

VANCOUVER ISLAND UNIVERSITY

DANCE MOVEMENT, ATTENTION AND IMPULSE CONTROL IN A FRENCH
IMMERSION CLASSROOM

By

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Abstract

The purpose of this study was to investigate the effect of dance movement as an intervention for students with issues with attention and focus in academic work, with the potential of supporting students with Attention Deficit Hyperactivity Disorder, Fetal Alcohol Syndrome Disorder or Autism with these needs. I used an Action Research approach to answer the question: How can I improve my support for students who have difficulties controlling impulses and sustaining attention by implementing dance instruction in my French Immersion classroom? The population of the study was 11 students from my grade 4/5 class who consented to participate in the study. The study consisted of a 5-week program, during which students were required to dance for 10 minutes after working on a subject for 40 minutes. In order to compare on- and off-task behaviors after each intervention, I recorded students' behaviors using an observation chart. Other data instrumentations included: survey, student reflection entries and researcher journal. Findings include observed increases in attention and engagement for students who took part in the study.

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CHAPTER ONE: INTRODUCTION

Hannaford's (1995) study found the following:

The more closely we consider the elaborate interplay of brain and body, the more clearly one compelling theme emerges: movement is essential to learning. Movement awakens and activates many of our mental capacities. Movement integrates and anchors new information and experience into our neural networks. (p. 96)

Learning

Learning is defined as “an active process of acquiring and retaining knowledge so it can be applied in future situations” (Sousa, 2007, p.31). Attention is the first task in the learning process. According to Levine (2002), “We cannot understand, learn or remember that which we do not first attend to.” Students have to choose to focus voluntarily on the tasks at hand and to be curious about what will come next. For example, when my students participate in classroom discussions, I know that they are attending to the task. They ask me questions or make comments about particular statements that were raised during the discussion. This process is defined as active attention, which Gaddes (1994) describes as “alertness, concentration, interest and needs such as curiosity and hunger.” Learning also requires controlling certain behaviours that can impede a task. Students need to regulate their emotions to be alert. Such impulse control requires students to be able to manage “the tendency to act on a whim, displaying behaviour characterized by little or no forethought, reflection, or consideration of consequences” (Sousa, 2007, p. 48). When students who have challenges disturb other students instead of focusing on the task that means they may not learn the information being taught.

Statement of Problem

The desire to make a difference in children's lives has always been my personal goal. After moving from Quebec to British Columbia, I was given the opportunity to work as an Educational Assistant. I gladly accepted that job, which led me to work with students with Special Needs for seventeen years. For me, this is where my interest in special education started.

My assignment required assisting students with behavioural, social and emotional issues. I noticed that many students who were diagnosed with Attention Hyperactivity Disorder, Fetal Alcohol Syndrome Disorder and Autism had commonalities in their behaviour; they could not focus on a task for an extended period of time and they often had difficulties controlling their impulses. Due to their distractibility, they often missed important concepts being taught throughout the day. As a result, their self-confidence was negatively affected.

Students who lack self-confidence in their ability to learn can find it difficult to become successful in school. According to Bandura (1994), self-efficacy is "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations." In other words, self-efficacy is a person's belief in his or her ability to succeed in a particular situation. Bandura described these beliefs as determinants of how people think, behave, and feel (1994). The social cognitive theory by Bandura explains how people acquire and maintain certain behavioural patterns, while also providing the basis for intervention strategies (Bandura, 1997). His theory added a social element, arguing that people can learn new information and behaviors by watching other people. Known as observational learning (or modeling), this type of learning can be used to explain a wide variety of behaviors. Bandura (1977) states: "Learning would be exceedingly laborious, not to mention hazardous, if people

had to rely solely on the effects of their own actions to inform them what to do (p.22). He also adds “people possess self-reflective capabilities that enable them to exercise some control over their thoughts, feelings, motivation, and actions” (Bandura, 1986). It is clear that Bandura’s social cognitive theory provides a good understanding on social aspects and learning.

While working as an Educational Assistant, I decided to begin my degree in education. After many years of studying, I finally achieved my personal goal of becoming a teacher. Thus, my past experiences as an Educational Assistant and my new knowledge as a teacher broadened my understanding of students with exceptionalities. In my six years of practice, I have noticed an increase in the number of students who struggle with attention and impulse control issues, which are becoming a significant problem for learning. In fact, the link between the rise of technologies and the decrease of play is well illustrated by University of Pennsylvania play expert Sutton-Smith. According to Sutton-Smith, “American children's freedom for freewheeling play once took place in rural fields and city streets, using equipment of their own making. Today, play is increasingly confined to back yards, basements, playrooms and bedrooms, and derives much of its content from video games, television dramas, and Saturday morning cartoons” (as cited in Hansen, 1998, p.25). While there are a range of opinions as to the causes of ADHD, there is a strong consensus among doctors and experts that an excessive amount of electronic media can exacerbate the ADHD behaviors in children. Research conducted by the National Institute of Mental Health concluded “extensive exposure to television and video games may promote development of brain systems that scan and shift attention at the expense of those that focus attention” (Jensen, et al., 1997, p.1672-1679). One aspect of electronic use is physical inactivity, and a reliance on the media for imaginative engagement. Perhaps as well as the

content of television, the inactivity and passive intake of information contributes to attention issues.

Special Education Context

Students with exceptionalities are classified as having specific learning problems, including speech, reading, mathematics, writing, and emotional and behavioural disorders. They are enrolled in special programs or classified for special education in order to meet their various needs. Many researchers in the field of Special Education recognize the challenges that regular classroom teachers have to face when meeting the needs of students with learning or behaviour issues. That is why some students with persistent needs require learning or behaviour plans to meet their various challenges. The nature of their difficulties often varies from maintaining focus, acquiring language, becoming socially engaged, learning to control impulsivity (Sousa, 2007, p.49). For instance, many students who have Attention Deficit Hyperactivity Disorder, Fetal Alcohol Syndrome Disorder and Autism disorder often display impulsivity. According to Maté (2006), “The second nearly ubiquitous characteristic of ADD is impulsiveness of word or deed, with poorly controlled emotional reactivity”(p.15). Attention-Deficit hyperactivity (ADHD) is “a syndrome that interferes with an individual’s capacity to regulate activity level, inhibit behaviour, and attend to tasks in developmentally appropriate ways” (Sousa, 2007, p.208). Educators need to learn strategies to help students with those deficits to function better in school.

Movement and Learning

Considerable attention and study have gone into the use of the arts to enrich the academic curriculum, including dance. A few months ago, a group of African dancers were invited to perform for the French Immersion classes at the school I have worked at for the past four years. The dancers started their performance by giving an overview of their traditional dances and explaining why certain movements were incorporated in them. After demonstrating a few steps, the African dancers invited all students to practice the same steps and put them into a sequence. As I was watching my class trying to memorize the sequence, I started noticing that students who had behaviour and attention deficit appeared to be more in control of their bodies. They also appeared to be calmer. By the end of the performance, I knew that dance could be an interesting subject to explore.

Evidence from several studies indicates that dance movement can improve academic performance and reduce disruptive classroom and social problem behaviours (Barkley, 2004; Majorek, Tuchelman, & Heusser, 2004). According to Gronlund, Renck and Weibull (2005), “there is a strong relationship between motor-perception dysfunction and Attention-Deficit Hyperactivity Disorder, which is why a movement intervention, such as Dance/Movement Therapy, could serve as an appropriate treatment method” (p. 63). In Dance/Movement Therapy practice, movement is used to foster social interactions and expression of feelings as well as to gain a sense of self-control (Koshland, Wilson, Wittaker, 2004). Moreover, children with autism need multiple types of stimulation in order to process information. Harshorn, et al. (2001) discussed the positive relationship between creative movement therapy and increased attentive behaviors with children who have autism. Susan Moffitt (2011) writes, “The combination of

music and dance help the brain to reorganize itself. In dance, the child processes music, learns movement, performs movement to that music, and then repeats it multiple times. The hearing, listening, processing, executing and repetition enable a child's brain to forge new pathways, engaging both the right and left side of the brain." I believe that integrating dance movement during classroom transitions, lessons, recess and gym may have a positive effect on all students including students with special needs.

Personal context

I use movement in my class as a medium that can help students to refocus when they become restless. That is why I have incorporated brain gym movements in my teaching practice. I do it throughout the day in order to give my students a chance to get up and stretch. I enjoy watching them while they are trying to follow my collateral movements. Drawing on my experience using bodily movement in class, I think that dance could fit in my teaching practice.

Overview of Study

In order to explore the inclusion of movement in my practice, I conducted an action research study. Most students are able to modulate their emotions in response to internal and external stimuli. In my research, I focused on impulse control and attention in hopes of better supporting students with exceptionalities. My research question was:

How can I improve my support for students who have difficulties controlling impulses and sustaining attention by implementing dance instruction in my French Immersion classroom?

My study was conducted as action research where I tried different strategies and assessed their effects as part of my own practice. I recorded these activities that I tried and reflected on their results in a research journal. I also recruited some class members to be participants to give me feedback on their impressions of the effect of dance on their attention and ability to learn.

I believe that this study on dance movements benefitted students who have attention deficit and control issues and it enhanced my teaching practice. My hope is that the knowledge created in this study will offer useful ideas and strategies for implementing dance movement with a focus on attention.

Chapter Two: LITERATURE REVIEW

The focus of this chapter is to investigate the value of movement and the arts for enhancing self-regulation and thus attention for students with exceptionalities. This literature review examines inclusion, information about ADHD, FASD and ASD in relation to attention disabilities, movement, dance/movement therapy, development theory, arts, kinaesthetic learners, self-regulation and rhythm.

Inclusion

Evidence from many studies indicates that inclusive education has many benefits for students with exceptionalities. The literature concerning special needs in general education classrooms has been extensively reviewed in two papers by Katz & Mirenda (2002a, 2002b). In terms of educational benefits for students with special needs, “they found positive effects for inclusive settings compared to separate provision, with more engaged behaviour leading to improved gains seen in inclusive rather than separate settings” (p. 242). Katz and Mirenda (2002) also found no evidence that students without special needs were impacted negatively by the inclusion of students with special needs. Not only does inclusive education for children with disabilities bring improved academic functioning (Manset & Semmel, 1997; Sideridis et al., 1997), but it also offers students with special needs the opportunity for socialization with their peers without disabilities in general education classrooms (Giangreco, Dennis, Cloninger, Edelman, & Shattman, 1993; National Center for Educational Restructuring and Inclusion, 1994).

While the inclusion of students with special needs reveals many benefits regarding academic functioning and socialization, it can be challenging for teachers to meet the various needs of those students. Stanovich and Jordan (2002) argue “that many teachers who are currently teaching in such (inclusive) classrooms have not been prepared to meet the challenges they face on a daily basis” (p. 173). For instance, students who are diagnosed with Attention Deficit Hyperactivity disorder, Fetal Alcohol Syndrome Disorder and Autism have many challenges in classrooms. They can be easily distracted and often need to have their attention redirected. Such inattention, hyperactivity and impulsivity also make it difficult for those students to focus their attention well enough and long enough to learn. Several studies have been conducted in recent years highlighting various strategies and interventions for students with exceptionalities. According to Wehmeyer (2002), "The National Association for the Education of Young Children (NAEYC) defined developmentally appropriate practice as applying to educational programs that provide instruction and learning activities consistent with a child's developmental needs and that focus on child-initiated, child-directed, and teacher-supported activities" (p. 89).

Exceptionalities

Attention deficit hyperactivity disorder (ADHD) is one of the most common childhood brain disorders and can continue through adolescence and adulthood. According to Sousa (2007), “ADHD is a syndrome that interferes with an individual’s ability to focus (inattention), regulate activity level (hyperactivity), and inhibit behaviour (impulsivity)” (Sousa, 2007, p. 49). These symptoms can make it difficult for a child with ADHD to succeed in school, get along with other children or adults, or finish tasks at home.

Autism spectrum disorder “is characterized by varying degrees of impairment in communication skills, social interactions, and restricted, repetitive, and stereotyped patterns of behaviour. Each disorder is lifelong and can run the gamut from mild to severe. The severe form is called autistic disorder, and the milder form is referred to as Asperger syndrome” (Sousa, 2007, p. 180). Students diagnosed with ASD often have difficulty paying attention to relevant cues or information in their environment and may focus their attention on a certain part of the environment, to the exclusion of what is relevant. Another feature of this disorder is impairment in the capacity to share attention equally between two things or people. This has been referred to as a problem with shared or joint attention. They often fail to pay attention to objects or events that interest other people (Sousa, 2007).

Fetal Alcohol Syndrome (FASD) is caused by maternal consumption of alcohol during pregnancy. Social/behavioural functioning presents some of the most difficult challenges for students with FASD (Coggins, Olswang, Carmichael Olsen, & Timler, in press; Miller, 2003; Thomas, Kelly, Mattson, & Riley, 1998). Students with a diagnosis of FASD frequently have problems controlling their anger, aggression, and impulses, which contribute to other social/behavioural difficulties, such as peer and student teacher relationships (Streissguth & Kanter, 1997). According to Landesman & Ragozin (1981), “Decreased reaction time, inattention, and hyperactivity have been demonstrated in preschool children exposed to moderate levels of pregnancy drinking (pp. 187-193).

Movement

Evidence from several studies indicates that movement can improve academic performances

and reduce disruptive classroom and social problem behaviours (Barkley, 2004; Majorek, Tuchelman, & Heusser, 2004). Students with a diagnosis of attention deficit disorder often have difficulty sitting still for long periods of time and benefit greatly by periodically having structured opportunities for movement. According to Mulrine, Prater and Jenkins (2008), “short energizers can give students the movement their bodies need to keep their minds focused on academic tasks (pp. 16-22). In addition, movement can enhance brain functioning, helping students to be more alert and better able to do the complex mental tasks required in classroom learning. Hannaford (1995) discovered when working with children labeled "learning disabled," that they performed remarkably better when beginning their sessions with simple, whole body integrative movements (pp. 11-13). She states, “Movement integrates and anchors new information and experience into our neural networks. And movement is vital to all the actions by which we embody and express our learning, our understanding and ourselves” (Hannaford, 1995, p.107). “Simply put, integrated movements done in a playful, coherent way with music activate the entire vestibular system large areas of the motor cortex, and frontal eye field area of the frontal lobes; and produce chemicals, such as dopamine, which assist enthusiastic learning and memory” (p.173). “There are numerous ways to reinforce academics through movement. Establishing a classroom environment, that encourages directed movement during content lessons throughout the school day, transitions and via specialized games for recess and indoor rainy day activities has potential to improve academic performance for all students” (Mulrine, et. al 2008). As explained above, there are positive effects of physical activity on brain function, cognitive control, and academic performance.

Dance/Movement Therapy

Dance/Movement Therapy (DMT) is when “we communicate with our bodies, and by understanding what a client is saying with his body, a therapist can help him engage in reciprocal movement dialogues with others” (Levy, 2005; Tortora, 2006). This can be a particularly important process for people with developmental delays, whose challenges with verbal language or aggressive behavior might otherwise create a barrier to communication. Also, many reports suggest, "that dance therapy... improved movement skills and concentration among persons with ADHD." (Strassel, Cherkin, Lotte, Sherman, & Vrijhoef, 2011). Dance/ Movement Therapy (DTM) is “founded on the principle that there is a relationship between motion and emotion and that by exploring a more varied vocabulary of movement people experience the possibility of becoming more securely balanced yet increasingly spontaneous and adaptable” (Hervey, 1999). Although DMT is promoted to reduce stress and center the body, this therapy is very effective in helping to heal other disabilities and diseases.

Development Theory

Probably the most important reason for the movement experience to be an integral part of the elementary curriculum is the impact it can have on learning in the development of concrete operations. According to Piaget (2002), the development of "concrete operations" should take place between the ages of seven and eleven. Piaget suggests that educators provide an extremely physical/active curriculum at the early stages of concrete operations. Children require a great deal of physical activity for proper development, especially in the first year of school (as cited in Gilbert, 2002, p. 7). According to Gilbert (2002), “These fundamental movement patterns wire

the central nervous system laying a foundation for appropriate behavior and attention, eye convergence necessary for reading, sensory-motor development and more” (p. 7). That is why Gilbert (2002) created a dance program called “BrainDance” that incorporates different movement patterns to help the body and mind. Gilbert (2002) states, “The BrainDance is an effective warm-up exercise that incorporates [developmental movement] patterns, reorganizes our brains, connects and aligns all parts of the body, delivers blood and oxygen to the brain, stimulates the Vestibular System, helps us to center and focus and brings clarity to all our movements” (Gilbert, “Dance Education” p. 39). This "dance" is an excellent full body and brain warm-up for students in classrooms, dance studios, physical education, and music classes. Gilbert believes doing these specific movements daily can help reorganize the central nervous system development (Gilbert, 2002).

Arts

For children with a diagnosis of learning disabilities, arts education can be a powerful tool in developing minds. Smith (2001) sums it up as, “For exceptional students, the arts are often a savior, a respite, and a solace that give these children a chance to express themselves and feel good about themselves” (p.4). In fact, the arts have the ability to open doors for children with learning disabilities. Art, in all forms, can serve as cognitive organizers, helping children “make sense of the world and of the messages coming in through the senses” (Smith, 2001, p.12). All art making, just as reading and mathematics, involves a linear process and completion of an artwork; dance, pottery, painting, piece of woodworking; requires attention and impulse control in organization.

Kinesthetic learners

According to Gardner (1993), “Control of bodily movement is localized in the motor cortex, with each hemisphere controlling bodily movements” (p. 18). Thus, kinesthetic learning is a processing of information through body movement and the gaining of knowledge through experiences (Dunn & Dunn, 1978). The kinesthetic learning style is highlighted by one of Gardner’s (1999) Intelligence concepts, bodily-kinesthetic intelligence. It expressed the ability to communicate with movement of the body. Researchers at the World Institute on Disabilities showed that kinesthetic or tactile learners learn best using the hands on approach while actively exploring the physical world. They may find it hard to sit in a traditional classroom setting and may become distracted by their need for movement and exploration.

H’Doubler (1978), a dance educator and philosopher, has addressed the issue on the importance of kinesthetic learning for human development and learning. She states that “kinesthetic learning is the result of stimulating the kinesthetic sense, i.e., the movement sense, and it is realized by sensations expressed by the human body’s motion which in turn generates new sensations” (p. 12). Also, she argues that because of the natural ability of the body to both generate sensations and to use movement in space as a form of self-expression, dance activities are natural channels through which an exploration and expression of these sensations can take place. Dance and movement activities are, therefore, essential tools through which meaningful exploration of concepts can be conducted and therefore should be incorporated as an integral part of the curriculum (H’Doubler, 1940).

Movement and Self-Regulation

Physical movement is the number one stress reducer; it helps in assisting the nervous system with development and function capacity (Barkley, 2004). Ratey (2008) states, “ Physical activity promotes biological changes in the brain that enhance adaptability and connections between brain cells; this brain activity is necessary for learning as well as for the growth of new brain cells” (p. 22). For their brains to function optimally and to do their best academically, “children generally need regular activity periods. Movement increases the heart rate and stimulates brain function, which facilitates a child’s ability to take in information ” (p.19-23). That is why teachers should create learning environments that provide opportunities for students with exceptionalities to demonstrate active engagement through movement. Once students are engaged and aware of their own learning, they can be motivated to attain their personal goals. According to Bandura (1986) and Zimmerman (1989), “students are self-regulated when they are aware of their own learning processes and select useful strategies to complete a task” (p.454). Those useful strategies can be found in dance, drama, music, visual art, and media-art. According to Madigan (2004), “When students are inactive for periods longer than 20 minutes, they experience a drop in glucose and oxygen to the brain, resulting in diminished ability to focus, comprehend, and remember (as cited in Reilly, Buskist & Gross 2012, p. 63). Indeed, physical activity may be directly related to factors of children’s self-regulation, which is in turn directly related to children’s achievement.

Rhythm

Rhythm has been defined in many ways, and often these definitions include the concept of

movement. Creston (1961) defined rhythm as "the organization of duration in ordered movement" (p. 1). Mursell (1956) defined it "as an expressive pattern of accent, duration, and pause" (p. 258). Furthermore, he argued that research has indicated that the best approach to rhythm is by way of movement, particularly through large, free-flowing continuous movements that are coordinated (not isolated)~involving several parts of the body at once (p. 167).

Research has demonstrated that the motor areas of our brains are engaged even if we are only listening to rhythm (Chen et al., 2006; Chen et al., 2008). Rhythm also induces calm and relaxed affective states through the alteration of brain wave frequencies and has immuno- enhancing and stress reducing benefits (Bittman et al., 2001; Winkleman, 1986; Winkleman, 2003). In addition, rhythm naturally pulls children into sync it helps them focus, use creativity, demonstrate organization, and complete tasks in a timely matter (Brack, 2009). The steady rhythm and sense of self-regulation can have this sensory organizing effect by alerting lethargic children and can also be calming to anxious children (Brack, 2009).

It is impossible to dissociate the role of the body and movement in the perception and production of musical rhythm. People use bodily motions to produce musical rhythm and to respond to musical rhythm with movement through simple body motions. Those body motions are often seen in rocking, foot tapping, or even by engaging in the act of dancing to the music. The association between musical rhythm and human movement dates as far back as the Greeks. According to Fraisse (1982), "rhythm" comes from the Greek *rhythmos* (rhythm) and *rheo* (to flow). *Rhythmos* appears as one of the keywords in Ionian philosophy generally meaning "form," but an improvised, momentary and modifiable form; it literally signifies a "particular way of flowing" (p. 150). Fraisse (1982) defines rhythm as "the perception of order" (p.151). In

his definition, he implies that people can predict what will come next in a rhythm sequence. He also states “there is a natural tendency to synchronize body motion (such as hand- claps) with rhythmic patterns” (Fraisse, 1974).

Ownership of Learning

Practically speaking, *ownership of learning* is the attitude of laying claim to one's personal charge for learning. Authors have described this outcome as a "psychological investment in learning" (Stefanou et al., 2004, p. 101), a "passionate commitment to the pursuit of a topic, inquiry, or creative exploration" (Stewart, 1994, p. 9), and "a sense of active involvement, and personal investment in the learning process" (Voltz & Damiano-Lantz, 1993, p. 18). In order to help students to be owners of their learning, one must help them learn how to identify their passions; build connections to others through those passions. Stewart (1994) suggests concentrating on experiences that contain "sufficient energizing capacity through mystery, connections, and affirmations to elicit commitment, passion, or original thinking in the pursuit of a topic, skill, or idea," something she refers to as "Touchstone Learning" (p. 16). Learners usually do not first discover a generalized commitment to learning, but rather this commitment tends to emerge within a specific context, tied to a certain question or idea (Stewart, 1994). *Ownership of learning* more resembles a quest with a specific starting point and path of progression.

Conclusion

Several biological hypotheses have been presented that describe how exercise affects brain structure and function (Colcombe et al. 2004a, b; Vaynman & Gomez-Pinilla 2006). While

intriguing, these hypotheses are limited to the study of physiological adaptations to exercise training. In addition, many studies have been done around dance movement and cognitive skills. These studies demonstrate possibilities of dance in inclusive classroom for supporting students who have exceptionalities. Dance training programs may prove to be simple, yet they are important methods of enhancing aspects of children's mental functioning that are central to cognitive and social development. However, many questions concerning the relation between dance movement and children's cognitive functioning remains unanswered. It is unknown whether improvements in cognition caused by movement are maintained following the termination of dance activity or if they decline. Further, it remains to be determined, for instance, if the benefits obtained are related to the type, duration, or intensity of dance movement programs. Answers to these questions will be attained through systematic research designed around dance movement and attention deficit and impulse control. At this time, no theory has been proposed that satisfactorily addresses the relation between dance movements during transition time to help students with ADHD, FASD and ASD. I believe that bringing dance into the classroom will not only increase learning, but will make the classroom a healthier, happier place to learn and teach. The particular individual benefits of dance, rhythm, movement and the arts will guide my action research design.

CHAPTER THREE- METHODOLOGY

Introduction

The purpose of this study was to investigate the effect of dance movement as an intervention for students with issues with attention and focus in academic work, with the potential of supporting students with Attention Deficit Hyperactivity Disorder, Fetal Alcohol Syndrome Disorder or Autism with issues with attention and focus in academic work. I used an Action Research approach to answer the question:

How can I improve my support for students who have difficulties controlling impulses and sustaining attention by implementing dance instruction in my French Immersion classroom?

Researching this topic helped me learn many teaching strategies that I will continue to put into my practice. This research question also helped me to realize the importance of using body movement throughout the day to help all my students including those with exceptionalities to become more focussed, and less impulsive during class time.

Methodological Understandings

McNiff (2002) states, “Action research, sometimes called practitioner-based research is a powerful tool for change and improvement at the local level” (as cited in Cohen, Manion, & Morrison, 2011, p. 344). This form of research is often used in education and the preceding quote illustrates the fit of action research for reflecting on my personal teaching practice.

“Action research can be used in a variety of areas, for example:

- *teaching methods* – replacing a traditional method by a discovery method;
- *learning strategies* – adopting an integrated approach to learning in preference to a single-subject style of teaching and learning...(Cohen, et al., 2003, p. 344).”

According to Mills (2003), “Action research is a process of concurrently inquiring about problems and taking action to solve them. It is an intentional, sustained, recursive, and dynamic process of inquiry in which the teacher takes an action- purposefully and ethically in a specific classroom context to improve teaching/learning” (as cited in Bruce & Pine, 2010, p.3).

During the intervention, I focussed on both my teaching method and the different strategies to better my own practice. It was my hope that my research would not only affect my teaching practice by the implementation of dance movements, but also that it would be useful to my colleagues and other teachers who face the same challenges in their classes.

This study was conducted using mixed-methods due to the fact that it contained both qualitative and quantitative data. In order to change my practice, I felt it was necessary to evaluate the effectiveness of dance movements for improving attention and focus in schoolwork as an intervention for students. With qualitative data, I was able to provide my reflections on the success or lack of success of the implementation of dance movements to improve attention and lessen impulsivity. I also received feedback from the participants on their experience in using the strategy, which further helped me to provide support for or against the success of this strategy. With the quantitative data, I used a survey to gather general information on students’ learning. According to Reams and Twale (2008), “mixed methods are ‘necessary to uncover information and perspective, increase corroboration of the data, and render less biased and more accurate

conclusions' ” (as cited in Cohen et al., 2003, p. 22). In this study I felt it was necessary to include the use of qualitative data from different instruments and sources to provide triangulation for depth and accuracy of interpretation.

Participants

I conducted the dance program with the whole class and only conducted data with the eleven students who showed interest and consented to participate in the study. First, I sent home a package that explained the study and included consent and assent forms. Then, I conducted a brief meeting with the parents/guardians of the students who were interested in participating to outline the nature of the study. After receiving the signed permissions forms from the students and the parents who were interested in taking part in the study, I proceeded with my dance program.

Program

The purpose of this study was to examine the effect of dance movement as a way to support students with issues of attention and focus in academic work, particularly for students with diagnoses involving these issues. The implemented dance program lasted 5 weeks and was done three times a day. The first dance movement of the day started at around 9:35 am, the second one at around 11:10 am, and the last one at 1:10 pm. Students were required to dance for 10 minutes after working on a subject for 40 minutes. I used the DVD called *6 Fit Kids Workouts* by Notte Howard (2008) to facilitate the dance program and to be able to do my observations without having to teach different moves in front of the class. On the second week of the intervention, my students became involved in selecting the songs and the dance moves for the dance program. During these weeks of the intervention, I observed and recorded student

behaviour on a student behaviour observation chart (see Appendix E) while being seated at the front of the room. I recorded my observations twice a week (Monday and Friday) in order to be able to do my whole class (24 students). They were generally observed from 11:20 to 11:32 while answering Math questions that were written on the board prior to the dance. Each child was observed individually for 1 minute.

Prior to the start of each dance movement, students were asked to stand, push in their chairs, and make sure they had plenty of space between them and their neighboring classmates. I then stood at the front of the class and set a timer. I called out the name of the dance and started the DVD with the class joining in. At the end of the 10-minute dance movement, I asked students to quickly and quietly return to their seats. I invited my students to carry on with the work that they were doing prior to do the dance movement program. I observed the class in general to watch for focus indicators and proceeded to write my observations in my reflective journal. I did my observations on Tuesday, Wednesday and Thursday. On Tuesday and Friday, I charted student behaviour on a student behaviour observation chart (Appendix E).

Data collection instruments

For the quantitative data, a survey instrument (Appendix C) was administered at the beginning of the trimester in an effort to assess students' impressions on movement and learning. The selection of the questions addressed active listening, sitting for a long period of time, strategies to help in class, rhythm and dance. My goal was to find out how my students felt about moving and learning and how long they could sit during a lesson before becoming distracted. The survey questions were developed by the researcher and were critiqued by two

fellow teachers and two graduate students to ensure content validity. These colleagues were sent a critique sheet to assist in the survey review. The survey was revised to address the suggestions of these individuals. The format to answer the survey consisted of a three-point pictorial scale with response choice of *always*, *sometimes*, *never*. Corresponding faces to go with these responses were included to help with the students' decisions because the students had different reading abilities in English. The last three questions included statements and corresponding boxes to mark with an X. The statements referred to the students' preferred learning style and types of dance. The survey provided valuable information about the kinds of movements students preferred and how they manage self-control.

I also used an observational checklist (Appendix E) with behavioural data to show trends in behaviour. The unfavourable behaviours that were observed included: talking out, out of seat, inactive, noncompliance and playing with objects. These behaviours were recorded with a code to ensure time efficiency.

For the qualitative descriptive data, I used a reflective journal to chart my journey of exploring the effectiveness of different dance movements with the students and to provide subjective knowledge grounded in my own experience through this work. A student feedback reflection form (Appendix D) was also used to see trends with their comments about dance and attention. At the bottom of the weekly reflection, there was a question that required using a rating scale for the answer. The question addressed if the student was able to focus for a longer period of time without being distracted after dancing three times a day every day of the week.

Data Collections Procedures

A recruitment script (Appendix A) and a parent consent letter (Appendix B) were sent home two weeks prior to the project. The survey was administered (appendix C) to the students on April 2, 2014 on the first day of the dance movement program. The data were collected in a 5-week period, starting April 4, 2014 and ending on May 10, 2014.

An observational checklist was completed twice a week after the first or second dance movement of the day. On this observational checklist there was a place to tally their behaviours after dancing for 10 minutes. During a particular student's observation minute, I placed codes under any category that described the student's behavior during that minute. A student could exhibit more than one behavior during his or her observation minute; I chose the codes related to the behaviour.

Throughout the study, students were asked to complete a weekly reflection and a rating scale related to focusing and improvement (Appendix D). These entries served as a way for the researcher to gather information about their feelings in relation to the short dance sequences of the week and to their focus with regards to class assignment.

Data Analysis and Interpretation

At the close of the five-week program of study, data sources were organized, read, and analyzed in order for conclusions to be drawn.

Responses to surveys were compared so that categories could be made in order to reduce the responses to discover patterns. The responses were then analyzed quantitatively as the researcher tallied responses and then converted the tallies into fractions. Converting the data into fractions made it easier for the researcher to recognize patterns in students' responses.

Data from student behavior observational checklists were also analyzed quantitatively. Each chart contained four columns for the students' names, the observation date, on-task behavior, and off-task behavior. The researcher then tallied on- and off-task behavior as recorded on the observation charts.

Weekly reflections were analyzed qualitatively to look for patterns and information. I aligned my thoughts on the effectiveness of the strategy with the students' feedback to see if my observations correlated. I was able to find commonalities with certain dance movements and see what worked and what didn't. I will use the data to guide my own practice with future students.

Limitations

The limitations of this study included: small sample size, lack of randomization, no control group and researcher subjectivity. The first three limitations do not allow the findings to be generalized. However, the mixed methods and different sources of data allow for triangulation, which is a qualitative way to improve and assess validity.

Significance

This study could provide a good starting point for research and practice. I think what are most valuable about this study are the insights I developed through my own observations and the data collections gathered from different sources.

Some studies have been conducted surrounding the impact of dance movement therapy to improve concentration for students who have Attention Deficit Hyperactivity Disorder, Fetal Alcohol Syndrome and Autism. Other studies have been done on physical activity on students' health; however, few studies have been conducted concerning the use of dance movements

during transition to increase on-task behaviours for students who are diagnosed with attention and impulse control issues.

Every day I see students who have difficulties to focus because of their distractibility and their impulsivity, particularly students with exceptionalities. As a result, their self-esteem is often negatively affected. It is so important for all students and particularly for those with diagnoses involving these issues to be able to get up and move around after sitting down for an extended period of time.

The value of action research for a project of this kind is its focus on naturalistic teacher inquiry. As the project was embedded into the regular school day with the classroom teacher, across a period of time, the result of this study may have benefit for those wishing to integrate these strategies in regular practice.

CHAPTER FOUR- FINDINGS

Upon completion of the dance program, I read and re-read data that I collected in order to have a good base for my analyses. These data were then reduced to a manageable amount and were coded for patterns and themes.

Analysis of data served to answer the research question:

How can I improve my support for students who have difficulties controlling impulses and sustaining attention by implementing dance instruction in my French Immersion classroom?

The data were analyzed qualitatively and quantitatively, and results were represented in figures and tables. The survey was analyzed quantitatively. Student behavior observation charts were analyzed quantitatively, as I counted the actual number of on- and off-task behaviors exhibited on observation days. I analyzed student journal responses, as well as my own journal entries, qualitatively. Journal responses were read and re-read, and were coded for common themes. Many responses from students and my own observations were identified in themes.

Pre- Activity Survey

The first source of data examined by the researcher was the pre- activity survey. The survey consisted of ten questions and was in the format of a pictorial scale. For the first seven questions, students were asked to circle one of three-point pictorial scale with response of always, sometimes and never. Results show that 10 students out of 11(90%) can sit for 30 minutes before their body feels squirmy, 6 students out of 11(55%) can listen actively for 20 minutes, and 5 students out of 11 (45%) can sit for 40 minutes. Also, 6 students out of 11(55%)

sometimes use strategies when they feel distracted or unfocused, 7 students out of 11 (63%) circled “sometimes” for being active prepares my brain to learn and 7 students out of 11 (63%) circled “sometimes” for Dance is my favourite ways to be active. Finally, 6 students out of 11 (55%) think that working with patterns, form and rhythm sometimes help them to be prepared to learn.

Students self-report indicated more control than observations did. Moreover, the majority of students have strategies they can use when they feel distracted, and being active is a great way to prepare their brain to learn.

The last three questions addressed: learning style, preferred dance and difficulties with impulsivity in certain situations.

In response to the question addressing learning style, 9 students out of 11 (82%) wrote that they were kinesthetic learners and 1 (9%) was an auditory learner and 1 (9%) a visual learner. For the question regarding dance, 7 students (64%) wrote that they prefer creative dance, 3 students (27%) wrote that they prefer hip-hop and 1 student (9%) like tap dancing. For the question addressing impulsivity, 6 students out of 11 (55%) indicated that they had difficulties controlling their impulsivity towards others when their peers made fun of them, 3 students (27%) wrote when my peers don't want to play with me and 2 students out of 11 (18%) wrote when my peers take things from my desk without asking. The responses were represented as fractions, and from the fractions, percentages were calculated. The quantitative results of these questions from the survey can be seen in Figure 1, 2 and 3.

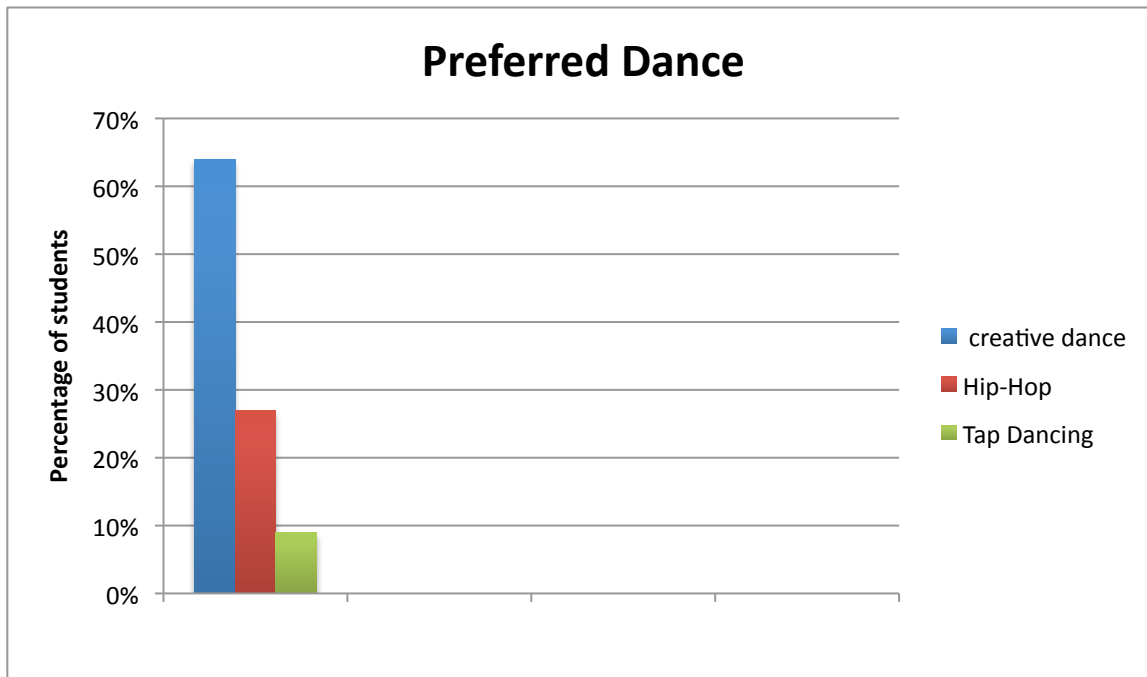


Figure 1. Preferred dance

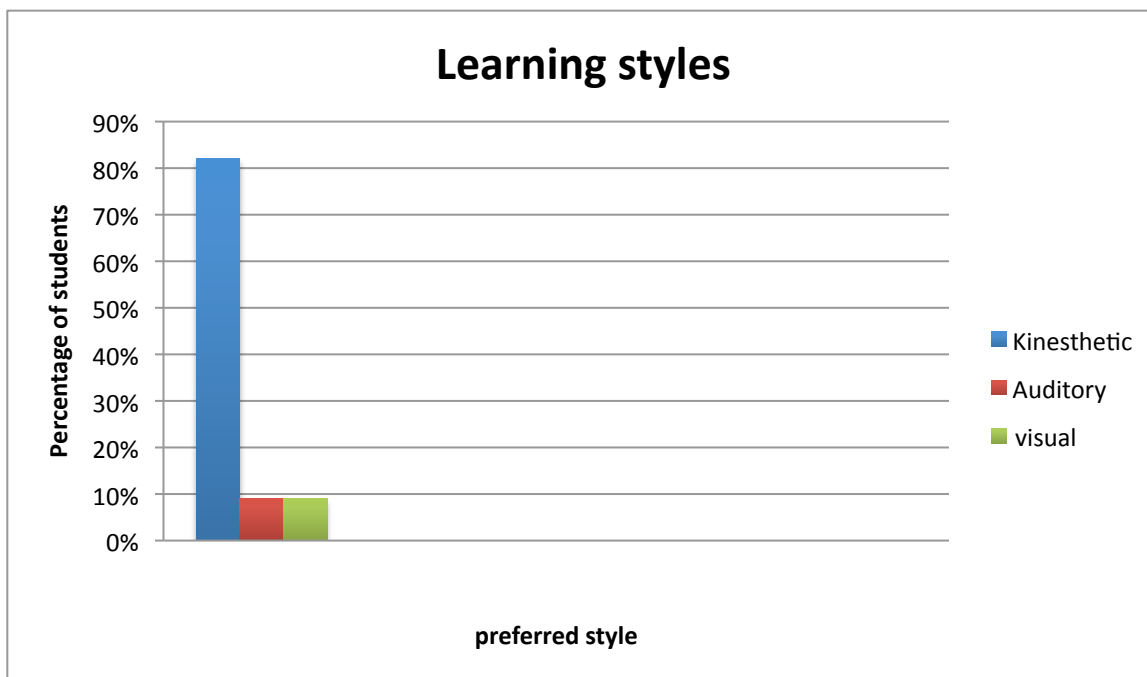


Figure 2. Students' preferred learning styles.

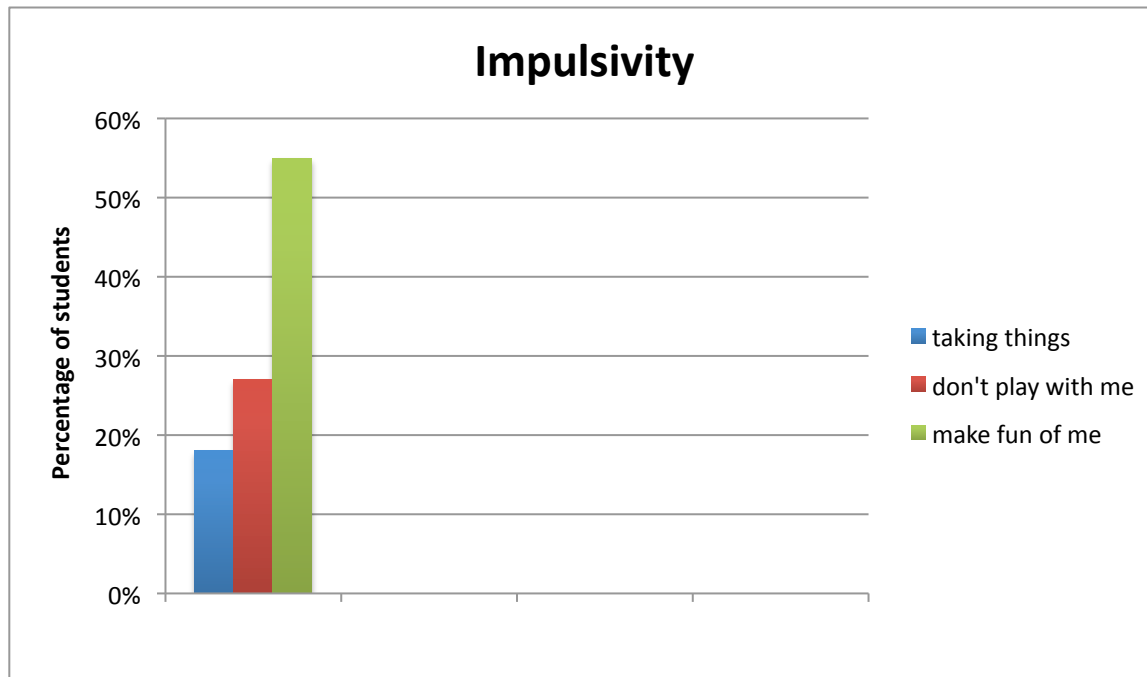


Figure 3. Difficulties controlling impulsivity in those situations

The responses from the survey exhibited four themes: the majority of students can do active listening for a limited period of time and they also need to move for their brain to be able to focus since most of them are kinesthetic learners. In addition, many students have difficulties interacting with other people, so dancing together and developing choreography could be a good way to focus on their interpersonal skills. Finally making the dance program enjoyable was important in order for students to build their engagement, because not all students indicated that they enjoyed dance before we began.

Project Instruction

“It was quite an adventure to dance for 5 weeks” (Nicole Pilote).

I started the dance program on Tuesday April 3 after administering the pre-activity survey. Results of the survey helped me to guide my dance program to suit the diverse needs of my learners. After spending a lot of time wondering how to teach dance in an efficient way, and observe at the same time, I decided to go to the library and look for ideas. I found a DVD called *6 Fit Kids Workouts* by Notte Howard (2008) that I thought would be valuable for my study. I watched the dances from the DVD several times in order to make myself familiar with them. I liked the fact that each dance was short and involved repetitions; they were also easy to follow. Those dances were called: Kardio Funk, Foot Stomping African, Loving Latin, Aerobic Dance, Getting Funky and Afro Latin Combo.

On the first day, I decided to play the “Foot Stomping African” dance, as it seemed to be the easiest dance to introduce at the beginning of the study. I set the timer and proceeded to start the DVD. Students were standing behind their chairs with lots of space from each other in order to do the moves without bumping into each other. It was interesting to see how difficult it was for students to follow the dance movement while looking at the screen. First of all, I noticed that a significant number of students were moving only their upper body and not their legs. They needed many reminders to keep on moving till the end of the music. On the other hand, other students were moving faster and appeared to be more at ease with the movement. I played the African dance twice, for each sequence was about 5 minutes. I wanted my students to dance for 10 minutes each time of the intervention. They started dancing at 9:35 and finished at 9:45 just before snack. I noticed that many students were tired and wanted to sit down to eat their snacks.

After a week of implementing the dance program, a group of students asked me if they could bring their own music to class and invite their peers to choose two songs from a selection of

songs on their iPad. I was not sure how it would work, but I agreed with them. The next day, that particular group was ready to introduce their choices of songs. They asked their peers to vote for two songs that they would like for the dance program. The students voted for two lively songs: “Happy” by Pharell (2013) and “Brave” by Bareilles (2013). Then, I invited my students to match the songs to the dances and proceeded with the intervention. It was finicky to start the dance on the DVD at the same time as the music on the iPad, but after a few practices I managed to make it work. It was fine for the first dances, but as it went on for a few days it became more challenging for most students to pick the right songs for the program because a group of students was often disagreeing with the choice of music. One week after the start of the program, I invited a kindergarten teacher to come and help my students to create dance choreography to go with the song “Brave”. Having another person in the classroom allowed me to observe their level of engagement and interpersonal skills while they were working on the steps.

Researcher's Journal

Throughout the 5-week study, I wrote journal entries whenever possible. Journal entries included thoughts about behaviour and focusing before and after the dance program. I also added thoughts about ownership, the effect of dance and self-regulation in regards to attention and impulsivity. Many questions arose from my observations, as well as concerns and surprises about data collection.

Table 1 displays six themes that emerged from the researcher's journal concerning the various factors that may have affected student attention and engagement during the dance movement program.

Table 1

Factors Affecting Student Attention and Engagement During Various Observation Periods

<u>Themes emerging from Researcher’s Journal</u>	<u>Explanation</u>
1.Ownership/Choice	I found many entries addressing the issue of student involvement in my dance movement intervention. Many entries contained comments about students who were happy selecting songs and bringing their own music to class. The dance program seemed to me more appealing when they were active in choosing the music and matching it to the dances. Also many students made comments about being more engaged during the dance instruction, for they felt more connected to the songs that were being played. It made me realized that students must make their own choices in order to gain valuable experiences.
2. Duration of Observation	Observing a student for one minute was extremely challenging, for there were students who were asking me questions after the intervention. It would have been easier if another adult had been in the class at the same time and be in charge of redirecting the students while I was doing the observations. Also, it was difficult to get an accurate description of a student’s on or off-task behaviour; students usually are not off-task during the first 10 minutes at the start of a lesson. Finding the appropriate time to fit three interventions during the course of the day was extremely challenging as well.
3.Resources/Music	In the age of technology, text messaging and instant access to information and other individuals, it is not surprising that my students felt disconnected when confronted with limited options in terms of music on my instructional DVD. Many students in my class are accustomed to carrying an iPhone in their pocket or an iPad that can access the Internet, play thousands of songs, play movies, play video games, and read a novel. Also, many students are familiar with the latest songs on the billboard, so it is easy for them to link the lyrics to different dance moves. It really made it clear to me that technology helps to bridge the gap between our technology savvy children and physical movement. UDL involves all students, including those with attention difficulties.

<p>4. Effect of Dance</p>	<p>I invited my students to answer a questionnaire about learning styles. After compiling the answers, I found out that 75% of my students were kinesthetic learners. That could explain why the majority of my students enjoyed the dance movement program, for it gave them an outlet to expend their energy. It also helped curve behaviour problems for students who could not stay in their seat. I noticed that students who were not paying attention and moving around in class appeared more attentive and calmer after the intervention. Perhaps the fact they had to focus on counting the steps and follow the rhythm of each dance sequence placed kinesthetic demands upon their nervous system. I also realized that most students looked happier after dancing. Of course, there were a few who complained through the whole process.</p>
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<p>5. Student Self-Regulation</p>	<p>The dance movement intervention seemed to have helped many students particularly, students with issues with attention and impulsivity. They appeared to behave more appropriately after dancing vigorously for 10 minutes. I think that moving helped to re-channel their disruptive energy to positive engagement. I also noticed that students who were feeling emotionally distraught appeared to be less tensed after the intervention. Perhaps the fact that they had to focus only on the steps and not so much on other things that were bothering them helped to be more inclined to work. Were students more focused because of dance, movement or preferred activities after the intervention? It was a challenge for me to link the effect to cause.</p>
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<p>6. Enjoyment</p>	<p>During my observations, I overheard many students making comments about dancing. Many stated that it was fun to dance. Perhaps, the fun of dancing for the students stemmed from the social interactions, the opportunity to choose their own dances, moving around, the interaction with other students, learning dances and other dance-related information. I also think that the types of moves that they learned made it fun. For example, the butterfly move...</p>
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Student Behavior Observation Chart

To analyze the large amount of data found in the observation charts (see Appendix E), I organized the data into a 4-column chart with a column for pseudonym, date, on-task code, and off-task code. Under the column “Date,” each date when movement took place was listed. For instance, Student C5L was found under the column, “Student,” and April 4, April 7, April 16, April 23 and April 28 were found under “Date.” In the on-task column, I tallied how many times a student was on-task during one minute. For instance, if the student exhibited on-task behavior two times during 1 minute, two tallies were placed in the “On-Task” column. In the “Off-Task” column, I tallied different codes related to different types of behaviour. For example, “T” means Talking Out/noise: Inappropriate verbalization or making sounds with objects, mouth, or body; “O” means Out of Seat: Student fully or partially out of assigned seat without teacher permission; “I” Inactive: Student not engaged with assigned task and passively waiting, sitting, etc.; “N” Noncompliance: Breaking a classroom rule or not following teacher directions within 15 seconds; “P” Playing with objects that are not accepted as a fidget. I colour-coded each day and matched the colour to the On-Task and the Off-Task codes for that day. Then, I tallied all their on-task and off-task behaviours and converted the responses in percentages.

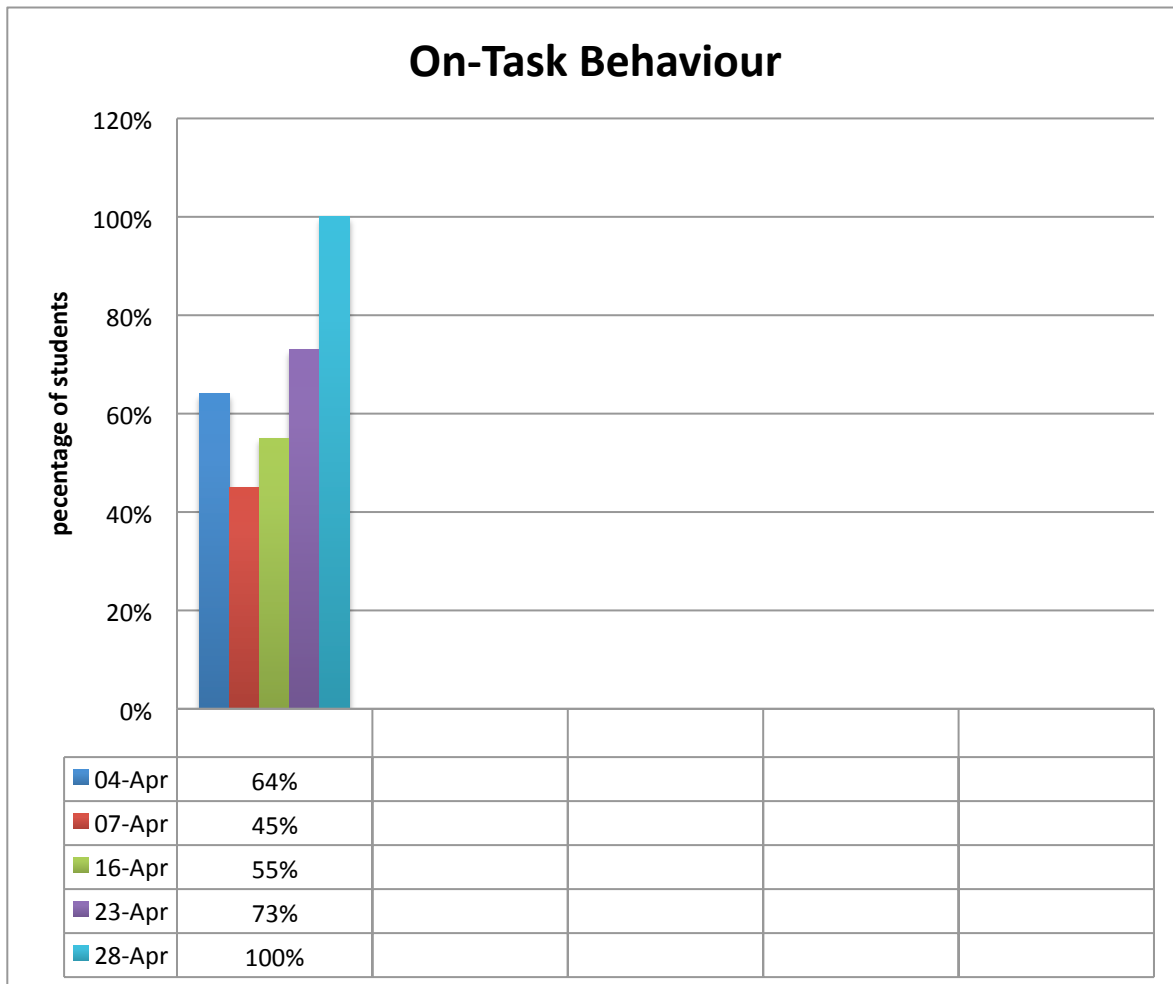


Figure 4. On-Task Behaviour of students taking part in study

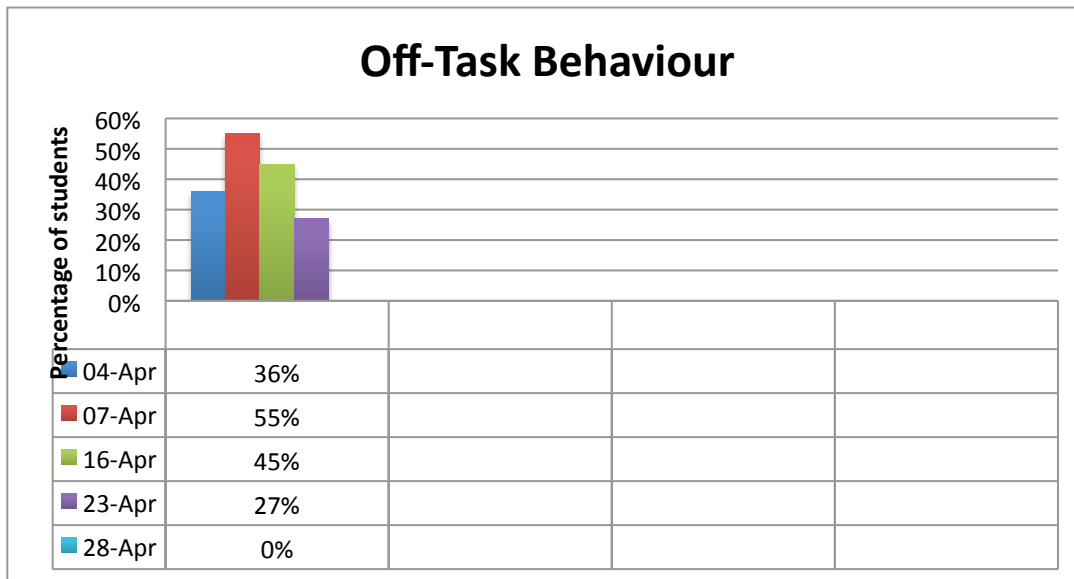


Figure 5. Off-task Behaviour of students taking part in study

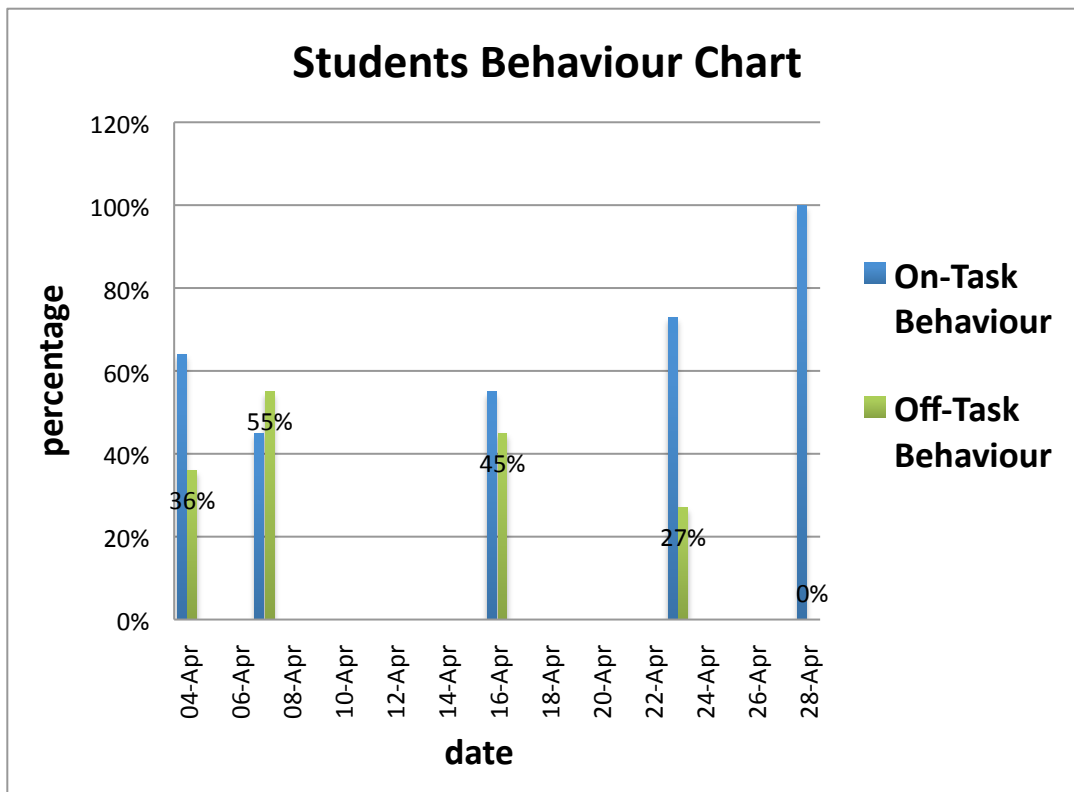


Figure 6. On-Task and Off-Task Behaviour Chart

Results from the dance movement program observation chart indicate a significant improvement in the on-task behaviour as seen on figure 4. On April 28, all 11 students (100%) were on task after doing the dance movement intervention. If you look at the graph (figure 4) you can see that their behaviour improved by 38% over the course of the dance movement program.

I also noticed that three students had a decrease in their off-task behaviour towards the end of the intervention (April 23). The off-task behaviours that I observed were: fidgety, unable to sit still for more than 5 minutes, talking out, clowning, bothering other students, drumming fingers, tapping feet, getting up without asking, playing with objects, doing something unrelated to the given activity.

One possible explanation for this decreased in off-task behaviour is that most children in my class are kinesthetic learners and sitting for long periods is not the best way they learn. Also, a few are hyperactive and impulsive, so they need to be able to release the excess energy to focus on their assignments. Thus, the dance movement program seemed to be a great way to use their body to regulate their energy; it allowed them to escape from sedentary activities that were no longer keeping their attention. For example, students who have ADHD or FASD often have problems with sitting for periods of time. That is why they need learning opportunities that complement their particular style of learning. According to Sousa (2007), “ADHD is a syndrome that interferes with an individual’s ability to focus (inattention), regulate activity level (hyperactivity), and inhibit behaviour (impulsivity)” (Sousa, 2007, p. 49). Students with FASD frequently have problems controlling their anger, aggression, and impulses, which contribute to other social/ behavioural difficulties, such as peer and student teacher relationships (Streissguth

& Kanter, 1997). The dance movement intervention definitely provided an outlet for those who had difficulties controlling their behaviours that were done without really thinking.

Also, the intervention helped students who have difficulties with their interpersonal skills, as it helped them to interact appropriately in a group situation. Moffitt (2011) writes, “The experience of dance can open up children with autism to the possibility of more connection with others. Social interaction demands being on the same page with peers — something very difficult for a child on the spectrum to achieve. By encouraging children with autism to dance to rhythms, the mirroring of another’s experience bestows the satisfaction of belonging to a group” (“Dancing Can Benefit Individuals with Autism,” para. 5).

Another possible explanation for this decrease is from a biological perspective. In fact, by moving their bodies in particular ways, their minds were simultaneously affected. For example, cross lateral movements of the body, connect the right and left hemispheres of the brain allowing for a higher level of thinking to occur (Gilbert 2006). I believe that cross lateral moves that Notte teaches on her DVD helped my students to be more focused and re-energized. According to Moffitt (2011), “The combination of music and dance help the brain to reorganize itself. In dance, the child processes music, learns movement, performs movement to that music, and then repeats it multiple times. The hearing, listening, processing, executing and repetition enable a child’s brain to forge new pathways, engaging both the right and left side of the brain” (“Dancing Can Benefit Individuals with Autism,” para. 3).

Students’ Journals

Over the course of the study, students completed four student feedback reflection entries

(Appendix D) concerning their thoughts about dance movement and attention. They also had to answer a question at the bottom of their reflection form that required using a rating scale. The format to answer the specific question consisted of a four-point scale with response choice of 1 for *No Improvement*, 2 *Little Improvement*, 3 *Some Improvement* and 4 *Big Improvement*.

As I read through their entries, I noted common phrases on their level of interest in the dance program and comments about the ability to stay focussed throughout the intervention. By reducing the journal entries to the most significant comments I was able to see that the responses appeared to be divided into two themes: focused and not focused. In order to analyze these two themes, I made charts that included boys’ comments and girls’ comments with dates related to the comments. My goal was to look for comments and information to align my thoughts on the effectiveness of the strategy with the students’ feedback to see if my observations correlated. I also wanted to see how many times “key words” such as: attention/concentration, focused, active, less distracted and less impulsive would appear in their four reflective journal entries, so it would provide another source of data to assess validity.

Table 2

Comments

<p>April 4 Date: April 4</p>	<p>“A week with dance was better <u>Girls’ comments:</u> than without because I like “With the iPad I was more into getting up and moving instead it” of sitting for a long time. I</p>	<p><u>Boys’ comments:</u> “More <u>focused</u>, but also very tired”</p>
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<p>April 4</p>	<p>“A week with dance was better than without because I like getting up and moving instead of sitting for a long time. I think our class is <u>a bit better</u>”</p>	
<p>April 4</p>	<p>“I think dance is really good for our learning because it keeps us going all day. When we started doing music it made it a lot easier to stay <u>focused.</u>”</p>	<p>“I like it a lot because it gives me time to be more <u>active</u> in class and also it is not that hard.”</p>

Focused:

<p>Date: April 15</p>	<p><u>Girls' comments</u></p> <p>“I feel great.”</p> <p>“I like it that we are using our own music.”</p>	<p><u>Boys' comments</u></p> <p>“Less tired after activities and <u>more focused</u> in getting more work done in time and it is easier to complete problems.”</p>
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<p>April 15</p>	<p>“I think it has been a lot better since we started doing music because it made the dance more fun.”</p>	<p>“Really good cause I could <u>concentrate</u> on my work and I <u>didn't</u> get distracted.”</p>
<p>April 15</p>	<p>“I think it gets a lot better with our own music cause it motivates people to dance cause they like the music.”</p>	<p>“Calmer and <u>more focused</u>”</p>

Focused:

<p>Date:</p>	<p><u>Girls' comments</u></p>	<p><u>Boys' comments</u></p>
<p>April 25</p>	<p>“I like how we get to pick our music.” “I wish one person pick one song each day, so we can take turns picking the music.”</p>	<p>“ A lot <u>more focused</u> from trying to keep up with the dance moves.”</p>

April 25	“ I like that we have to choose our own music.”	“I feel very refreshed after dancing because it loosens me up and I work better.”
April 25	“I feel like it gets a lot of stress off.”	“Refreshed, invigorate, happy and found my <u>energy more manageable</u> .”
April 25	“I feel I’m taking a <u>load off</u> and I feel great.” “I think it’s much better with the music because it’s making it more fun and it’s <u>more motivating</u> .”	“ I love it.” “I get all the <u>energy out</u> and I get to listen to great music.”

Focused:

Date:	Girls’ comments	Boys’ comments
May 6	“I like it, but I would like to	“ I love it.” “I get all the

	do different kind of dances cause it will get boring.”	<u>energy out</u> and I get to listen to great music.”
May 6	<p>“I think that dancing is a lot of fun and it helps me to be <u>focused</u> on my work.”</p> <p>“Good I guess, I mean it’s kind of getting old. I like the music and the dance.”</p>	<p>“ I really think it is helping me to calm down and <u>focus</u> on my work.</p> <p>“Helping a little bit.”</p>

Not Focused:

Date:	<u>Girls’ comments</u>	<u>Boys’ comments</u>
April 4	“I didn’t get more focused.”	“I did not like dancing.”
April 4	“I do like dance and it’s fun, I just think we should dance in the gym, I didn’t get more focused.”	“The same as before.”

<p>May 6</p>	<p>“ I like dance before. I don’t like it anymore and it’s taking up my work time.”</p> <p>“It is hard to get focused again after choosing the music and dancing.”</p>	<p>“I don’t see a difference.”</p>
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Results from the students’ comments indicate that most students enjoyed the dance program and felt more focused on their work after the intervention. On April 4 and May 6, three students wrote that it was “easier to stay focused on their work” and one student stated that he was “less impulsive” after dancing for 10 minutes. On April 15 and 25, five girls wrote: “I like how we get to pick our own music.” “I think it gets a lot better with our own music cause it motivates people to dance cause they like the music.” Another student wrote, “ I get all the energy out and I get to dance to great music.”

In analyzing the student journal entries, it was found that uniformity among the responses existed in that the majority of students were more focused because the intervention was fun and interactive. Also, students felt more motivated to dance because they could choose their own music. Lastly, they felt more relaxed and less anxious after learning different dance sequences.

Rating Scale Results at the bottom of Each Reflective Journal

After charting their comments, I proceeded to record their answers related to the question below.

Question that required using the rating scale: **Were you able to focus on your class**

assignment for a longer period of time without being distracted?

Here is the Four-point scale with response choice that students use to answer the question above:

1 No Improvement, 2 Little Improvement, 3 Some Improvement and 4 Big Improvement

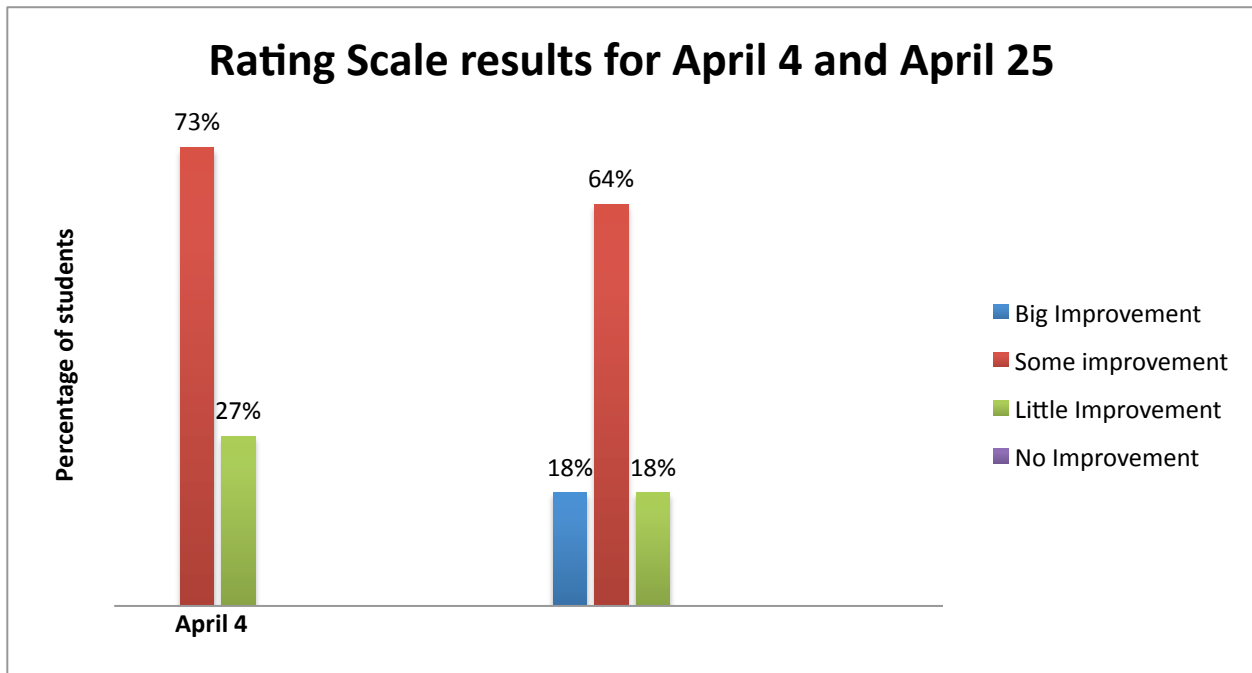


Figure 7. Rating Scales for April 4th and 25th

Date:	Girls	Boys
April 4	4 girls “Some Improvement” 2 girls “Little Improvement”	4 boys “Some Improvement” 1 boy “Little Improvement”
April 15	3 girls “Some Improvement” 1 girl “Little Improvement” * 2 girls did not answer	2 boys “Big Improvement” 1 boy “Some Improvement” 1 boy “No Improvement” *1 boy did not answer

April 25	1 girl “Big Improvement” 4 girls “Some Improvement” 1 girl “Little Improvement”	1 boy “Big Improvement” 3 boys “Some Improvement” 1 boy “No Improvement”
May 6	2 girls “Some Improvement” 2 girls “Little Improvement” * 2 girls did not answer	1 boy “Big Improvement” 1 boy “Some Improvement” 1 boy “Little Improvement” * 2 boys did not answer

After compiling all their data, I realized that I could use only April 4 and April 25 for my analysis as all the eleven students that consented to be part of the study had circled their answers. On April 15, 3 students did not answer and on May 6, 4 students did not answer.

April 4: 8 students out of 11(73%) showed “Some Improvement” whereas 3 students out of 11 (27%) experienced “little improvement”.

April 25: 2 students out of 11(18%) showed “Big Improvement”, 7students out of 11(64%) “Some Improvement” and 2 students out of 11(18%) “Little Improvement.”

The results from those two days indicate that the percentage of “Little Improvement” decreased after two weeks of the dance intervention, which showed that the dance program benefitted students who had difficulties attending to tasks. I also noticed that on April 25, two students taught that the dance movement program provided a “Big Improvement” in terms of

being more focused and less impulsive during work activities.

When given opportunities to reflect on their own learning process, students can start recognizing the value of the learning strategies.

Conclusion

Through my observations and data analyses, I learned many things about the dance program that I found valuable when supporting students with issues with attention and impulse control. First of all, UDL involves all students, including those with challenges. For example, after allowing my students to choose songs from their ipad and matching them to the steps, their level of engagement increased; they appeared to be more interested in the intervention. Second of all, students need to take responsibility for their learning. By giving them choices, students felt more empower to do the dance activity, which helped reduce their off-task behaviours.

Third of all, practicing dance sequences in a group could help students who lack interpersonal skills to build self-esteem and confidence. A student gains a greater confidence in his/her abilities when internalizing different steps and interacting with others while dancing. Finally, it is important to bring enjoyment in the intervention in order to reduce anxiety and stress. For example, after many dance sessions, I overheard several students stating that it was fun to dance. Perhaps, the “fun of dancing” stemmed from the social interactions, the opportunity to choose their own music and dances, moving around, and finally learning fun moves. Students need to be able to create, explore, and express in order to be able to sustain their attention and possibly reduce their impulsivity.

CHAPTER FIVE- DISCUSSION AND IMPLICATIONS

The purpose of this study was to investigate the effect of dance movement as an intervention for students with issues with attention and focus in academic work, with the potential of supporting students with Attention Deficit Hyperactivity Disorder, Fetal Alcohol Syndrome Disorder or Autism with these needs. In designing and carrying out this study, I sought to answer the question regarding attention and student focus in academic work. The research question was:

How can I improve my support for students who have difficulties controlling impulses and sustaining attention by implementing dance instruction in my French Immersion classroom?

The study consisted of a 5-week program, during which students took part in a dance movement program. Students were required to dance for 10 minutes after working on a subject for 40 minutes. In order to compare on- and off-task behavior after each intervention, I recorded students' behavior using an observation chart. The observation chart was used twice a week on Mondays and Fridays. The observation charts for the five-week intervention were then charted and compared for analysis.

Other data collections tools, such as intervention survey, student reflection entries and a researcher journal, were used to gather a variety of data that could be cross-checked for themes and patterns regarding students' attention and impulse control.

In response to the research question, I am convinced that a dance instruction program can

provide support for students' attention and focus in class. Through this action research project, I explored a variety of resources, dances, structure of program, timing and activities. I feel that I have gained knowledge and skills, both in implementing a dance program, and in systematic action research as teacher inquiry that will contribute to my teaching practice and student learning.

In Chapter 4, the results from the data analysis process were presented. In this chapter, the discussion revolves around these questions: Why does this dance movement program matter? How can it be used? How has my practice changed? What have I learned from this study? How has my study answered my question? This chapter also includes recommendations.

Discussion of Findings

After analyzing my data and my reflections, I realized that implementing a dance program as an intervention for students, who have difficulties attending to tasks in appropriate ways, definitely helped them to increase their level of engagement in class. There are many reasons why students become off-task, lose focus or become impulsive during a lesson, but by giving them the opportunity to get up and move around can unleash the excess energy and help them to re-focus. According to Mulrine, Prater and Jenkins (2008), "short energizers can give students the movement their bodies need to keep their minds focused on academic tasks (p. 16-22).

Implementing the dance movement program worked not only for students who have difficulties controlling their impulses and sustaining their attention, but also for all the other students who also need to move. These activities relate to literature reports by Gardner (1993) and Jensen (2000) who encourage the implementation of music and movement activities in every

classroom, from preschool through high school because it works.

Implications for My Own Teaching

Based on the successful implementation of the dance movement program and the positive effect that it had on student attention, engagement, and focus, I plan on continuing to use this intervention in my classroom. Because implementing a movement break in the middle of a lesson proved to be effective on student attention and behavior, I will continue to incorporate dance movement into my lessons regularly. I will implement this intervention in September, as it would become part of their routines. I believe that starting something new in September is easier than half way through the school year.

Recommendations

Based on students' percentages of on-task behavior, I believe that implementing a dance movement program can reduce the off-task behaviours and help students with their attention and impulse controls. I think that a possible benchmark for implementing the dance movement intervention should be after teaching for 25 minutes, as students' off-task behaviours start increasing after this length of instructional time. I also think that students should do the dance intervention for only 5 minutes instead of 10 minutes, for students become tired of dancing after 10 minutes.

In addition, the dance program was more appealing when students were active in choosing the music and matching it to the dances. Therefore, I would encourage teachers who want to use this intervention, to ask their students to give them a list of their favourite songs ahead of time in

order to become familiar with the lyrics and to see if the words are age appropriate. Then, I would recommend that students pick one song from that list and match it to a dance that they like. One day it could be the boys' turn to pick a song and the following day the girls'.

Finding the appropriate time to fit three interventions during the course of the day was extremely challenging. I would try to fit two dance movement interventions in the morning and one in the afternoon. I also recommend using a dance DVD at the beginning of the intervention, as it is easier to show different dance moves that they can later incorporate in their creative dances. Furthermore, I would encourage educators to incorporate weekly reflective journals in their planning in order to see the student's perspective on how a learning experience is making an impact.

Finally, I think it is important to maintain dialogue with students about their needs. Through this action research project, I began asking questions to my students about their lack of focus during work time, what I could do differently to help them to stay focused, what they would like me to do to keep them engaged. By the end of my study, the usefulness of talking with students about what was working for them and what was not became apparent to me. I am going to continue to talk with my students, both informally through class discussions, and formally, through surveys, about their attention and focusing needs. I will use the information I gain through discussions and surveys to reflect on my teaching and make any necessary changes to best serve the needs of my students.

Limitations

The limitations of this study included: small sample size, lack of randomization, no control

group and researcher subjectivity. The first three limitations do not allow the findings to be generalized. However, the mixed methods and different sources of data allow for triangulation, which is a qualitative way to improve and assess validity.

Another limitation of this study was that as the only researcher collecting data for this study, I was able to observe one student for only one minute. Through my observations and the data analyses process, it became apparent that I was not going to gather an accurate depiction of a student's on- or off-task behavior during such a limited time. I believe that my observations would have been more accurate if I had observed a student's behavior for an entire 10 minutes after the intervention.

Significance

I believe that the results of this study hold practical significance in that they will inform classroom teachers of the importance of providing opportunities for dance movement during transition time. Teachers are always looking for ways to make lessons enjoyable and improve student engagement. Thus, this study will allow teachers to see the potential benefits that may stem from using dance movement in the classroom as a means of improving student attention and decrease impulsivity.

Recommendations For Future Research

I would recommend that the dance program be teamed with other academic subject areas besides math to determine if it might improve focus in different learning areas.

Many questions concerning the relation between dance movement and children's cognitive

functioning remain unanswered. It is unknown whether improvements in attention focus and impulse control caused by dance movement are maintained following the termination of dance activity or if they decline. Further, it remains to be determined, for instance, if the benefits obtained are related to the type, duration, or intensity of dance movement programs.

Conclusion

This action research study explored the development and implementation of a dance movement program. Based on my findings, I feel that the strategies explored do improve my practice by providing support for students with attention and focus issues. Given the challenges these issues can pose for learning, particularly for students diagnosed with ADHD, FASD and Autism, a dance movement program in transition times through the day is recommended for students in order to engage them physically, allowing them to subsequently sit and attend to less active learning like math problems.

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Appendix A

Recruitment Form for

“Dance Movement, Attention and Impulse Control in a French Immersion Classroom”

Principal Investigator

Nicole Pilote, Master’s student, Faculty of Education, Vancouver Island University and French Immersion Teacher

Dear Parents/ Guardians,

In addition to being your child’s teacher this year, I am also a graduate student in the Master of Special Education Program at Vancouver Island University in Nanaimo. As part of the requirements of my Master of Education in Special Education, I am conducting a study to explore the use of dance movement in my teaching practice. I am interested in finding out if dance movement can help students to focus better in class and to improve their impulse control.

In my research on learning, movement and dance, I have become interested in the potential for a dance program to enhance student focus and attention, and have decided to implement this practice as part of our program.

Research has shown that regular activity increases the heart rate and promotes biological changes in the brain necessary for learning (Steven-Smith, 2008).

I will use dance movements as a way of transitioning from one subject to another. Students will do those movements at the beginning of each day, after recess and after lunch. The creation of each sequence will last 15 minutes and be based on a short piece of poetry or music provided at the start of the day. At the beginning of the study, students will be asked to fill out a 15 minute paper survey. At the end of each week, for a period of 5 weeks, students will be providing feedback on their learning experience in the movement program in reflective journals. Before and after movement activity times, on 1 day per week, I will use an observational checklist to record indicators of student attention such as focus on assignment in learning. I will keep a reflective journal where I will make general comments on class participation, interest, involvement and strategies tried in the dance instruction activities. The activities outlined above are part of regular classroom routine and that no additional activities are required for participation in the research.

All students will participate in the dance program as part of regular class routine but only those whose parents/guardians provide consent will have their information used in my study. Your

child's name, nor any information that might identify your child, will not be included in any presentations or publications of study results. Participation in the study is entirely voluntary and there will be no negative consequences if you choose not to have your child participate or your child, on his or her own, does not want to participate.

The results will be presented in my Masters' thesis and during a workshop with my colleagues.

I am contacting you to ask you to read the consent and assent forms enclosed, sign them, and return as instructed in the consent letter if you would like your child to participate in this study.

Contact for information about the study:

If you have any questions or desire further information with respect to this study, you may contact Nicole Pilote, research student, at Ecole Puntledge Park Elementary, 250 334-4495 or at 250 792-0104.

Concerns about your child's treatment in the research: If you have any concerns about this research, please contact the VIU Research Ethics Officer at reb@viu.ca or by telephone at (250) 753-3245 (ext. 2665).

Respectfully,

Nicole Pilote

VIU Student Researcher

French Immersion Teacher

Appendix B

Consent Letter for

“Dance Movement, Attention and Impulse Control in a French Immersion Classroom”

Principal Investigator

Nicole Pilote, French Immersion Teacher, Master’s student, Faculty of Education, Vancouver Island University, contact phone number: 250 792-0104

Research Supervisor: Mary Ann Richards, PhD, faculty of Education, 250-753-3245 Ext. 2834

Purpose of the study

Dear parents/ guardians,

In addition to being your child’s teacher this year, I am also a graduate student in the Master of Special Education Program at Vancouver Island University in Nanaimo. As part of my program, I am conducting a study called, “Dance Movement, Attention and Impulse Control in a French Immersion Classroom”. Your child is invited to participate in a research project on the use of dance movement and student attention and impulse control.

In this research, I plan to explore teaching strategies for dance instruction and student’s impressions of control over their own impulses.

The results will be presented in my masters thesis and during a workshop with my colleagues.

Study Procedures

As part of our regular class, all students will create dance movements as a way of transitioning from one subject to another. They will do those movements at the beginning of each day, after recess and after lunch. The creation of each sequence will last 15 minutes and will be based on a short piece of poetry or music provided at the start of the day. At the beginning of the study, students will be asked to fill out a 15 minute paper survey. At the end of each week, for a period of 5 weeks, students will be providing feedback on their learning experience in the movement program in reflective journals. Before and after movement activity times, on 1 day per week, I will use an observational checklist to record indicators of student attention such as focus on assignments, listening engagement in learning. I will also keep a reflective journal where I will make general comments on class participation, interest, involvement and strategies tried in the dance instruction activities. The activities outlined above are part of our regular class routine and no additional activities are required for participation in the research.

I am asking for your consent to use the survey data, observational data and reflective feedback that students create in class for the purpose of my research. I might want to quote some

statements students make, but their names will not be used and any identifying features will be removed.

Potential Risks

There are no potential risks in your child's participation in the research. Your consent to use your child's data is completely voluntary. There will be no negative consequences for not participating in the study.

Potential Benefits

There are no potential benefits to your child's participation in the research through consenting to use the data generated. However, my hope is that the dance project will benefit your child and the class as a whole through improved attention and impulse control.

Confidentiality

Your consent to use your child's data is completely voluntary. There will be no negative consequences for not participating in the study. If you choose to consent, please seal this completed and signed form in the envelope provided, and return to Maura Walls in the main office. She will store the consent form in a drop box until June 30th, 2014. At that time, consent forms will be opened, and data (survey, reflections and observations) will be collected from the students who are participants for analysis. Your child's participation in this project will be kept confidential. I will not know who will be participating until the end of June. Students will not be identifiable in my thesis or any other publications and presentations of the research. All documents will be kept in a locked filing cabinet for 2 years at my home. Electronic data and results of this study will be stored on a secured, password-protected computer located in my home.

If you consent to your child's participation in this project, please read the student assent section with your child, complete the sections below, seal in the provided envelope, and return to Maura Walls in the office by February March 14th, 2014. A second copy of this consent form is included in this package. Please keep the attached letter and copy of this consent form for your information.

Contact for information about the study

If you have any questions or desire further information with respect to this study, you may contact me at Ecole Puntledge Park Elementary, 250 334-4495 or at 250 792-0104.

Concerns about your child's treatment in the research

If you have any concerns about your treatment as a participant in this research, please contact the VIU Research Ethics Officer at reb@viu.ca or by telephone at (250) 753-3245 (ext. 2665).

Consent

Your signature indicates that you consent to your child participation in this study.

Your name(s) (please print)

Your signature(s)

Date

Student Assent

I understand that I am being asked to participate in Mme. Pilote's research project about dance and learning. I agree that she can use my writing from the survey and reflections and observe my behaviour as part of her project. I understand that this is voluntary and I do not have to take part. I understand that I can withdraw from the study by making a withdrawal request to the School Secretary, Maura Walls prior to June 30th, 2014.

Student Signature

Appendix C

Survey

On Movement and Learning

Please circle the face that best represents you.

1. How does my body feel after sitting for 20 minutes?

I feel:



2. When the teacher is talking, I can listen actively for ...



whole time part of the time very little

3. I have strategies I can use when I feel distracted or unfocused.



whole time part of the time very little

4. When I am active it prepares my brain to learn...



whole time part of the time very little

5. Dance is one of my favourite ways to be active...



whole part of very
time the time little

6. Working with patterns, form and rhythm help

prepare me to learn....



whole part of very
time the time little

7. I am physically active after school at least twice a

week...



whole part of very
time the time little

Put an X in the box that best fits your personality trait.

8. I think I am a

visual learner

auditory learner

kinesthetic learner

9. I prefer this type of dance

creative dance

- line dancing**
-
- hip-hop**
- tap dancing**

10. I have difficulties controlling my impulsivity towards

others

- When my peers make fun of me**
- When they don't let me play**

Appendix D

Weekly Reflections

Nom: _____

Date: _____

Week 1:

Explain how you felt after creating all those short dance sequences this week?

Use this rating scale to answer the question below.

1. No improvement 2. Little improvement 3. Some improvement 4. Big improvement

Were you able to focus on your class assignment for a longer period of time without being distracted? 1-2-3-4

Appendix E

Weekly Teacher Observation Checklist

Directions: Each [] represents a 30 seconds observation after one transition dance. Observe each student once; then record data. Collect data for the whole class (approximately 15minutes)

Record Monday, Wednesday and Friday for 5 weeks

Recording Codes:

On Task Code: OT

Off-Task Codes:

T: Talking Out/Noise: Inappropriate verbalization or making sounds with object, mouth, or body

O: Out of Seat: Student fully or partially out of assigned seat without teacher permission.

I: Inactive: Student not engaged with assigned task and passively waiting, sitting, etc.

N: Noncompliance: Breaking a classroom rule or not following teacher directions within 15 seconds.

P: Playing with objects that are not accepted as a fidget

N: Pseudonym

First Week

Date: _____

N: Monday Wed. Friday [] [] []	N: Monday Wed. Friday [] [] []	N:	N:
N: Monday Wed. Friday	N:	N:	N:

[] [] [] N: Monday Wed. Friday	N:	N:	N:
[] [] [] N: Monday Wed. Friday	N:	N:	N:
[] [] [] N: Monday Wed. Friday	N:	N:	N:
[] [] [] N: Monday Wed. Friday	N:	N:	N:

Comments:
