives, such as in schools, friendships, and extracurricular activities. The students enjoyed dancing and were more willing to try other sports. The group choreography and dyadic dance activities with sighted peer partners contributed to positive psychological and psychosocial outcomes. Parents reported gains in social interaction both in and outside of the dance studio, describing their children as more outgoing, sociable, and cooperative. Through the dance program uniquely adapted for their physical abilities, the participating students with visual impairment gained a vocabulary to conceptualize, integrate, and execute complex dance choreography. This vocabulary also enables them to build on dance skills learned and continue to dance with greater confidence in their movement and self-presentation.

Parent reports on the physical, psychological, and social effects of participation in this dance program reflect literature findings on the benefits of dance and sport participation. Structured, interactive movement activity enhances physical health, motor skills, creative thinking, and the emotional and behavioral development of children with visual impairment (Reber and Sherrill 1981; Barati et al. 2014). People with visual impairment too frequently face exclusion from the social interaction afforded by structured group activities that involve physical participation (Ophir-Cohen et al. 2005). The blind should not be denied access to the multitude of benefits our culture deems essential for a good quality of life, so many of which can be derived from dance (O'Connell, Lieberman, and Petersen 2006).

Accessibility of Dance Education

Parents unequivocally reported that dance education was hardly accessible for their children with vision impairment. Most of them (86.7%) did not know of any dance program other than the one provided by the Lighthouse that included students with visual impairment. Over half of the parents tried to look for a dance class for their children prior to participating in this program; however, the vast majority of them (87.5%) failed to find a class that served the needs of students with visual impairment. Not only was it difficult to find a suitable dance class or activity, but many programs that exist seemed unprepared to accommodate students who are blind. The results of the survey indicate the need to make dance education more inclusive of and accessible to students with visual impairment.

INCLUSIVE DANCE EDUCATION AND PERFORMANCE

Dance Pioneers Teaching the Blind

Dance education pioneers Alvin Ailey, Martha Graham, and Jacques d'Amboise each tackled societal disabilities, successfully communicating his or her distinct artistry and pedagogy to blind students. In 1982, Ailey partnered with The Kennedy Center for the Performing Arts Very Special Arts (VSA) to teach teenagers with visual impairment (Dunning 1982): "I thought it would be wonderful to teach blind children . . . give them a sense of space, of self-worth, of their place in the world and of conquering the instrument of their own bodies" (Dunning 1982). At a workshop in 1986, Ailey instructor Wendy Amos described the teaching pedagogy: "While the dance techniques are the same my verbal instructions have to be very clear and physical contact is very important. In other classes I say, 'Follow me,' or 'Look into the mirror.' Here, we use touch," showing how a quick stroke on the back indicates to a blind dancer how to adjust posture (Armstrong 1986). Martha Graham's reciprocal teaching relationship with Helen Keller was recorded in documentary film footage titled (Helen Keller Visits Martha Graham's Dance Studio). Graham taught Keller choreography. Keller endowed Graham with an even greater appreciation of the emotional impact of somatic expression. Graham guided Keller through a rehearsal, holding her close so she could feel the movement and music. "(Helen) could not see the dance," Graham marveled, "but was able to allow its vibrations to leave the floor and enter her body" (Popova 2012). She helped Keller run her hands across the body of dancer Merce Cunningham so she could experience a jump and other intricacies of movement and position (Popova 2012). Former New York City Ballet principal dancer Jacques d'Amboise founded NDI in 1976 with "the belief that the arts have a unique power to engage and motivate individuals towards excellence" (NDI 2006). In 1989, d'Amboise extended his inclusive dance pedagogy to blind children through a partnership with Lighthouse International (now Lighthouse Guild International) (Lighthouse Guild International 2014). "They're going to be able to come across the stage and not be afraid," d'Amboise declared in a *New York Times* interview (*New York Times* 1989). NDI instructor Lori Klinger explained, "The students are working on 'muscle memory' in which certain body movements become instinctive. You can't ask them to watch what I do and copy" (*New York Times* 1989). Each of these master teachers learned that teaching students with visual impairment required an expansion of dance education techniques. Integrating physical guidance, tactile modeling, descriptive verbal instruction, and concept development with a passionate commitment to dance artistry, these educators surmounted social barriers and taught the blind to dance.

In Practice

Alicia Alonso, founder of the Ballet Nacional de Cuba and prima ballerina with American Ballet Theater, danced the performances for which she is most famous while partially blind (Pinto-Duschinsky 2012; Zar 2014). Dancer Brylenn Rakes, also legally blind, gained international acclaim performing on network television's *Dancing with the Stars* (Zar 2014). Born with cone dystrophy, an inability of the eyes to filter light, and nystagmus ("dancing eyes"), a constant eye shaking, Rakes was unable to see to spot a turn and could not use the studio mirrors to check body positions. She relied on proprioception, core strength, and meticulous partner communication (Zar 2014).

Author Georgina Kleege continued to dance after being diagnosed with macular degeneration at age 11. The macular degeneration caused progressive deterioration and eventual loss of central vision (Kleege 2014). Kleege contended that choreography does not always require or allow a dancer to look where she is going. Moreover, it is unnecessary or even detrimental in learning dance to constantly look at oneself in the mirror, at one's own feet, or at other students (Kleege 2014). She believed that her dance training was successful and beneficial because it gave her the physical confidence to move around without having to see. Kleege asserted that dance is not a visual art, but a kind of art that is felt through kinesthetic empathy that even nondancers experience, possibly through mirror neural systems (Kleege 2014). She described her experience of a group dance exercise in which a dance was meant to be experienced through touch. As she danced, Kleege "felt [her] brain actively interpreting . . . the form of individual gestures [with the skin and other parts of her body,] while anticipating the duration and sequence of each movement" (Kleege 2014). She was attempting to learn the rules of the dance through touch. At the same time, she was studying the movements of her partner and "peripherally aware of what was going on around [her] among other [dancers]" (Kleege 2014). Alonso, Rakes, and Kleege occupy important places along the spectrum of dance achievement.

At the other end of the spectrum, as a beginning student and dance spectator, Helen Keller connected emotional experience to her physical contact with dance. Keller kinesiologically learned and then interpreted what "jumping" meant on a visit to Martha Graham's rehearsal:

"Martha, what is jumping?" says Helen Keller, "I don't understand." Graham is touched by this simple question. She asks a member of her company, Merce Cunningham, to stand at the barre. She approaches him from behind, says, "Merce, be very careful, I'm putting Helen's hands on your body," and places Helen Keller's hands on his waist. Cunningham cannot see Keller, but feels her two hands around his waist, 'like bird wings, so soft.' Everyone in the studio stands quite still, focusing on what is happening. Cunningham jumps in the air while Keller's hands rise up with his body. "Her hands rose and fell as Merce did," recalls Martha Graham, in extreme old age. "Her expression changed from curiosity to one of joy. You could see

the enthusiasm rise in her face as she threw her arms in the air." Cunningham continues to perform small leaps, with very straight legs. He suddenly feels Keller's fingers, still touching his waist, and begins to move slightly, "as though fluttering." For the first time in her life, she is experiencing dance. "Oh, how wonderful! How like thought! How like the mind it is!" she exclaims when he stops. (Popova 2012)

Keller's interpretation of the dance experience was uniquely her own. We can only guess what she meant by it being "like thought," and "like the mind," marveling as she allows us into the cognitive processing of this moment. Her emotional connection to dance is universally understood. Dancer Tadej Brdnik continues to teach Graham technique to the blind. He declared, "[V]isual impairment is 'absolutely not' an impediment to the ability to dance. . . . Being able to see is only one way to experience this world" (Halvorson 2014). Many like Brdnik have reached this conclusion despite prevailing barriers to dance inclusion.

Although few in number, there are dance companies around the world that provide training and performance opportunities specific to the needs of people with visual impairment including Touchdown Dance (Touchdown Dance 2015) in the United Kingdom and the United States, and The Association of Ballet and Arts for the Blind (ABAB) in Sao Paulo, Brazil (Associacao Fernanda Bianchini 2012). Collaborations between nationally funded organizations for the blind and professional dance companies also serve to provide access to dance education and performance. These include the Canadian National Institute for the Blind and DZouk Productions in Toronto, Canada (Vision Dance 2014), Association for India (AID) and Articulate Ability, India (Association for India 2014), and Greater London Fund for the Blind and Extant in London, England (Extant, UK 2014). Other resources exist, like the program at the Lighthouse, but as the Lighthouse parents tell us, access is scarce and needs improvement.

MOVEMENT PEDAGOGY

The field of dance education has produced important resources with essential techniques for teaching people who are differently-abled (Whatley 2007; Davies 2008; Cone and Cone 2012; Tomasic 2014). Many writers include visual impairment in a spectrum of disability, but most do not emphasize the very specific needs of nonvisual learners nor comprehensively provide methodology for addressing these needs. For further documentation of essential teaching techniques for dance educators, we turn to studies in physical education.

Movement researchers emphasize the importance of pedagogical techniques such as tactile modeling, physical demonstration, and oral description to improve the motor skills of students who are visually impaired (Lieberman and Cowart 1996; Downing and Chen 2003). Modeling is a process in which observers attempt to reproduce the

actions that another person performs. Tactile modeling involves the learner touching a model to reproduce or understand the actions, as in Merce Cunningham's modeling for Helen Keller. Although instructions might be given verbally, modeling increases understanding, providing depth and nuance to what an individual needs to do to replicate the movement. In dance, it adds an important layer of somatic understanding about how a movement or posture feels and is performed. Once a skill is somatically understood, children with visual impairments have a mental picture and generally know what to do. All dancers rely on muscle memory to recall and perform movement from a simple plié to the most complex choreography. When teaching the blind, however, the initial concept of each step, pose, position, or movement must be conveyed without reliance on visual cues.

Physical demonstration for students who are blind means that the instructor must facilitate learning by guiding the student's body or using tactile modeling to teach movement skills. Physical demonstration techniques are used along with verbal prompts, descriptions, and feedback that fit the level of the student's receptive language (O'Connell, Lieberman, and Petersen 2006). Barati et al. (2014) discussed the importance of specialized methods of verbal communication for teaching physical education and sports to children with visual impairments. Auditory information serves a compensatory function for people who cannot receive visual information. The cognitive development of children with visual impairment depends greatly on the auditory input. Optimal motor functioning relies on the quality of verbal instruction (Barati et al. 2014). Because research has shown children with visual impairments to be as competent as their sighted peers in the processing of auditory imagery, physical education programs should actively use auditory imagery to improve motivation, movement, and mobility of children with vision loss (Barati et al. 2014). The techniques described require training, practice, and, preferably, a learning environment in which every student receives the individual attention necessary to serve his or her needs. Peer partnering provides visually impaired students with a sighted partner who can facilitate necessary individual attention. This allows a lead teacher to facilitate group learning, maximizing opportunities for tactile modeling, physical guidance, and specialized verbal instruction between partners (Seham 2013). Although dance partners do not necessarily need to be same-age peers, there is an additional benefit of social connection when this model is used. The societal disabilities denying access to dance for the blind include limited training for dance educators wanting to teach people with visual impairment. This can be daunting and discouraging, but resources exist that can ground a dance educator in essential, baseline information.

Educators should start by using the Expanded Core Curriculum (ECC), a web resource that includes information on current educational guidelines for academic instruction to the visually impaired (American Foundation for the Blind [AFB] n.d.). The ECC is "the body of knowledge

and skills that are needed by students with visual impairments due to their unique disability-specific needs" (AFB n.d.). Students with visual impairment need the ECC in addition to the core academic curriculum of general education. The ECC should be used as a framework for assessing students, planning individual goals, and providing instruction whether it is academic instruction or dance and physical education.

Somatic Approaches and Oral Description

Somatic education methods such as Alexander technique, body-mind centering, Laban/Bartenieff, and Feldenkrais Method® provide further valuable resources for dance inclusion teaching and practice. Somatic dance education deemphasizes reliance on repeated visual cuing and brings mindful attention to internal sensory input. Movement awareness exercises based on these approaches provide students with sensorimotor experiences that can be stored, transferred, and applied to dance learning and performance (Fortin, Long, and Lord 2002). One example is the Feldenkrais Method transition to standing exercise in which students focus on the "sensation of verticality" and transfer the kinesthetic memories to movements associated with standing and traveling (Fortin, Long, and Lord 2002). The sensorimotor experiences acquired in this exercise are further practiced and adapted in other areas of somatic education. Such somatic practices offer students with visual impairment opportunities to conceptualize and perceive dance through kinesthetic sensorimotor experiences. Through such exercises, students enhance awareness of their internal bodily processes and sensory feedback, developing psychophysical abilities to produce coordinated actions (Brodie and Lobel 2004; Batson and Schwartz 2007). Eventually students master the dance moves and sequences by attending to their senses and re-creating the sensation of movement. Although these methods have not been empirically studied nor specifically designed for people with visual impairment, somatic pedagogy presents viable, nonvisual movement communication strategies compatible with the learning needs of blind students. Glenna Batson and Ray Eliot Schwartz (2007) noted the reliance of classic Western forms of dance on "visual modeling to elucidate and communicate shape and ideal body patterning," whereas "somatics tends more readily to embrace the use of . . . haptic, kinesthetic and proprioceptive experience in defining form" (Batson and Schwartz 2007, 48). Another reason why somatic education might be useful for teaching this specific population is that many of its lessons can be delivered verbally. Not only can instructors verbally present the tasks, but they can also demonstrate learning goals in words by describing sensations to be felt during execution of the tasks (Fortin, Long, and Lord 2002).

Frequent repetition of oral instruction is an unfamiliar skill for educators new to teaching people with visual impairment. Without the ability to self-correct by using a studio mirror or by mimicking the teacher and other

students, more oral corrections by the teacher are necessary to remind students of new postures and positions (Seham 2013). Like all dancers, people with visual impairment will build muscle memory and maintain postures, but unlike other dancers, they will likely need to strengthen muscles that have been weakened by common movement accommodations to blindness. People with vision loss, for example, do not site the horizon while walking, tending instead to tilt their chin downward, especially if using a cane or guide dog. This compromises neck and upper back muscles that must be taught to maintain new postural control. Many with vision loss also lose a natural lateral arm swing and experience rigidity in their limbs. The mere lack of opportunity to move freely and exclusion from most general exercise opportunities also leads to limited mobility. However, much of this can be restored with dance practice. All good dance students know that mastery of position, posture, and any dance movement requires repetition and practice. For the blind, this repetition creates internalized dance concepts that serve a purpose beyond performance and artistry. Repetition provides somatic reminders of healthy stride, posture, and everyday movement, positively affecting general health and quality of life. One of our parents noted her son “had very poor posture” and walked slanting to one side (see Table 4). She attributed correction of these issues to his dance participation. Despite barriers to access, we have evidence of successful inclusion of the blind at every level of dance training.

CONCLUSION

Our survey of parents emphasizes the importance of dance education for students with visual impairment. Many of the youth enrolled in our dance program experienced improvement in their physical and psychological health and social and academic performance. Despite the numerous benefits that dancing can have for the blind, having vision loss remains a significant disadvantage for the population seeking access to dance education and performance (Duckett and Pratt 2001; Kleege 2014). Our investigation reveals societal disabilities that restrict access to dance for people with visual impairment. A majority of parents reported that it was extremely difficult to locate an appropriate dance program for their blind children. Their responses are in line with past studies that unanimously concluded physical and recreational activities were rarely inclusive of persons with vision loss. Although dance educators are beginning to address many of these societal disabilities, there is still much to contribute if we are to fully realize dance inclusion for people with visual impairment.

Kinesthetic approaches for learning and teaching dance to the blind are essential. Existing pedagogy provides several techniques, such as tactile modeling and physical guidance that should accompany descriptive verbal instruction and concept development. We need to increase research efforts to investigate effectiveness of these techniques and to further

illuminate the impact of dance education on blind students. We also should study the impact of peer partnering on the sighted member of the partnership, as anecdotal evidence describes positive and transformative experiences derived from dancing with and learning from a blind partner (Seham 2013). Expanding best practices in dance education requires increased attention to the training of our teachers in pedagogy that will make dance accessible to the blind. As artists and teachers we are divinely equipped to further human rights action and include all people in dance learning.

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