TEACHING ART TO STUDENTS WITH SEVERE TO PROFOUND DISABILITIES:
UTILIZING SENSORY STIMULATION
THROUGH
ACTIVE LEARNING METHOD

A thesis submitted to the College of the Arts
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The primary purpose of this action research study was to examine my own teaching strategies and the effectiveness of the lessons utilizing art materials that stimulated the senses when teaching art to students with severe to profound disabilities. The sessions were based on the Active Learning method, defined by Lilli Nielsen as strategies that encourage independence in the students’ exploration with the materials or their environment. This research investigated three sensorial stimulations through art making with the participants: auditory, olfactory, and tactile. Each session was video recorded and then analyzed for the participants’ responses and reactions to each sensory stimulated art activity to determine the most effective teaching strategies. Other methods used were documentation/data collection, self-journal writings through critical reflection, and interviewing of an intervention specialist. Based on the results and my reflections, students with disabilities can benefit from Active Learning because it fosters student independence, but it does require flexibility as well as persistence and patience for both teachers and students.

Through this research, my goal was to apply critical self-reflection in order to create more meaningful art lessons for the students with severe to profound disabilities in the future. I want my students to explore more of this world through art making as well as
share my experiences with other art educators and encourage them to learn how they can accommodate the needs of the students with multiple disabilities. This study demonstrated how teachers can focus on students’ abilities through utilizing a modified Active Learning method so that the students have autonomy in creating artworks.
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CHAPTER ONE
INTRODUCTION

Overview

This thesis is about students with severe to profound disabilities having autonomy through art making, a teaching method that facilitates their independence, and the researcher’s self-reflection as the students’ art teacher, a person, and a researcher. This research seeks to provide encouragement to teachers who provide art education to students with disabilities, offers positive transformation in thoughts through honest reflections, and presents an Active Learning method that could be modified to implement in art lessons for students with disabilities. It also includes three sensory system art lessons: olfactory, auditory, and tactile senses that could be incorporated for sensory stimulating art lessons to enhance the student’s daily experiences.

This study emphasizes the significance of self-reflection for my own improvement in teaching art to students with severe to profound disabilities. It provides
stories from an art teacher’s perspective, how we, as people whose lives evolve around children with disabilities, can listen carefully to the unheard voices of students with disabilities through art making. Most importantly, this study demonstrates how art teachers can focus on students’ abilities through understanding the students’ needs and desires through trained communication over the years.

**Background of the Study**

The background of this study introduces my own personal anecdotes as a 1st-year art teacher for students with severe to profound disabilities at the charter school that is specifically designed for students with disabilities. I intend to disclose the struggles, difficulties, and burdens as well as my happiness, successful moments, and transformation in my thoughts that I faced as a beginning art teacher without any teaching experience with students with severe to profound disabilities. It was incredibly challenging, and at times I wanted to quit and run away from the battlefield; however, through many shed tears and much frustration, now I can confidently say that I am very grateful for my students and my experiences. Because of all the hardships, I was able to open a brand new chapter in my life that consisted of unforgettable experiences, creative ideas, critical reflection, and life-long learned lessons.

The charter school provides services and education for children with disabilities. They offered me my very first teaching position as an art teacher. Unlike many other organizations, this facility accommodates medically fragile individuals in a residential facility, which includes a school in the same building. During my orientation I learned a
great deal about the founder of the facility. She was a nurse who had a special devotion to children with disabilities. As I watched the video about her, I wanted to develop a heart like hers and serve the children through art. Learning about her provided me with the encouragement I needed to take the first step as an art teacher in the field of special needs.

The definitions of *art* are countless and varied. Many factors can contribute to defining the term. As for my own definition, art can be an independent or group process or activity that can illustrate the skills, creativity, thoughts, emotions, knowledge, and experiences of the artist(s). As an art teacher, I situated myself to become a facilitator who should be able to instruct students to create “art;” however, I recognized that my own definition of art was not applicable during my first day at the school. I walked into my classroom to find six students and two paraprofessionals. The initial challenge was student independence. Because of their severe physical disabilities, student movement ranged from absent to uncontrollable. The second difficulty that I faced was the creative process itself. Because of the severity of their mental retardation, the majority of the students were incapable of demonstrating their own creativeness through art making. Third, I did not know how much vision each student had in order to see colors, objects, shapes, and materials. Another problem was the students’ medical fragility, which varied according to the student. Finally, I had no rapport with the students to provide art education; and I did not understand their unique communication skills. I am generally calm and able to think things through: I can deal with struggles and difficulties; however, the foregoing images ran through my mind a hundred miles per second on the first day of teaching.
I desperately needed help. I began by reading the students’ history files. As I was reviewing the students’ files containing Individual Habilitation Plans (IHP), Individual Educational Plans (IEP), and other social work files, I realized how much knowledge I lacked in this field. Thankfully, the paraprofessionals with whom I worked had 10 to 20 years of experience at the students’ residential facility. They knew the students’ medical needs, habits, behaviors, communication skills, preferences, and most importantly secret methods to make students laugh or smile. Trying to remember what to do in certain situations was difficult, and most of the time paraprofessionals were busy taking care of each student’s personal needs. Many unexpected situations happened very quickly; for example, as soon as I was alone with the students, one student started crying because of personal needs at the same time another threw toys from his tray. A student across the room ate the art materials while the student next to her laughed hysterically. Another was startled by the loud laughs and had a seizure. As a result of the situation, I sat next to the crying student and cried with her and may have been louder than her! Not every moment was chaotic, but many certainly were.

As days passed, I had to think fast and remain positive. I realized that my attitude needed adjustment, and I needed to search for possibilities. I recognized that this job as an art teacher was not for my own good but for my students’ benefit. I transformed my perspective from concern for the unchangeable disabilities of my students to a search for each individual’s specific abilities; furthermore, I believe what the others had written on pieces of paper contributed only a small addition to the knowledge I gained from one-on-one interaction with each student.
Each day, I planned my lessons the way I learned from my college professors. From the very beginning, I confidently used hand-over-hand assistance with my students to create their artworks. According to the lesson, I held the students’ hands to create various movements with the tools and materials. If we were to paint, I placed a paintbrush in the student’s hand and painted with hand-over-hand assistance; or if we were to use clay, I used the hand-over-hand method to press down on the clay and created whatever I felt like making without much of the student’s participation. Many students were passive and moved their hands and arms around as directed by the assistant. Not all students participated in hand-over-hand assistance because they did not allow any other people to touch their hands; therefore, an assistant verbally explained to the student what kind of art was being done without the student’s actual participation. During this process, the student received a verbal interpretation of creating art. I soon questioned hand-over-hand assistance and the ownership of the artworks. Looking at the finished products, I was uncertain about the ownership of the artwork: the student because the art activity was for him or her; the person who assisted with hand-over-hand method because their creativity was involved; or both the student and the assistant sharing the ownership of the artwork. Basically, the assistant created the artwork. That was not what I envisioned for my art class, but I simply did not know any other ways.

Then gradually and fortunately, I was able to identify each student’s specific abilities and understand her or his communication methods. Understanding the students’ skills opened up whole new possibilities for lesson ideas. I was able to ask color preferences, material choices, likes and dislikes, favorites and least favorites, and wanted
and unwanted assistance. I searched for helpful guides, handbooks, articles, and any advice from previous college professors. The more I researched the field of severe to profound disabilities, I recognized that it was unproblematic to find information about mild to moderate disabilities; but little research covered the severe to profound range of disabilities. I do not want to criticize the hand-over-hand method, but I learned other strategies, such as Active Learning by Lilli Nielsen (2001), that are far more effective with students with severe to profound disabilities.

I thought to myself: This will be a temporary job before I attend graduate school to study special education, and working at the facility would provide excellent experience; however, despite my intentions for only a brief stay, I sought more knowledge about the field of art education in special needs, focusing on severe to profound disabilities. I decided to pursue graduate work in art education, concentrating on students with severe to profound disabilities. The strong relationship that I created with my students expanded my heart and gave me the desire to learn more about them and seek a way to inspire better lives through art making. In order to accomplish that, I had to improve my own teaching strategies, methods, and approaches for the students in my classroom. I wished to bring hopes, dreams, new understandings, improvements, and supports for the art teachers working with students experiencing severe to profound disabilities through this thesis.
Purpose

The primary purpose of this study was self-improvement in teaching art to students with severe to profound disabilities, utilizing art materials that stimulated the senses. I aimed to study my own teaching strategies and the effectiveness of the lessons by examining the participants’ responses and reactions to each sensory-stimulated art activity through the Active Learning method, defined by Nielsen (2001) as strategies that encourage independence in the students’ exploration with the materials or their environment. Nielsen’s research brought innovative ideas in material use to my own classroom and challenging ideas that allowed students’ independence in art making.

Through this research, my goal was to apply self-reflection to create more meaningful art lessons for students with severe to profound disabilities. I was interested in exploration of various materials beyond what was known as typical art materials. I wanted to bring the world to my students through art materials. Many students spend most of their lives inside the facility or if they are healthy they may take brief walks with a volunteer; therefore, I desired to bring the world to them in small bits and pieces via an art form. Self-reflection guided me to see and understand my own thoughts, behaviors, reactions, and vulnerabilities as a teacher.

In addition, I want to share my experiences with other art educators. Numerous teachers face similar struggles and challenges when teaching students with severe to profound disabilities, so through this study I would like to encourage teachers to learn how to accommodate the needs of students with multiple disabilities and not to fear or be discouraged by the students’ disabilities. Only limited resources are available in the field
of art education on teaching individuals with severe to profound levels of disabilities in contrast to the mild to moderate range of disabilities. The methods of Active Learning are not widely known in the art education field, especially with regard to teaching art to students with disabilities. Through combined lessons in sensory stimulation and Active Learning strategies, art educators can potentially improve their understanding of Active Learning approaches as well as the teaching of art making with students experiencing both cognitive and physical disabilities. Careful examination can benefit the participants as well as peers experiencing similar disabilities. Through this research, I was able to better understand and improve my knowledge of the way auditory, olfactory, and tactile stimulation can foster learning and how it can be modified in future lesson planning.

**Significance of the Study**

Following the Education of All Handicapped Children Act of 1975, an increasing number of students with disabilities joined the regular classroom setting, including art classes, throughout the nation (Schiller, 1999). The field of art education is slowly growing its understanding of students with special needs and implementing various practices used in special needs education; however, the pace of this development in art education is not fast enough for students with special needs. In order for the field of art education to grow more rapidly, I believe art educators who are teaching students with disabilities need to share their experiences and ideas. It is important for those art teachers also to add the improvements they made throughout their experiences and ideas suggested in the field of art education. Guay’s (1994) survey study of 535 art education
professionals involved in the National Art Education Association revealed unprepared art educators teaching students with disabilities:

Of the 106 teachers who identified needed knowledge areas and skills not covered by their preservice education to teach students with disabilities, 47% emphasized they felt totally unprepared, needing “anything” or “everything.” When the remaining answers were categorized, 35% of the respondents needed more information about disabilities and understanding or assessing the needs of students with disabilities, 36% needed specific art-related knowledge, including methods for media and instructional adaptation and information about evaluation/grading. (p. 51)

Guay’s (1994) study generated the following question: “How prepared are we as art educators to teach students with disabilities?” As in Guay’s findings, I was unprepared to teach students with disabilities right out of college. I jumped into the field of special education unawares with little guidance from written resources such as handbooks, lesson books, guidebooks, and more. My only resources were intervention specialists and paraprofessionals who had been working with the students for over 10 years.

More than 70% of the teachers in [Guay’s] survey felt unprepared or only minimally prepared to teach in integrated classrooms; yet this is the most frequently implemented model for the art education of students with all but the severest disabilities. (Guay, 1994, p. 54)

Many theories, practical suggestions, and research results can help educators to understand the student with disabilities but only through the mind of the readers. In my
practical study I hope to contribute actual experience with teaching art to students with disabilities to the field of art education. It will guide art educators, intervention specialists, and paraprofessionals to understand how individuals with severe to profound disabilities can participate and engage in various art-making activities.

Furthermore, numerous scholars and researchers acknowledged the fundamental and vital part that art plays in everyone’s life. Art engages the development of the senses based on observation, imagination, and memory through experiencing sight, touch, feeling, and smell. For special educational needs, personal experience and personal responses represent the starting point for an art activity. The art teacher is to support the idea that the expectations of progression and result correspond with the child’s level of development and aptitude. In addition, the teacher should offer a variety of opportunities through resources and materials by having available supplies throughout the art room. Thus, I advocated the idea that through Active Learning strategies by Lilli Nielsen, art teachers can provide sensory stimulated art activities for students with severe to profound disabilities in a creative way. The combination of the Active Learning methods and art activities is a novel method in the field of art education.

This study was conducted to facilitate further investigation via critical reflection and examining myself through use of Active Learning in my own classroom. Through this self-study, I wished to increase knowledge in the field of art education with a new method of Active Learning and hoped to provide encouragement and beneficial ideas for art teachers, intervention specialists, parents, paraprofessionals, and everyone involved with the students with severe to profound disabilities.
In addition, endless possibilities exist in creating art lessons; however, when the student has severe to profound disabilities, many lessons will take alternate routes or need adaptive tools to achieve the objective of the instruction. I hope my reflection on lessons can be helpful to beginning art teachers and establish new research ideas for the advanced art teachers. This thesis can be a steppingstone for art teachers to adopt and implement various art lessons by focusing the students’ abilities through the Active Learning method with various sensory stimulations. I want my readers to know that I am still engaged in the learning process, and I will always be in experimental stages of creating lessons. This thesis describes the initial phase, which comprises art educators reaching out to the population of individuals with severe to profound disabilities so that the students have equal opportunities to create art to the fullest potential possible.

**Bias and Limitations**

I consider my strong rapport with the students a source of bias in this study. Loesl (2006) recommended that art teachers build meaningful relationships with students in
order to initiate different plans and develop new tactics. I am very aware of the closeness between my students and me. I can answer a majority of questions about the students. Most of the time, I can effortlessly distinguish the student’s feelings or needs from his or her facial expression or body language. In addition, I can identify student preferences from previous experience and have acquired some techniques to motivate happier moods in the students. Along with my solid rapport with the students, I also consider my emotional attachments to the students another source of bias. I am satisfied when the students express their happiness and contentment. They hold a special place in my heart, and I am grateful for them everyday.

Furthermore, the nature of the design caused some recognizable limitations. In order to improve my own teaching, receiving advice and comments from the students would help me tremendously; however, because of the students’ disabilities, I could not glean full details of their thoughts and opinions about a project. It was difficult to collect data on such inquiries: how much each student learned and understood the concept; what kind of value they gained through the lessons; and to what degree they liked or disliked the project and why. In addition, the students presented a variety of levels of abilities. Medically, the students were classified as being in the severe to profound range; however, despite the written documents, each student was unique and able to express his or her abilities in various ways.

Finally, the students’ medically fragile conditions caused another limitation in this study. At times, medication was dispensed as a result of their mental, physical, and
emotional conditions. The medications sometimes caused them to be drowsy, irritable, and impatient during the learning situation.

**Definitions of Terms**

**Students with Severe/Profound Disabilities**

The definition of *severe disability* has been divided into three categories: moderate, severe, and profound mental disabilities. Characteristics of individuals with severe disabilities often include self-stimulatory behaviors, incapability to care for themselves, and the inability to communicate verbally. According to the American Association on Mental Retardation (AAMR), IQ range for persons with moderate mental retardation is 50–55; for persons with severe mental retardation, 35–40; and for persons with profound mental retardation, 20–25. An IQ score of 20–25 corresponds with a developmental age of birth to 12 months. Individuals with moderate cognitive disabilities are capable of learning basic skills in the areas of communication, self-help, functional academics as well as social, community, and vocational skills. Individuals who have severe motor and cognitive disabilities may experience difficulties in self-feeding, dressing, bathing, independent toileting, and hygiene skills. Services for an individual with profound cognitive and motor impairment must include a curriculum focused on mobility, communication, self-care, employment, independent living, and self-sufficiency (Fox & Westling, 2000).
Art

As mentioned earlier in this chapter, I defined art as an independent or group process or activity that can illustrate the skills, creativity, thoughts, emotions, knowledge, and experiences of the artist(s). However, as I understood the students a bit better, I believe my own definition of art does not have to imply directly to my students. I cannot define their own meaning of art as they create something that others label “art.” As I modify my own thoughts and understandings, I rely heavily on experience of the artists as defining what is considered as art. To others, what my students with profound and severe disabilities are creating would logically be akin to art-like activities; but I believe more accurately through their own self-motivation to manipulate the materials, the experience of each moment of making marks, and the learning that occurs while they are creating something novel is indeed what I consider art.

Students

In this thesis research, participants are identified as students. They are identified in this manner because they are learners engaged in Active Learning method and involved in sensory stimulated art lessons. The students are in control of their own learning through their independent exploration of the art materials. In addition, students recognize my name as “Daisy” instead of Young-Ji; therefore, I utilized “Daisy” in this thesis.
Active Learning Method

For most of the art sessions designed to engage the students in creating art, I implemented an approach known as Active Learning strategies, introduced by Lilli Nielsen. The philosophy of Active Learning holds that a child can use his or her own action to learn how to explore and discover through given opportunity or circumstance (Nielsen, 2001). This may seem redundant and time-consuming when put in practice. No sudden outcomes occur in the beginning; however, this technique serves as an avenue for students to learn independently at their own pace. The process will not force them to learn, and the student is in control of everything. At first the student may not seem to have any movement or response, but slowly independent learning becomes natural and engages his or her personality through learning.

To implement Active Learning method the students are provided with the materials. While the students are not engaged in the art session with a teaching assistant or myself, the students are offered Active Learning materials. They come in various forms. Some are commercially produced, and some I myself created. The ones that I made are either on a wooden board or a metal bar. I mixed various textured materials: a variety of carpet samples, rubbery toys, and soft and rough dolls; items that make sounds: bells, metal spoons, chimes, and hard plastics; and “theme” materials: visual art pieces, music, kitchen items, soft, and hard materials.
Communication

The students with severe to profound disabilities use various communication methods. In most cases, they do not communicate verbally with sentences or words, but they can vocalize sound to answer yes or no questions. Those students who do not have vocal communication skills can express themselves through bodily gestures, facial expressions, eye gazes, eye blinks, reaching for the decisions, assistive technology, and communication devices, such as various switches and computer usage. Everyone has a different level of communication skills; some students are able to express through one avenue, and others are able to express it multiple ways.

Sensory Stimulation

Human beings can experience five different senses: taste, auditory, olfactory, visual, and tactile sensory stimulation. Students did not, however, use taste and visual sensory stimulation for this study. Because of the students’ disorders, allergies, and hazardous choking circumstances, I omitted stimulation by taste. In addition, visual sensory stimulation was eliminated because I did not know the visual range of each student and could not determine how much they can see merely by observing their expressions or behaviors.

The remaining three senses were part of this investigation: auditory, olfactory, and tactile senses. The auditory sense involves hearing sounds. In Active Learning method, students who experienced visual impairment or blindness exercised auditory sensory methods to create art. The olfactory sense involves the sense of smell. The
majority of the students can apply the olfactory sense to food, fragrance, aroma, and more; however, students who have undergone tracheotomies (creating an air pathway through the neck to assist breathing) may have difficulty with the olfactory sense. The tactile sense suggests touch through material manipulation, temperature, weight, and more. This could be applicable with most of the students who have visual impairment or blindness. In addition, tactile sensory stimulation is a major part of Active Learning tactic.

**Intervention Specialist**

In this study, an intervention specialist is indicated as the student’s homeroom teacher. Intervention specialists are qualified to teach as they have a teaching certification in special education from the Ohio Department of Education. Depending on their special education teaching certificate, the intervention specialists either have mild to moderate or moderate to intensive level of teaching certificate. They are responsible for writing and implementing the student’s Individual Education Plan (IEP), attending the medical reviews meetings and Individual Habilitation Plan meeting each year. Intervention specialists teach all of the subjects except for art and music.

**Paraprofessional**

In this study, a paraprofessional is recognized as the intervention specialist’s classroom assistant. Each class contains one intervention specialist and one paraprofessional for six to eight students. The paraprofessionals hold certification from the Ohio Department of Education to assist the intervention specialist. They are
responsible for implementing the student’s IEP goals and objectives, for assisting in their personal needs, and supporting the intervention specialist throughout the sessions.

Teaching Assistant

In this study, a teaching assistant is known as both an intervention specialist and a paraprofessional as they are assisting in the student’s learning in art. For this study, a teaching assistant is whoever is involved in the process of assisting the students to accomplish the art task. Any adult helper to the students in my art class was recognized as a teaching assistant other than myself as the art teacher.

Habilitation Assistant

All of the students at my school reside at the facility where they have habilitation assistants who take care of the students’ needs. Habilitation assistants are responsible for the students’ personal needs, hygiene, implementing the IHP goals, feeding, positioning the students’ body according to directions in individualized therapy notes, clothing, bathing, shopping, and providing students with entertainment such as radio, television, movies, and music.

Conclusion

In this chapter, I introduced the topic of this thesis. An overview of the study, background of the study in the context of my experience as a beginning teacher, purpose and significance of this study, bias and limitations, and definitions of terms are included.
CHAPTER TWO
REVIEW OF RELATED LITERATURE

Introduction
This chapter will consist of research on literature that identifies topics associated with students with disabilities and Active Learning method. First, it discusses the progression of disability history and policy in the United States starting from late twentieth century to present day. Then it focuses on art education with people experiencing disabilities that Funk (1987) talked about in four evolutionary phases. In addition, this chapter will review information on legal perspectives of students with special needs, and how they are defined medically. Then it moves onto sensory information and how olfactory (nose), auditory (ear), and tactile (skin) sensory organs function to perceive various sensations in the human body. Lastly, this chapter will concentrate on the Active Learning approach with students with severe to profound disabilities. It provides a connection between the Active Learning and sensory experiences as well as the importance of repetition in Active Learning method. Overall, this chapter illustrates the improvements society has made throughout the years of struggles people with disabilities have dealt with and how methods like Active Learning benefit the learning of students with disabilities.

History and Social Contexts of Students with Disabilities

The evolution of disability history and policy in the United States can be described as the increasing humanization of disabled people: humanization is defined as a recognition that disabled people have human needs and
characteristics, and public policy must be designed to reflect and further this human potential. (Funk, 1987, p. 8)

Before the late-twentieth century, historical records indicate that society treated people with disabilities with negligence, inequality, discrimination, rejection, and inadequate service (Blandy, 1991). According to Longmore and Umansky (2001), “because older works in disability history operated from the perspective of medical pathology, they typically presented people with disabilities as passive” (p. 8). The historical perspectives found that this medical pathology theory fostered a society with a misunderstanding and a false impression of individuals with disabilities. This medical perception also led scholars to treat the disability as the individuals’ medical histories, instead of social, cultural, or political history.

Moreover, Goessling (2000) employed words like ignorance, isolation, and insulation to summarize the history of the way society attended students with disabilities. Ignorance is illustrated by the rejection that was experienced by many individuals with severe disabilities from their families and society during the nineteenth century. Isolation of students with severe disabilities in the first half of the twentieth century was demonstrated by the redefinition of who was eligible for special education in a school setting. Students with disabilities required an IQ above 50 which continued to leave out students who were labeled with severe mental retardation. Even enrollment of private residential facilities or special schools refused to accept students with multiple disabilities because they were considered uneducatable. Those students who were isolated from public education were kept in state institutions or homes. By the mid-twentieth century,
society was able to experience the institutional lives of individuals with severe disabilities through a photographic essay, *Christmas in Purgatory* (Blatt & Kaplan, 1974). The essay provided disturbing photographs of state institutions which depicted unsanitary, insufficient, and dehumanizing conditions that shocked society. During the 1970’s to 80’s, the nation’s consciousness was awakened for students with disabilities and their education through many court decisions and mandated federal legislation, which will be detailed in a later section in this chapter. Nevertheless, while a history of ignorance, isolation, and insulation was not the greatest treatment for individuals with disabilities; it could have been a step towards the acceptance, deinstitutionalization, and inclusion of present day service (Goessling, 2000).

In the early 1990’s, there was a paradigm shift and a reconstructing of special education through inclusion or inclusive schooling. “The call for inclusive education is the outcome of a complex set of discourses about the equality of education that is driven by changing demographics, ideologies, and perceptions of marginalized groups as well as by associated social issues” (Winzer & Mazurek, 2000, p. ix). In general, special education grasped the concept of inclusion as offering equal education in the school or classroom for students with and without disabilities. To be more specific, inclusive education allows students with disabilities to be taught in the general classroom along with their peers for the full day. It also permits support staff(s) and/or services to be brought to the student rather than segregating them from the student’s peers or settings. However, many educators, parents, and scholars believe “the very term inclusion is problematic” (Winzer, 2000, p. 7). The definition of inclusion varies from person to
person, and there is no single interpretation that is equivalent to the needs of all students in the process. In addition, diverse perspectives are suggested by people who are working within different disability areas, so the term does not create harmony within a broad field of special education. The term is still being reformed and redefined; however, despite the definition of the terminology, educators, parents, scholars, and advocators are all working towards the same goal: providing equal and quality education for students with disabilities (Winzer, 2000).

**Art Education and People with Disabilities**

*People who are disabled have historically been treated as objects of pity and fear—individuals who are incapable and neither expected nor willing to participate in or contribute to organized society. Thus, a societal attitude developed that this class of persons, viewed as unhealthy, defective, and deviant, required special institutions, services, care and attention in order to survive* (Funk, 1987, pg. 9).

Funk (1987) has divided art education with people experiencing disabilities’ evolutionary process into four phases that are beneficial in recognizing the responses of art educators toward people experiencing disabilities. The first phase, during 1700-1920, is where Funk illustrates a period that established the family or local community affiliates as the primary care givers for individuals experiencing disabilities. Soon after, large residential institutions were built for people with disabilities to gather in common facilities. Funk indicated that the people living in these institutions participated in art activities; however, there is no clear evidence that these institutions supported the idea of art education programs. During 1812, psychiatrist Benjamin Rush was notorious for
collecting the cartography (art or technique of making maps and/or charts) of patients. They categorized this art as “art of the insane.” By the 1860’s art was less evident in the institutional settings, but it became a diagnostic tool for determining nonfunctionality and psychopathology. By the end of phase one, art for people with disabilities became associated with rehabilitative and remedial purposes.

Next, phase two lasted from 1920-1940. Funk (1987) illustrated this period as being the beginning of over population in large residential institutions. The increasing growth of patients occurred concurrently with an increase in the number of specialists associated with the care, education, and rehabilitation of people with disabilities. Some of the included specialists and educators were recognized as the art teachers. In addition, a growth of literature became apparent associating art education with people experiencing disabilities. Art educators created classifications for persons with disabilities as, “abnormal” children, “mental retardation,” “deafness,” “socially maladjusted,” “visually handicapped,” the “delinquent,” “slow learner,” and the “cerebral palsied” (Blandy, 1991, p. 135). Furthermore, researchers like Charles D. Gaitskell, Margaret R. Gaitskell, and Viktor Lowenfeld supported further studies in art education with students experiencing disabilities (Funk, 1987).

Subsequently, during the period of 1960-1975, Funk (1987) characterized phase three as a period that began to acknowledge the inadequacy of the large, over populated institutional system. This was a successful era for the integration of individuals with disabilities into the larger community. Improvement of legislation, including the Rehabilitation Act of 1973, facilitated smoother integration and forbade discrimination in
federally supported projects. During phase three, the “normalization principle” gained interest when Wolfensberger accentuated that professionals assisting individuals with disabilities should center their work on the “utilization of means which are as culturally normative as possible” (Blandy, 1991, p.135). This principle continues to be prevalent in art education literature. In addition, a number of art educators persisted in their research reminiscent of phase two on an explorative and/or rehabilitative emphasis. Other attributes by art educators during phase three comes from a 1975 National Art Education Association and Illinois Arts Council, which focused on special needs with a conference titled “Art Education and Special Education.” The conference gathered both art educators and intervention specialists from Canada and the United States to discuss issues in the associations between art education and special education, appropriate teaching strategies, continuing education, and integrated curriculums. However, the result of the conference communicated basic concerns about the preparedness of art educators to participate in the mandates of Public Law 94-142 which states that school districts provide suitable education for all children including children with disabilities (Schiller, 1999).

Lastly, in the period of 1976-1985, Funk (1987) differentiated the fourth phase as a time when disability developed into a completely shaped civil rights issue. During phase four, significant numbers of people with disabilities began to advocate for themselves. This became evident through public activists demanding accessible housing, education, employment, transportation, and communication services. “People experiencing disabilities recognized that they were not inherently disabled, but were
struggling with human-made environments that failed to adapt to their needs” (Blandy, 1991, p. 137). Moreover, another conference was held for art educators and individuals experiencing disabilities. The National Committee Arts with the Handicapped, now renamed Very Special Arts International conference critically concentrated on the Rehabilitation Act of 1973 and Public Law 94-142. In result, participants acknowledged the U.S. Individuals with Disabilities Education Act (1975) that education for students with disabilities should take place in the “least restrictive environment” as well as in integrated settings. After the conference, art educators suggested various integrating strategies, specific methods such as the Individualized Education Plan (IEP) and task analysis. However, art educators throughout this period categorized disabilities, which brought the unknown information more visible that portrayed the functional-limitations of the students (Blandy, 1991).

**Legal Perspectives of Special Needs and Education**

The continuation of the revolutionized special educational legislation draws a parallel with the attitude that was portrayed by society in each time period. The Civil Rights movement of the 1960s brought a legal basis for equality in America, and this brought a natural progression for individuals with disabilities to request the same equality rights as an American. In addition, parents, professionals, and advocators demanded equal access to educational opportunities for the students with disabilities. In 1973, the Rehabilitation Act (Public Law [P.L.] 93-112) had forbidden discrimination on the basis of disability in employment and any programs managed or supported by federal agencies.
Also in the same year, Section 504 of the Act assured availabilities and banned
discrimination due to disabilities in educational services, communications, and other
programs accessible to non-disabled peers (Burnette & Lokerson, 2006). Two years later,
The Education for All Handicapped Children Act of 1975 (P.L. 94-142) was passed. The
legislation mandated school districts offer suitable education for all children with
disabilities (Schiller, 1999).

Fifteen years after the development of the Rehabilitation Act of 1973 and Section
504, legislature improved the law through the Americans with Disabilities Act (ADA) of
1990 (P.L. 101-336). The ADA enhanced protection against discrimination to public
businesses and organizations, employment, transportation, public accommodations, to
local, state, and federal government facilities, services, and to communications. Moreover,
Title II of ADA particularly protected elementary, secondary, and postsecondary students
from discrimination by offering academic modifications and adaptations necessary to
guarantee equal opportunities (Burnette & Lokerson, 2006). In addition, the Education
for All Handicapped Children Act of 1975 was reauthorized to the Individuals with
Disabilities Education Act of 1990 (IDEA 1990). The change provided language that
specified the procedures for free and appropriate public education to implement and
create equal opportunities for children with disabilities. Along with IDEA 1990, the term
“handicapped” was modified to “disabilities” because handicapped connotes a state that
is nonchangeable, whereas “disabilities” give the impression that the child has the
opportunity to improve or work through the disability (Schiller, 1999).
Art education under the law of the Education for All Handicapped Children Act of 1975 was viewed as a relative/support service, but there was no specific reference to the arts in general. A gradual improvement was seen in schools that included mainstreaming and inclusion of students with disabilities in general education classes. In 1997, IDEA underwent another change that focused on students’ learning and consequent assessments to determine learning. Students with disabilities now participate in statewide testing, and the teachers are required to develop Individual Education Plans (IEP). The most recent IDEA reauthorization was made in 2004 as the Individuals with Disabilities Education Improvement Act (IDEA, 2004), P.L. 108-446. Similar to the No Child Left Behind (NCLB) Act of 2001, the arts are now listed as part of the IDEA 2004’s core academic subjects. Other concerns were addressed such as alternative assessment, IEPs, transition, teacher quality, disproportionality, enforcement, and eligibility for special education (Burnette & Lokerson, 2006). According to the Ohio Department of Education, the most recent updated IDEA of 2004 was revised and effective July 1, 2008. “The intent of these revised requirements is to ensure that children with disabilities have equal opportunity, full participation in education, independent living and economic self-sufficiency” (Ohio Department of Education, 2008).

**Severe to Profound Disabilities Medically Defined**

The definition of severe disabilities has been divided into three categories, moderate, severe, and profound mental disabilities. Characteristics of individuals with severe disabilities often include self-stimulatory behaviors, incapability to care for
themselves, and the inability to communicate verbally. According to the American Association on Mental Retardation (AAMR), IQ ranges for persons with moderate mental retardation are 50-55, persons with severe mental retardation are in the range of 35-40, and persons with profound mental retardation range in IQ from 20-25. An IQ score of 20-25 corresponds with a developmental age of birth to 12 months. Individuals with moderate cognitive disabilities are capable of learning basic skills in the areas of communication, self-help, functional academics, social abilities, community, and vocational skills. Individuals who have severe motor and cognitive disabilities may experience difficulties with self-feeding, dressing, bathing, independent toileting, and hygiene skills. Services for an individual with profound cognitive and motor impairment must include curriculum that focuses on mobility, communication, self-care, employment, independent living, and self-sufficiency (Fox & Westling, 2000).

When specific characteristics are observed in individuals with disabilities through physical, behavioral, and common etiologies, they may receive a syndrome diagnosis. Some of the most recognized syndromes include Down syndrome, Fragile X syndrome, fetal alcohol syndrome, Prader-Willi syndrome, and Angelmans syndrome. In addition, individuals with severe disabilities may have physical disabilities such as cerebral palsy, convulsive disorders (epilepsy), cardiovascular diseases, respiratory diseases, eating disorders, hydrocephaly, spina bifida, and growth impairment. Regardless of their cognitive and physical disabilities, all individuals can learn and participate in many life activities. They are involved in learning communication skills, daily living skills, recreational and leisure skills, social skills, vocational skills and community skills.
Individuals with severe disabilities can enjoy fulfilled lives when families, friends, teachers, and other service providers are able to offer appropriate methods of instruction and resources (Fox & Westling, 2000).

**Sensory Learning and Severe to Profound Disabilities**

The human body contains a complex system that recognizes various sensory integrations. Sensory integration is when stimulation is provided to our body and the body responds by attempting to make the best use of the received stimuli (Burdick & Ross, 1981). The sensory integration theory was developed by A. Jean Ayres, an occupational therapist, in the year of 1972. She defined sensory integration as:

> The neurological process that organizes sensation from one’s own body and from the environment and makes it possible to use the body effectively within the environment; the entire sequence of central nervous system events from reception to the display of an adaptive environmental interaction. (Bundy, Lane & Murray, 2002, p. 4)

Sensory integration theory and its assessment and intervention methods have undergone frequent modifications. Sensory integration theory is defined with three components:

1. Learning is dependent on the ability to take in and process sensation from movement and the environment and use it to plan and organize behavior.
2. Individuals who have a decreased ability to process sensation also may have difficulty producing appropriate actions, which, in turn, may interfere with learning and behavior.
3. Enhanced sensation, as a part of meaningful activity that yields an adaptive interaction, improves the ability to process sensation, thereby enhancing learning and behavior. (Bundy, Lane & Murray, 2002, p. 5)

Understanding the sensory integration theory, especially the third theory mentioned above can be helpful throughout Active Learning method that was incorporated during the students’ sensory lessons for this thesis. Active Learning approach emphasizes the students’ independency through exploration of materials and environment (Nielsen, 2001). When improved sensation, as part of “meaningful activity” such as Active Learning approach that provides independent and “adaptive interaction,” it “improves the ability to process sensation, thereby enhancing learning and behavior” (Bundy, Lane & Murray, 2002, p. 5).

**Utilizing the Body Sense to Teach Students with Severe to Profound Disabilities**

When all of the body’s sensory systems are working correctly, it is easy to ignore the complexities of those systems and how much information the body processes using them. Students with severe to profound disabilities rely heavily on their senses to explore the materials and their surroundings. In this study, I focused on auditory, olfactory, and tactile sensory systems and have therefore included information about the ears (auditory), nose (olfactory), and touch (tactile) sensory organs and their functions. Providing scientific understanding of our senses can help us to visualize what is happening during the process of sensory learning for students.
Auditory Sense

The first lesson taught during this research involved engaging the auditory sensory system by utilizing marbles on a metal tray. The student was interacting with the movement of the marbles and hearing the sound of the marbles against the metal tray while creating an artwork. The sound is generated by compression and decompression waves that are propagated in air. Sound transmits at about 335 m/sec in air. The waves are linked with certain pressure changes, called sound pressure. The peripheral auditory apparatus is the ear which is divided into three parts: the external ear, the middle ear, and the inner ear. The external ear includes the pinna, the external auditory meatus, and the auditory canal. It is believed that the pinna helps guide sounds into the auditory canal. The auditory canal passes on sound waves in a vibrating manner to the tympanic membrane. The function of the tympanic membrane is to increase energy of the sound wave. As the sound wave enters from the external ear to the middle ear by the tympanic membrane, it then vibrates to the inner part of the ear called cochlea. The inside of the cochlea contains organ of corti which functions as the auditory nerve that sends the sound message to the brain by utilizing the outer hair cells to the nerve fibers entering the brain like an electrical wire. The auditory radiation ends in the auditory cortex which is located in the temporal lobe of the brain. When the brain receives the sound message, it recognizes what the sound is, what is creating the sound, and what needs to be done with the sound such as enjoy it, be alert, or dislike it (Berne, Levy, Koeppen, & Stanton, 2004). Having the knowledge of how the ears function is an important foundation in
understanding the student’s experience with Active Learning through the auditory lesson that involved a metal tray and marbles.

Olfactory Sense

The second sensory art lesson for this thesis study engaged the olfactory sense via utilization of popcorn while creating the artworks. The student was able to smell popcorn while manipulating it in their hands. The olfactory senses are encountered as the students breathe in the air through the nasal cavity. Any odor molecules in the air pass by and dissolve into the moisture lining of the olfactory epithelium and stimulate its chemoreceptors that are joined with the olfactory nerves. Olfactory receptor cells initiate action potentials in response to these chemical stimuli. The olfactory nerves sense the odor and transmit messages to the frontal lobe of the brain. The brain recognizes the odor as it is connected with the limbic system involved with emotion and memories. This area is thought to mediate the emotional response to the odors (Berne, Levy, Koeppen, & Stanton, 2004). The awareness of how olfactory senses are functioning through the popcorn lesson provided an understanding of the relationship between olfactory and gestation.

Tactile Sense

The last sensory art lesson for this thesis utilized tactile sense by manipulating sculptamold with the students’ hands. The tactile senses are experienced through the skin which is the human body’s largest sensory organ. The tactile system distinguishes qualities and location of external stimuli employed to the skin. There are various types of
receptors that are built into the skin. The mechanoreceptors are activated when a mechanical force such as deep pressure, light touch, stretch, or vibration is applied to the receptors as the neural transmission process begins. The receptor on the skin called dorsal column medial lemniscal (DCML) is associated with “functions inherent to tactile discrimination or perception: detection of size, form, and contour; texture; and movement across the skin” (Bundy, Lane & Murray, 2002, p. 44). Furthermore, our tactile discrimination capability relies on the density of receptors and the related size of the receptor field. In areas of delicate tactile input such as finger tips, palms, around the mouth, receptor density is high and the receptor field is small. Alternatively, the abdomen and back areas need less specific information about tactile discrimination because receptor density is low and receptor fields are larger. In addition, the Pacinian corpuscle, located in the deep layers of the skin recognizes vibration and pressure. The Ruffini ending distinguishes prolonged pressure on the skin, and offers information considering the intensity, duration and speed of the input through skin stretch and joint movement.

Lastly, the hair follicle identifies the starting and stopping of input on the skin through mechanoreceptors such as Pacinian corpuscles, Ruffini ending, and hair follicles. In addition, tactile sensory in the subcutaneous skin of the hand can be divided into four different mechanoreceptors: Merkel receptors sense steady pressure and texture, the Meissner’s corpuscle responds to flutter and stroking movements, the Pacinian corpuscle senses vibration or heavier touch, and the Ruffini corpuscle responds to skin stretching. These four mechanoreceptors send signals to the spinal cord by sensory nerves and then the signals travel to the somatosensory cortex in the brain via the DCML of the spinal
cord (Berne, Levy, Koeppen, & Stanton, 2004). Understanding the tactile system and mechanoreceptors that differentiate qualities and location of external stimuli applied to the skin can help realize and distinguish the students’ preference of tactile interaction through the Active Learning method.

**Active Learning Approach with Students with Severe to Profound Disabilities**

Over the past 30 years, Dr. Lilli Nielsen introduced and developed the approach of Active Learning in the field of special education. Dr. Nielsen has been working with children with disabilities as a preschool teacher and a psychologist for 40 years as well as a special education adviser at Refnaesskolen, National Institute for Blind and Partially Sighted Children and Youth in Denmark. Her research focused on how infants with congenital blindness perceived spatial relationship. She continued her studies in how the environmental intervention can facilitate the children with visual impairments and multiple disabilities to access various achievements through Active Learning. Although Active Learning is defined differently by various scholars and teachers, for this thesis I mainly focused on Lilli Nielsen’s Active Learning approaches in special education with some inclusion of other Active Learning ideas.

The philosophy behind the approach of Active Learning is to offer the student the opportunities to learn through his/her own active exploration and examination (Nielsen, 2001). “Active Learning, as the term implies, is a process where the learner takes a dynamic and energetic role in one’s own education. Due to the learner’s participation, such learning is self reinforcing” (Petress, 2008, p. 566). The child achieves the pre-
requisite skills that would enable a learner to attain higher and higher levels. The beginning level in Active Learning is allowing the child to learn the basic steps that lead to mastering the skills through curiosity, questioning, and exploration as independent as possible while recognizing the student’s wishes, interests, abilities, and potentials.

According to Dr. Nielsen, when a child’s developmental level is younger than the level of three years, he/she tends to learn from his/her own independent activities. As previously mentioned, students with severe to profound disabilities have a developmental age between birth to 12 months. As a result, the child will benefit from being allowed to play and learn independently instead of being trained and taught by an adult (Nielsen, 2001).

To facilitate the Active Learning approach in a successful manner, there are three crucial conditions that should be considered for the student’s learning. First, the teacher needs to recognize the student’s level of development, readiness for learning, and the skills he/she already accomplished. The student should have had a restful sleep, be emotionally calm, physically content, ready to explore and identify responses from his/her own movements, or is performing at the level of their identified developmental stage. The teacher needs to provide the student with sufficient time for exploring and discovering as well as for thinking and encouraging continuation of the further repetition movement. Secondly, the environment should be established for the student to utilize already achieved motor abilities, and stimulate his interest and curiosity, as well as offer the opportunity to attain the next level of development. The students should be provided with numerous and various environments, which create chances to learn both gross and fine movements. Lastly, the teacher’s cooperation and positive attitude is imperative in
upholding the approach of Active Learning. Environmental intervention means that the
teacher establishes environments and objects that are appropriate, suitable, and available
while the student is motivated to learn. In addition, the teacher must react to the student’s
signals, movements, and vocalizations by sharing the student’s interests and by
interacting with him/her at his/her level of development. The teachers and adult assistants
need to consider the three conditions in an appropriate manner to suit the student’s needs
and interests while utilizing the Active Learning approach (Nielsen, 2001).

The following is a handout that I received from Penrickton Center for Blind
Children where Lilli Nielsen’s Active Learning method was apparent through the
understanding of the Dynamic Learning Circle. It outlines four stages of progression that
teachers can look for while the students are performing the Active Learning method and
how it carries into their everyday life.
I. Stage One
a. A child becomes aware and interested in:
   i. His/her own motor and sensory activities
   ii. The objects and activities in the environment
   iii. People in the environment – their social/communication activities

II. Stage Two
a. A child becomes curious and interested – which leads to:
   i. Repetition of his/her own activity
   ii. Establishing memories of his/her own activities
   iii. Experimentation, exploration and comparison with objects
   iv. Imitation of the activity of others
   v. Responding to verbal/non-verbal communication of others
   vi. Initiating activity
   vii. Sharing his/her experiences with others

III. Stage Three
a. An activity is repeated to such a level that it becomes part of the child’s everyday actions and patterns.
b. An activity or action becomes familiar enough that it presents no more challenges to the child.

IV. Stage Four
a. A child becomes ready for new challenges which leads to awareness and interest if:
   i. The child is given opportunities to experience new motor/sensory activities
   ii. The child is given opportunities to experience new actions of others
   iii. The challenges offered are within a child’s developmental level
   iv. Other people have taken an interest in the child’s past activities
Connections between Active Learning and Sensory Experiences

According to Brittain and Lowenfeld (1982), the senses are a vital ingredient of a creative arts experience. Students learn through utilization of their senses such as hearing, seeing, smelling, and tasting. Art education is not merely teaching predetermined responses or focusing on formalist fundamentals qualities: it should instead integrate and develop perceptual sensitivity of the student’s world. This integration and development of the senses of the students will increase the opportunity for all learning of their environment.

In order to achieve the Active Learning method while incorporating sensory stimulation, students need the ability to accomplish a movement as a necessary prerequisite for learning. While the student is physically active, he/she experiences two significant lessons. First, the student learns that movements lead to certain results such as cause and effect experiences, and also the student learns to exercise and improve muscle activities as he/she tightens muscles. In addition, it is recognized that the movements in the beginning are usually done unintentionally. Repetition of the unintentional movement assists the student to become aware of the movement, especially when he/she obtains sensory feedback from the movement. Thus, this repetition of unintentional activity gradually inaugurates to perform the movement intentionally. This process is greatly strengthened if the student acquires feedback from the movement by means of the tactile, auditory, visual, or olfactory stimulation experiences (Nielsen, 2001).
Auditory Stimulation and Active Learning

Auditory experience for students with disabilities is imperative during Active Learning procedures. Students’ learning in adjusted environment needs to be meaningful learning experience such as auditory awareness and attention. As the students interact with their environment, they advance the ability to be aware that a sound source is present in their own interactive environment. As the auditory development improves, the students localize to the sound and then attend to the sound source for a period of time. While the students are recognizing and aware of the auditory information from their environment, they are also actively engaged in the auditory memory. Through the auditory memory, the students are able to recall auditory information in the shape of environmental sounds, syllables, words, numbers, sentences, and directions. This field includes immediate recollection of the information as well as retention of the information over time. This ability is significant so that auditory experiences can be stored to assist with future discrimination and cognitive tasks. In addition to auditory awareness, attention, and memory, through auditory Active Learning, the students also gain auditory discrimination. The students begin to recognize and distinguish the difference between sounds in general. As they start with the gross discrimination of environmental sounds, the students are able to work up to the ability level where they can detect phonemic differences in words. Through continuation of practice in Active Learning with auditory stimulation, the students will learn to recognize sound awareness, attention, increase in auditory memory and discrimination.
Olfactory Stimulation and Active Learning

Olfactory experience does not happen often during art sessions; however, according to Nielsen (2001), smell presented during an activity can encourage a child to move, which can help the student to create an artwork with their own independent movement. It is also recognized that the influence of smells have an overpowering effect on human’s memory, mood, energy, libido, and as overall health as it links to specific times and events. The human sense of smell compared to the average hamster, a German shepherd, or even to cave-dwelling ancestors is deplorable; however it is 10,000 times more accurate than our sense of taste, and is able to identifying thousands of aromas. The widely accepted effects of smell are that it can lower our stress levels, improve mental and physical performance, ease pain, end insomnia, and facilitate weight loss. The reason lies in how our brain processes smells. Auditory, vision, tactile, and taste enter the brain and are initially aimed at the parts of the brain dedicated for each sense. Then they are transmitted to the limbic system to be seasoned with emotion. For example in vision, human identifies the object as a dog. After recognizing it, the brain tells the person how much you love the dog. The brain makes sense of the object or the information before accessing the emotion. However, compared to the other four senses, smell works in a different way. Smell is sent directly to the amygdala, which is involved in experiencing emotion and is located in the emotional memory part of the brain. Scent does not go through the thinking part of the brain until after it is soaked with emotion. According to the research by Herz and Schooler (2002), “memories recalled in the context of odors were significantly more emotional… order-evoked memories also tended to make
participants feel more ‘brought back’ to the original event” (p. 21). As the student constantly is involved in olfactory Active Learning, he/she is not only encouraged to move in ways that he/she has not experienced before, but is also able to utilize their emotional memories as well.

Tactile Stimulation and Active Learning

“A feel is worth a thousand pictures” (Tim Cranmer as cited in Wittenstein, 2006, p. 437). Many of the tactile stimulation lessons through haptic abilities (hand use) are primarily geared towards the students with blindness and/or deaf blindness. However, in recent contemporary school settings, teachers recognize the significance of tactile learning as they incorporate hands-on activities and Active Learning activities in typical school settings. The haptic system has been recognized as a distinctive perceptual system that is oriented towards discriminating and identifying objects by handling them as opposed to observing them. The various property features such as vibration, surface texture, wetness/dryness, surface temperature, shape, slope, curve, hardness/softness, weight, elasticity, and pliability are acquired through the haptic system (McLinden & McCall, 2002).

To integrate Active Learning with haptic abilities utilizing tactile stimulation, it is necessary for the teacher to observe where the student’s hands and fingers are habitually positioned. For example, examine whether one or both of the hands are clenched at all time, whether the motor development of one of the hands is at a higher level than that of the other one, how small the hands are, whether the child is moving one or several fingers,
whether the child is moving his arms and if so what kind of range of motion do they have, in which directions such arm movements are going, and whether the child’s arm or hand movements are restricted from spasticity or from lack of muscle tone and/or control (Nielsen, 2001).

**Repetition and Active Learning**

As briefly mentioned in the introduction, repetition in Active Learning is crucial and must exist in order for the student to experience the Active Learning approach. It is imperative that the student repeats such unintentional movements through sensory experiences an ample number of times. The repeated unintentional movements establish an opportunity to create a memory pertaining to the specific movement. These unintentional movements become intentional through a sufficient number of practice in repetitions. When a movement has developed into a familiar sensory experience practice for the student, continuation of sensory feedback from the movement must exist to motivate the student’s further repetitive movements that confirms the reality of the sensory experience. Progressively, the repetition of the movement enables the student to recognize, to remember, to imagine, and to associate both the movements acted upon and the sensory experienced (Nielsen, 2001).

It is recognized that based on the student’s IQ scores, number of repetition to place new tasks or words into long term memory varies. Hargis (1982) found that the average students’ IQ ranging from 90-109 needed about 35 repetitions to learn new sight words, whereas, students’ IQ ranging from 60-69 needed 55 repetitions. Hargis indicated
that each ten points drop in IQ scores needed an additional five repetitions to place into long term memory. Therefore, students with moderate mental retardation, IQ scores ranging from 35-55 will require about 60 or more repetitions, and students with severe to profound disabilities will need over 70 repetitions to fully recognize their movements and sensory experiences.

It is significant to understand the importance of the repetitive movements; however, facilitators of the Active Learning method also need to recognize the break that is needed in between the repeated movements. The break should not be determined by the facilitators, but facilitators should allow breaks that are long enough just for that specific student who is involved in repetitive movement. Depending on the student, he/she may need only one or two seconds of breaks, while the other students may require four to five or even more seconds of break between the movements. Therefore, facilitators of the Active Learning must refrain from interrupting the student while he/she is active and abstain from persuading the student to repeat before he/she is ready for another repeated movement. “Who else knows when he is ready but he?” (Nielsen, 2001, p. 57). Active Learning is individualized as not every student progresses and achieves in the same way; therefore, the facilitators need to create an environment that enables the student to repeat activities whenever and as often as he/she desires to do so to establish memory concerning his experience (Nielsen, 2001).
Conclusion

In this chapter I have discussed a range of literature associated with students with disabilities and the Active Learning method. I have given a brief review of history and policy that progressed from late twentieth century to present day through art education for people with disabilities that Funk (1987) illustrated as four phases. The chapter included the legal and medical perspectives of students with special needs. I have also illustrated how olfactory (nose), auditory (ear), and tactile (skin) sensory organs function to perceive various sensations in the human body. Finally, this chapter focused on the Active Learning approach for students with severe to profound disabilities. It explained the correlation between the Active Learning and sensory experiences as well as the significance of repetition in Active Learning method. It also demonstrated how society especially in the field of education significantly made evolutionary improvements for individuals with disabilities.
CHAPTER THREE

METHODOLOGY AND METHODS

Introduction

I was introduced to Lilli Nielsen’s Active Learning strategies through LeBlanc School in Lincoln Park, Michigan and the Penrickton Center for Blind Children in Taylor, Michigan. Along with intervention specialists and paraprofessionals from my place of employment, I visited the Center for Blind Children as part of our professional development. They were able to provide us with a whole day’s worth of in-service training through a variety of demonstrations, video examples, student observations, live interactions with the students, utilization of various Active Learning materials, handouts, and demonstrative role play. LeBlanc School is a school distinctively designed for children with disabilities very similar to where I teach, and the Penrickton Center for Blind Children is a residential facility for students who attend LeBlanc School. These two facilities both implement Dr. Nielsen’s Active Learning methods with children whose learning is affected by various disabilities. The Active Learning approach is intermingled with the students’ daily activities that include communication, social life, play time, and education. Both facilities’ intervention specialists, paraprofessionals, occupational and physical therapists all indicated that they absolutely do not use hand-over-hand method with any of their students. When the hand-over-hand technique is utilized to assist the student to engage in an activity, the assistant places his/her hand(s) over the student’s hands. The student is the one who is interacting with the materials, and the assistant’s hand(s) guides and manipulates the materials to complete the activity. However, this
Initially, I was astonished and skeptical of their approach with Active Learning because my method of hand-over-hand seemed to be a suitable technique to manipulate and interact with the art material with the students experiencing severe to profound disabilities. Within an hour of touring the LeBlanc School, I was rapidly transforming my thoughts about hand-over-hand assistance. After the visit, the whole school decided to subscribe to the Active Learning method. The principal, intervention specialists, paraprofessionals, and I all thought it would be a tough change in the school’s curriculum and teaching methods, but we wanted to give it a try to see what kind of effect it would have on our students.

Touring the facilities allowed me to witness the freedom of independent life in the children with disabilities engaged in Dr. Nielsen’s Active Learning strategies. I caught a glimpse of what it truly meant by deemphasizing disabilities and focusing on abilities of each student. I was a shamed to realize that I did not seek an alternative method in my approach as I fully trusted the hand-over-hand assistance to create art works. I also was humiliated to recognize that I was superficially imposing hopes and dreams for the students; giving them no room for autonomy and independence by utilizing abilities to create personal works of art. Dr. Nielsen dedicated her studies in creating opportunities for children with disabilities to learn. Her determination and perseverance was humbling and encouraged me to improve my own teaching method for my students.

This thesis utilized qualitative research methodology that focuses “the quality of relationships, activities, situations, or materials” (Fraenkel & Wallen, 2003, p. 430) by
investigating sensory stimulation art activities that are incorporated with Active Learning strategy by Dr. Nielsen. This qualitative research concentrates on the process of how things occur and details that emphasize the holistic description of the process and results through various methods: participant observation, note taking, intervention lessons, interviews, critical self-reflections, and video recordings.

**Research Questions**

For this thesis, I developed two main research questions that focused my teaching and the students’ learning. The research question that targets my teaching stated: What is the effectiveness of using the Active Learning method in art lessons that incorporate auditory, olfactory, and tactile senses with students experiencing severe to profound disabilities? In addition, the research question that directs my students stated: What is the experience of students with severe to profound disabilities as they participate in art lessons that incorporate the Active Learning method that focuses on auditory, olfactory, and tactile senses? Through these questions, I was able to draw several conclusions about the Active Learning method, about the students, and about myself as a teacher.

**Method: Action Research**

In order to answer the research questions, I employed action research as the method to improve myself in teaching students with severe to profound disabilities. During this study, I utilized sensory stimulating materials while implementing Active Learning strategies. According to Tomal, (2003) action research is a “systematic process of solving educational problems and making improvements” (p. 5). Action research is
concerned with improvement within the framework of the study that relies on the practicality and feasibility of improving a provided issue. Furthermore, in action research, the researcher utilizes various interventions or instruments for the research action plans in order to make improvements (Tomal, 2003). In this action research, I implemented a mixture of interventions through adaptive art tools, assistive technologies, sensory stimulated art activities, and Active Learning strategies. These interventions were assisted by occupational therapists, physical therapists, a biomedical engineer, and intervention specialists for the duration of art activities or after school discussions.

The action in action research focuses on the improvements that emerge through action-oriented interventions (Arhar, Holly, & Kasten, 2005). As I desired to improve my own teaching, the methodology of action research provided numerous advantages for this study. First, action research served to facilitate improving my own educational practice, and helped me to better understand and apply the research findings of others who have done work in this area. Secondly, action research helped me gather a new source of ideas about how to revise and adapt lessons and perhaps enhance my own strategies and techniques of teaching. Lastly, action research facilitated in the identification of the problems and issues that lead to alternative routes in which to resolve the problems and evaluate various methods, which I was able to share with other teachers in the school (Fraenkel & Wallen, 2003). Through this action research, it was my goal to improve my own teaching practice by adopting practices of the Active Learning approach while utilizing sensory stimulating art activities with my own students who are experiencing severe to profound disabilities.
Methods

Participant Observation

The primary purpose of observation is to familiarize researchers with the circumstance in which issues and events are displayed. Vigilant observation allows participants to grasp details of the environment, mundane activities, and routine interactions (Stringer, 2008). The method of participant observation illustrates involvement with the observed person or activity, and the participant observer can detect the key elements such as “what to look for, how to apprehend it, and how to describe it for later reflection” (Arhar, Holly, & Kasten, 2005, p. 142). Similar to many teachers, I scarcely had time to observe my own classroom. I was always occupied with many students at time and did not have a time to reflect after school because I was planning lessons, cleaning the classroom, attending after school meetings, and preparing materials for lessons. I did not have opportunities to carefully observe students or become constantly cognizant of my actions or behaviors. However, through participant observation, I was able to engage myself with the students throughout the art activities and study the issues and events within my own classroom. Participant observation enabled me to observe the students, atmosphere of the classroom, material usage, art activities, students and staff actions and interactions, various means to approach goals, and my emotional orientations and responses. I also learned to become more self-conscious of my role as an observer, which enabled me to step back and examine the students and myself more meaningfully.
Note Taking

Note taking of observations is the most common method utilized in action research to describe what is occurring. According to Arhar, Holly, and Kasten (2005), the “writing down” stage indicates documenting and recording of what the researcher sees during an observation (p.237). This process is crucial because capturing a rich and detailed database from the “writing down” stage can provide a strong foundation for further analysis and interpretation. Partial note taking was done with field notes and anecdotal notes where I was able to record specific observations and descriptions of students and events as they occurred naturally. Another portion of note taking was done during the reviewing of recorded video. Throughout the note taking procedure, I documented: my own interaction with the students; my behavior and reactions; my approach on each lesson; any moments of confusion or perceived mistakes; students’ reactions, facial expressions, vocalizations, eye gazing, and other noticeable behaviors.

Sensory Art Lessons

Three sensory stimulating art lessons were utilized for this study. Lessons involved auditory, olfactory, and tactile stimulated art activities that were employed with Active Learning strategies. In these lessons, I incorporated Ohio Content Standards, IEP objectives and goals, materials, procedures, and assessments. Although my students did not receive a letter grade, they were assessed through their Individual Education Plan (IEP) goals and objectives. The three sensory art lessons are located in the appendix.
Interview

Conducting interviews can be a vigorous method for action research (Anderson & Herr, 2005). In this study, I interviewed each student’s intervention specialist or paraprofessional addressing questions of each student’s performance and perceived benefits of the activities. I provided a portion of standard questions before the art classes under observation in order for them to think about and reflect on the answers during the actual art activities. The known and unknown reflective questions were posed after school hours in the art room. Each interview consisted of asking questions about the effectiveness of lessons, students, and my teaching. This method was important for this research because it was an opportunity for the teacher or the paraprofessional to share their views and opinions. Due to an inability of the students to verbalize responses, interviewing intervention specialists and paraprofessionals became the only verbally expressed opinions that I obtained during this research. Both informal and formal interviews were conducted for this research. The purpose of the informal interviews was to gain understanding of the perspectives of the intervention specialists and paraprofessionals. Informal interviews were initially conducted in a conversation about the art lesson for the day. Following a brief informal interview, I formally asked standard questions of each interviewee. According to Arhar, Holly, and Kasten (2005), formal interview methods are normally designed to allow the researcher to explain a pattern of interviewee responses. I truly believe that each intervention specialist and paraprofessional only want what is best for the students; therefore, I am confident that
they provided honest and reliable answers during the interviews. The interviewing process enabled me to understand from a third person’s perspective on each art lesson.

**Formal Interview Questions**

The following questions were standard questions posed to each interviewee:

1. What moments of success could you identify in the student’s performance, art making, or participation today?
2. Did you think this art project was age appropriate? Why or why not?
3. How do you think the student benefited or not benefited from today’s lesson?
4. Considering the sensory aspect of this lesson, why or why not did you feel the materials were appropriate?
5. How can I improve this project? Any suggestions?

**Critical Reflection**

Critical reflection was done through analysis and interpretation of notes taken during observations in class and during video footage. In addition to critical reflection, I also wrote in a research journal. According to Anderson and Herr (2005), keeping a research journal is a critical element of any action research. In my research journals, I was able to record emerging thoughts, emotions, impressions, ideas, decisions, and actualizations of myself, procedures, students, the environment, and staff.

**Critical Reflection Questions**

1. Was my student’s voice heard throughout the art project?
2. How did I accommodate or not accommodate the student’s needs?
3. What was the value of the lesson from my perspective and aid’s perspective?
4. Are Active Learning strategies working in my art class?
5. Is there any modification that I need to do in Active Learning method for my students?
6. Am I giving the students enough time and space to explore and create art?
7. Are the materials appropriate for the students?
8. Am I interrupting or interfering with their learning in any moments?
9. Did I learn anything new about the student?
10. How can I improve this project or make any changes in the future lesson?

Video Recording

Video recording was another method for collecting data. According to Stringer (2008) “[v]ideo recording has the advantage of making the scene immediately available to viewers, providing a far greater depth of understanding of the acts, activities, events, interactions, behaviors, and the nature of the context” (pg. 72). As a participant observer, I was able to concentrate on a specific element; however, focusing on one circumstance distracted me from many other important occurrences throughout the art activities. Fortunately, video recording offered highly informative data otherwise impossible to gather fully. In addition, video recording presented advantages of repetitive viewing; the ability to rewind in order to carefully watch specific segments repeatedly; fast forward unnecessary segments; and the ability to pause at certain parts to take notes. Another
advantage of utilizing video recording was to consult with other professionals on uncertain perceptions that I had of the students or the situations.

**Site and Participants**

I played a participant role for this research as the students’ art teacher. This action research that focused on my teaching improvement would not be possible without the aide of intervention specialists and paraprofessionals. Intervention specialists and paraprofessionals are teaching partners who recognize and assist in interpreting student behavior and performance so as to develop appropriate goals and objectives. They assisted this study through their inputs and opinions about the projects and the students’ performance. Most importantly, the students were the heart of this study and without them, understanding and improvement of my teaching would not have been possible.

The students all reside and attend school located within their residential facility. All the students are affected by various levels of severe to profound disabilities. The majority of the students experience various degrees of physical disabilities, mental disabilities, visual impairments, and medically fragile needs. The students do not communicate verbally, but they utilize facial expression, vocalizations, eye gaze, small body movements, and assistive technology (communication devices) to communicate choices, wants, and needs. The students have a two and a half art session once a week throughout the year. Art is a required service that is to be provided to students as dictated in their IEP’s in the amount of no less than 240 minutes a month. All students have IEP goals and objectives that are tailored to their specific needs and learning experiences. Although medically they are categorized as students with severe to profound disabilities,
I believe each student is capable of portraying their own unique personalities, gifts, and talents.

I am very grateful for the three remarkable students who made this research possible. All three are very unique and are incredibly loveable by possessing extraordinary personalities that generate smiles and laughter in those around them. I am greatly confident that my students each have potential to improve and learn new skills to enrich their lives. One similar characteristic they possess is that none of them fit into the stereotypical image of students with disabilities as being passive. I am very proud of them for expressing their needs and wants, likes and dislikes, and especially their joy of creating art. As I watch them individually, I see the freedom within their artworks. They are not concerned about what the outcome will be like; they do not worry about matching colors or shapes; they do not compare their artworks with other students; however, they purely enjoy the experience of creating art and exploring the materials. As an artist and a teacher, I envy those moments in which my students freely let out their expression through art. I have tried to paint without any worries and concerns of outcome like my students; however, I found that I could not let go of a thought that I needed to create something visibly pleasing (at least to my eyes). This thought poignantly illustrates the difference between the pure art that my students experience and the tainted art that I create in an attempt to prove to the world that I went to art school and I am an art teacher. Through this research, it is my desire to become more reflective in regards to my teaching and search deep thoughts within myself. I am thankful to my students for giving me the opportunities to reflect, learn, and improve myself as a teacher.
Often, words fail at describing attributes of people that are better understood through observing, direct contact, and forged relationships. The following is merely an overview of each student’s history of observed behavior throughout their history of participation in my art class. In addition, for this study each student was assigned pseudonyms for their protection and privacy.

Brian

Figure 3: Brian, Photograph courtesy of Young-Ji Kim, © 2009

Brian has been a student of mine for two years now. He gained popularity very quickly among teachers and paraprofessionals. He has a kind face and a personality that tends to attract people to him. Brian’s laughter fills the whole room like a contagious virus. When others hear his laughter, quite often they will find themselves laughing without knowing why. Through various art activities such as painting, I saw that Brian has much potential to grow and improve his skills through modified art activities. Brian does not like to be controlled by means of hand-over-hand assistance or physical direction, fitting perfectly with Dr. Nielsen’s Active Learning philosophy of independent
exploration. Brian is comfortable vocalizing to show enjoyment or disapproval of an activity and also how he wants to interact with the materials. A majority of the time, Brian likes to explore with his mouth and his hands. We, as the teachers at the school, understand that he is a bright student who understands cause and effect, recognizes his preferences, acknowledges his needs and wants, and knows how to joke around with the school staff. Brian also enjoys playing with toys that makes noises and understands that he can interact with a toy to make sounds and motions. Brian’s IEP indicates that he smiles, laughs, and socializes when spoken to or hears something that he thinks is funny. His art IEP goals consist of improving his manipulation and exploration of various art textures and materials independently, which he will try to accomplish with assistance from myself and the occupational therapist. In addition, some of his goals consist of actively exploring his environment, utilizing assistive technology, grasping objects, and increasing awareness in his schedule. Brian indicates his preference by eye gazing and/or reaching for the preferred object with his hands. According to his IHP team, Brian’s dad indicated that he would like to improve Brian’s talking and communication skills through speech therapy services. However, the IHP team explained to the father that Brian might only be able to use a communication device and be limited to facial expressions to express his needs. At times, Brian’s hands seem uncontrollable, but it is clear when observed carefully that many of his arm movements are purposeful. Brian is in the youngest group, School Age A class, which means that I will have the privilege of seeing him grow and improve throughout his time in school. I would like to work on Brian’s
movement to be more purposeful, so that in the future he can paint each stroke with a meaningful and specific intent.

Zander

Figure 4: Zander, Photograph courtesy of Young-Ji Kim, © 2009

Zander is a student who recently joined the school. Zander is among the highest functioning students at the school and at the facility. Zander can walk with the help of a walker, gait trainer, lite gait, and tricycle which is in his IHP and IEP goals, and he can propel his own wheelchair and is able to communicate with sentence fragments which are recognized as intentional communication. According to Zander’s IHP, he enjoys various forms of sensory, auditory and visual stimulation within his classroom and therapy environment. Zander also is able to answer “yes” and “no” to questions with a minimum of 50% accuracy. He is capable of operating computer games in the classroom and is able to follow one-step directions with some assistance. Zander expresses his preferences clearly and understands others’ wants, and he improves his vocabulary through repeating words. For Zander’s speech therapy, faculty are working to increase consistency in
comprehension or action, object, and preposition labels, to increase comprehension of “yes/no” and “what” questions based upon immediate events, and to increase spontaneous verbal productions as a responder and initiator. In Zander’s IEP, he is working on goals such as, learning to work independently, using sequencing skills to complete his work, exploring different objects, initiating interactions and developing more communication with staff, and using vocalizations, gestures, or assistive technology to correctly answer questions.

Throughout the time I have spent with him, one of my biggest accomplishments has been teaching Zander to say my name and greet me by it during class sessions. I see Zander once a week for my art session, and in the beginning when he joined the school, I taught him my name repeatedly. Now Zander is able to say my name without being mistaken for the other teachers and paraprofessional which makes me feel very special. There are numerous moments in which Zander made me feel special; however, the two most special moments for me were at Halloween and Christmas. The first moment occurred when his homeroom teacher asked him what he wanted to be for Halloween and Zander replied, “Daisy.” I hope this does not mean that I am a scary witch of a teacher, but that he recognized me and said my name. Another moment was when his homeroom teacher and paraprofessional asked him what he wanted to pop out of his Christmas box? He said excitedly, “Daisy.” If a person has not experienced these kinds of interactions with a student, these small occurrences may not touch someone’s heart as much as it did mine.
Zander loves to paint and is not afraid to mix colors. He loves the color green. Whenever a teacher asked for his color preference, he always says green; however his recognition of the color green is inconsistent as that he demonstrates reaching for another color when he says green. Zander will repeat the name of the color if the adult assistant tells him the correct color name. Zander is also tactile defensive especially, with mediums that are “wet and gooey.” Zander prefers to utilize a tool to paint instead of using his hands (opposite case with most of the students). If he gets even the littlest bit of paint on his hands, he immediately wants to clean them off. Therefore, art projects utilizing mediums such as shaving cream, finger paint, and slip (watered down clay) proved difficult for Zander to interact with the materials. Long term goals I hope to teach Zander are the names of the colors and encourage him to try colors other than green. In addition, throughout the time I would like to lessen his tactile defensiveness by providing him with a variety of materials to explore and learn.

Diane

Figure 5: Diane, Photograph courtesy of Young-Ji Kim, © 2009
Diane is also fairly new to the school. Her smile and inviting personality attracts others to easily approach her and get to know her better. She is a bit shy at first, but when she does become comfortable with the person, she thoroughly enjoys the one-on-one interaction. Diane is very pleasant and easy-going as she does not demand attention or ascertain a negative attitude. However, she will get mad if you take her toys away when she is fully engaged with them. In addition, Diane is very active and energetic throughout the school session. She loves to interact with various toys that provide multiple stimulations such as bright colored toys, vibrating motions, silly sounds, which she can manipulate with her hands. According to Diane’s IHP, she enjoys exploring sensory activities and musical activities such as bells, when they are presented in front of her. She is working to increase her frequency of non-verbal cues; increase the rate of intentional communication acts; and increase the use of a switch to activate objects for social interaction as she works with the speech therapist. She loves to explore her surroundings and objects with her hands and with her mouth. She is not timid with the materials given to her and without hesitation; she approaches and explores the objects on her tray. She rarely sits still because she is constantly engaged in Active Learning tools, multisensory toys, and her surroundings. Diane expresses her preference with eye gaze and/or reaching out for the object that she prefers. For Diane’s IEP, she’s working to: actively manipulate 3-dimensional objects purposefully; grasp and release objects; improve her muscle control; increase her communication skills through facial expressions including smiling and by utilizing assistive technology; and continue to develop her fine motor skills and maintain coordination. She is also working on developing her gross motor strength and
coordination to improve her interaction with her surroundings. I would like Diane to explore materials with her hands instead of her mouth. I would like for her to progress to a developmental stage where she does not have to explore materials with her mouth, but can learn to utilize other parts of her body. This may not be accomplished during the period of the research, but I am confident that Diane will increase in maturation throughout her schooling.

Baseline Data

For this thesis, I collected baseline data for the purpose of close observation of the students to gage their state when they are not interacting with art materials. Since I already knew the students from my previous observations of them in my classroom, I decided that a collection of baseline data over a short period of the time would be useful and telling. I divided 20 minutes sessions into phases for this purpose. During the first five minutes the students were alone without any activities to do. Then for ten minutes, the students were given an activity to do such as interacting with their favorite objects, toys, or Active Learning materials. Then, for the last five minutes, the students interacted with the given items and me. Throughout the baseline video taping, I did not intervene or interfere with their activities except for in the last five minutes to see the effect of people interacting with the students. Each student was video recorded separate times, and they were the only student in the classroom at the time. Some of the questions asked while observing the video recording of the baseline data are listed below.
Baseline Data Questions

1. For five minutes give the student nothing with which to interact. How do they act/behave when they are on their own?

2. What are some repeated patterns of the student’s motions, behaviors, or vocalizations?

3. Describe the student’s emotional state by their facial expressions, bodily gestures, or vocalizations.

4. For ten minutes give the student an object with which to interact. How do they act/behave when they are interacting with the object?

5. Describe the difference in behavior between the time when there was no object and when there was an object.

6. During the last five minutes in which the teacher is present and interacting with the student, how does the student act/behave when they are interacting with them?

7. Describe the differences in the student’s behavior when they are interacting with the object alone as opposed to when the teacher is also present.

8. How long were they interested in the object and the teacher?

9. In general, was the student content?
Role of the Researcher

In this study, my role as a researcher was comprised of the many roles I assimilate as an art teacher. To be a researcher, I also had to be a participant for this study. As the researcher and the art teacher, I was also a participant observer, a collaborator, an assistant, and a care-giver. The primary role that I assumed throughout the day was being an art teacher for the students with severe to profound disabilities. As the art teacher, I utilized conventional teaching methods such as: a brief introduction of the topic; presentation of art examples; demonstration of the use of materials; and individualized assistance. Simultaneously, as the researcher, I have examined myself as an art teacher by means of reviewing video footage of my teaching methods, analyzing critical reflections and notes, and coding interviews. As the art teacher and the researcher, I was also a care-giver for the students. In most of the IEP meetings, the parent(s) or the guardian(s) indicate that their primary desire is for the school to provide comfort and happiness for the students. Comfort and happiness occur only when the students are properly taken care
of. This meant that there were numerous necessary interruptions throughout the art sessions to attend to students’ personal needs. According to Plant and Sanders (2007), “it is generally accepted that caring for a child who has a developmental disability can involve significant and prolonged periods of time and energy, completion of physically demanding and unpleasant tasks, and frequent disruption of family routines and activities” (p. 109). Even as I tried to focus my full attention on one student at a time, it was impossible not to notice other students’ needs. For example, as I was assisting a student in a painting project, my attention went to the student who was salivating on her clothes. Another commonly occurring incident was when a student cried out of a need to use the restroom. The intervention specialist and paraprofessional would escort the student to the restroom. Therefore, I had to stop the one-on-one session with the student to overlook all the other students. However, the disposition of teacher and paraprofessionals went beyond being a care provider for the students. Their characteristics demonstrated the true rapport and love for the students.

**Teaching Method**

During my teaching session, I had two types of audiences: adult assistants (including intervention specialists and paraprofessionals) and the students with disabilities. For the majority of the art sessions, adult assistants were new to the concepts, art materials, artists, art movements, techniques, and skills presented. At times, I felt like the adult assistants were my students and those students (adult assistants) were applying what they had learned to the students under their care. Therefore, I delivered my lessons
as if I was instructing the adult assistants. I began by introducing the topic with small clips of video, books, visuals, or magazine articles. I tried to familiarize the adult assistants with the materials and techniques so that they could apply them with the students. I also provided background contextual information about the artists, art movements, and ideas of the lessons to the adult assistants so that they could demonstrate and communicate the information with the students during one-on-one interaction.

Unlike a typical art class, not every student could start their art project at the same time. In my art class, there were usually about two to three adult assistants with six to eight students per class. Therefore, a portion of the students were able to work on their art project while the other students who did not have an adult assistant engaged in an independent Active Learning tactile board or switch-activated tool or toy. During this time, I was very thankful for the Active Learning materials such as tactile boards, material bars, and other learning tools that were designed or inspired by Dr. Nielsen. The students, who were not involved in art making, were not just sitting idly by; they were exploring and learning about various objects through tactile and auditory stimulation. At times, I also played videos on artists for those students not participating in the art making.

The one-on-one sessions were always very interesting to observe because each adult assistant had a different idea on Active Learning approach. For example, at the school everyone understands the Active Learning method or at least has an idea of the basic principle of independence. Yet, occasionally, some forget the concept of the Active Learning and go back to hand-over-hand assistance. I believe that once in a while hand-over-hand assistance is acceptable for demonstration and teaching the skills with physical
prompting; however, finishing an entire artwork with hand-over-hand is an intolerable method. Another interesting discovery through observing one-on-one interaction was the degree of fondness of the project and degree of relationship with the student, creating a vast difference in artwork qualities. Adult assistances were more tolerant with the project and the student if they enjoyed the project themselves. They provided more time for the students to explore and pleasantly discussed the topic with the students.

One-on-one interaction is a bitter-sweet teaching experience that I have with the students. The student is always paired up with an adult staff such as intervention specialist, paraprofessional, or myself for assistance while she or he is exploring and creating artworks. This one-on-one opportunity is more than an assistance time; it is an opportunity to grow an intimate relationship with the student. Through one-on-one interaction, I was able to identify the student’s communication skills, likes and dislikes, range of motion, capability, and cultivate genuine growth in the relationship. Unfortunately, I could only build one or two close relationships in two and half hours of class time, which concludes that I did not have a chance to instruct the rest of the five to six students in the classroom. While I did not personally forge relationships with each of the students, relationships were still formed. Intervention specialists, paraprofessionals and other staff were always available to work with students one-on-one at some point in their art session, forming those relationships that allowed the student to make independent choices and progress.
Development and Description of the Lessons

In the beginning of the school year, all the teachers gathered around to brainstorm numerous themes to use in the development of a curriculum for the upcoming year of school. The curriculum is usually divided into about six to seven basic themes such as “weather and seasons,” “around the world,” “sports,” “family and people,” “science and social studies,” “animals and insects,” and more. Intervention specialists, paraprofessionals, and I have limitless opportunities to develop various lessons within the theme based curriculum. I was not obligated to follow each basic theme, but it was encouraged and helpful throughout the year. For my art class, I did not exactly follow the theme, but I did attempt to involve my lessons within certain themes. I also attempted to create multidisciplinary lessons with certain subjects or other class involvements. I was very fortunate to have the freedom in my lesson planning.

The autonomy in lesson planning provided great motivation for this study. I was able to develop lesson plans that enabled me to explore and discover the materials, the students, and myself. Applying two great motivations together, I was able to join ideas of sensory stimulating art materials while engaging in Active Learning method. When working with the students experiencing severe to profound disabilities, one can easily recognize that the majority of the students have various reactions during sensory exploration. The reaction depends on the preferences of the student’s sensory material. For example, some people enjoy the “gooeyness” and “stickiness” of glue, yet others think it is a disgusting feeling that they prefer not to touch with their hands. This same principle applies to the students as well. The purpose of utilizing sensory material for this
study is not to understand the preference of student’s sensory materials, but rather I would like to bring unfamiliar sensory materials for the students to explore and learn. At the same time, I believe that implementing Active Learning method can assist the independent exploration and learning for each student.

Keeping sensory stimulating materials and Active Learning method in mind, the art lessons are developed with three stated objectives for this thesis study. The first objective in my lesson plan for this thesis was that students will independently move their feet, hand(s), or fingers to explore given art materials. In the beginning, majority of the students needed physical prompting towards the materials; however, given time, the students independently explored the materials. The second objective for the lesson was that students will independently manipulate given art materials repeatedly. This objective was attained by utilization of adaptive tools and assistive technology. The first and second objective may sound very similar; however, the first objective was focusing on the student’s independent body movement, and the second objective was movement of the materials created by the students. The manipulation of the material was an important factor to understand if the material was appropriate for the students. The first objective needed to be attained in order to achieve the second objective. Lastly, the third objective in my lesson plan for this thesis was that students will express their preference of either like or dislike of the materials and the project. The last objective was accomplished through students’ facial expressions, and communication devices.

The objectives for the students were one avenue for improving my own teaching method. I was able to watch myself through video recording to determine if I was giving
students enough independence and autonomy for their artwork. In addition, the objectives allowed me to understand the difference of what is considered an adequate amount of assisting and what is considered ineffective assistance. The detailed lessons of auditory, olfactory, and tactile sensory are provided in appendixes A, B, and C.

**Development of the Materials**

Three lessons were involved in this thesis study: auditory, olfactory, and tactile. As an art teacher, I try to provide materials that are fun and novel as well as materials associated with traditional art making. Materials for each lesson were chosen for specific purposes to provide special meaning to the lessons.

For the auditory lesson, I provided students with a metal tray and marbles with which to paint. This combination of materials is very common, especially when the metal tray is replaced with a cardboard box or a shoe box. I utilized a metal tray to accentuate the noise of the marbles rolling around so that the students would react to the sound. In addition to the sound, I provided a semi-hemispheric vibrating toy underneath the metal tray, so that when the students were manipulating and pressing the metal tray downward, they were able to hear the vibrating sound as well as the sound of the marbles rolling. Also, the plastic covering of the metal tray created a noise as the students were scratching the surface, patting it like a drum, and moving their hands around the top of the plastic. Therefore, the auditory lesson provided three different sounds that students could create by manipulating the materials.
For the olfactory lesson, I provided students with popcorn (not for consumption, however). The choice for the material was developed as a result of the common experience that the students had with the smell of popcorn within their residential facility. The students were able to smell the popped popcorn around the building as the employees snack on microwaveable popcorn regularly. However, students are not allowed to consume popcorn because the covering of kernel popcorn creates a choking hazard. Hence, popcorn is never introduced as an interactive material for this reason. I noticed the smell was common, but the actual experience with the popcorn did not exist in the students’ life. Therefore, I decided to utilize the popcorn for the olfactory lesson. Given the familiarity of the smell of the popcorn, I felt painting with the kernels would create a harmonizing experience.

Lastly, I utilized Sculptamold for the tactile sensory art lesson for this thesis. Originally, I wanted to use molding paste for the project; however, it was very difficult to clean it off from the students’ hands. Therefore, I changed the material to Sculptamold, an approved product (AP), and it was easy to clean afterwards. The integrity of the art material utilized for the tactile sensory lesson was due to the fact that students do not commonly experience art materials like Sculptamold, yet it is a legitimate art-making material. In the past, for the majority of the time, the students were provided with whipped cream, shaving cream, or pudding for tactile-like sensory lessons. Students were familiar with those materials; as a result, I wanted to introduce a new (and more authentic) material and a new experience for the students. In addition, whipped cream,
shaving cream, or pudding do not change form much as students manipulate them; whereas, the Sculptamold changes with manipulation. It hardens as time passes.

Conclusion

This chapter has presented the researcher’s utilization of qualitative research methodology as a paradigm for the study. The researcher employed action research to provide methodology that emphasizes the process of improvement in the teaching of students with severe to profound disabilities. Also included in this chapter is the researcher’s method of collecting data through participant observation, note taking, intervention lessons, interviews, critical self-reflections, and video recordings. Lastly, this chapter provided a description of the researcher’s role, setting, participants, teaching method, and development and description of the lessons and materials. The following chapter will address the findings of this study.
CHAPTER FOUR

RESULTS AND FINDINGS

Figure 7: Brian and Olfactory Lesson, Photograph courtesy of Young-Ji Kim, © 2009

Introduction

This chapter demonstrates what happened when students with severe disabilities engaged in Active Learning. Field notes, participant observations, video recordings and analysis, interviews with intervention specialists, and personal reflection have supported a range of understandings about the Active Learning method and about my role as a teacher. Six categories emerged from the results and my reflection: For students with severe disabilities, Active Learning (a) fosters student independence; (b) requires flexibility; (c) necessitates differentiated communication styles; (d) must focus on the process; (e) requires persistence and patience for both teachers and students; and (f) must deviate in practice from its philosophy. The thoroughness of Active Learning philosophy provided clear guidelines for application of the method; however, I learned that modification is necessary to fit the need of my students.
Nielsen (2001) defined Active Learning in terms of its strategies designed to encourage students to explore materials or their environment independently. During olfactory, auditory, and tactile lessons, the students in this study were able to explore materials independently with their senses.

**Olfactory Lesson Promoting Independence**

In the olfactory lesson, Brian, Diane, and Zander explored popcorn independently. They were able to smell and explore with their hands popcorn on a plastic tray. I also helped them smell the popcorn by bringing it close to their noses. All three students were able to smell it. The aroma of popcorn near their nose triggered a reaction, and they all opened their mouths, more interested in eating the popcorn than smelling it. I repeated several times: “This is not food, can’t eat this, not food.” They all engaged in identical behavior in response to the aroma of popcorn.
In the olfactory lesson, the students were able to move their hands around the popcorn freely and independently to mix paints together to create a painting. Diane needed physical assistance to initiate her project, but she was able to open and close her fingers in a circular motion to explore the popcorn and mix the paint. Randomly she flicked, hit, pushed, and pressed down on the popcorn as she moved her hands in various directions. Diane’s hand movements were calm and gentle throughout the session.

Unlike Diane, Brian explored aggressively with his arms and hands. He engaged in a big circular swing motion with both of his arms and hands, quickly dropping his hands down on the popcorn to move them around. He attempted various actions as he moved his hands side to side, grabbed the popcorn, tried to lick his hands, crushed popcorn, and gathered it to the middle of the painting. Brian’s intervention specialist said, “Brian was able to independently use his hands to create the painting. He successfully covered the canvas with colors by using large arm movements.” Brian was also intense in his use of arm movements, facial expressions, and gestures. He showed concentration with a tightly closed mouth and widened eyes, leaning his head all the way back to the head rest and stretching his arms out straight onto the painting.

In contrast with Diane and Brian, Zander used his fingers to explore the popcorn gently. Zander had defined fine motor skills, which he used to pick up each popcorn kernel from the tray. He grabbed one or two in his hand and immediately placed it back down on the painting. Most of the time, Zander examined the popcorn by gently tapping with his index and middle fingers and moving it side to side with his hand. Later on, he independently taught himself to break apart a popcorn kernel by using both hands. His
intervention specialist noticed and stated, “He even explored the popcorn on his own.”

Through the olfactory lesson with popcorn, the students were able to discover and learn about the popcorn independently through their arm, hand, and finger movements.

Auditory Lesson Promoting an Understanding of Cause and Effect

As much as the olfactory lesson encouraged student independence, the auditory lesson advanced independence through purposeful hand movements throughout the session; in addition Diane and Brian learned about cause and effect. A half-hemisphere vibrating object was attached to the bottom of a metal tray, and placed on the student’s wheelchair tray. The circular part of the object faced down, so the metal tray could move 360 degrees, allowing marbles to roll around in various directions on the tray. Diane actively moved her hands around the tray, lifted the tray using her hands and arms, dropped it on her tray to make a loud noise, allowed the marbles to roll around, and pressed down to make the object vibrate the whole tray. At first, I was not sure that Diane understood the cause and effect in two cases. First, she needed to move the tray in order to roll the marbles around the metal tray; and second, she had to press down on the tray to create a vibrating effect. According to Nielsen (2001), students will learn cause and effect through an accidental movement that creates a sensory outcome for them. That sensory outcome will trigger interest and curiosity, perhaps causing them to try to do it again. Then this repetition of movement will become learned behavior that will teach them about cause and effect.
Observing Diane and watching the video recording, I determined that she gained an understanding of cause and effect by exerting random pressure at the outset of the experience. Slowly realizing that her interaction with the tray created a vibrating stimulation, Diane interacted with the metal tray more aggressively over time, moving the metal tray around her wheelchair tray vigorously, lifting it up and quickly dropping it, holding the tray down to feel the vibration, and trying to put the metal tray in her mouth. Diane apparently understood the idea of rolling marbles as she moved her tray in different directions. The sound of the marbles rolling and hitting one another and the metal tray made her smile throughout the session. Diane’s intervention specialist stated, “When Diane got to hear the marbles roll, she smiled. She liked to hear the sound.”

Observing the progress she made with cause and effect in such a short period of time through the auditory lesson was gratifying.

Watching Diane learn independently throughout the auditory lesson was very rewarding, but Brian reacted in a different manner to the auditory project, finding a louder and more forceful sound than that produced by rolling the marbles around the metal tray. His arm movements were clearly purposeful as he tried to reach and interact with the metal tray and the marbles. He responded with a smile whenever he heard marbles rolling around. At first, when he pulled the tray near him, it fell on his lap. Then aggressively, he moved his arms around to drop the metal tray on the floor, creating a loud noise as the metal hit the concrete floor. Laughing and screaming in a high pitch, he was ecstatic about the thunderous noise he created. Throughout Brian’s 30-minute auditory sensory session, he attempted to drop the metal tray on the floor 24 times. To
determine whether he understood the cause and effect, I caught the metal tray before it hit the floor, preventing it from making the loud metal sound. When Brian pushed the tray off the table, he anticipated a loud sound. When the metal tray hit the floor, he laughed and screamed with excitement; however, if I caught it before it hit the concrete floor, he waited with a confused look on his face, then scowled disappointedly as he watched me replace the metal tray on the table. I concluded that he understood cause and effect in creating an earsplitting sound with the metal tray, which he enjoyed very much.

Independently, Brian learned how to manipulate the metal tray, and he was able to self-motivate throughout the session. Brian was unstoppable, and his energy was powerful during the art making. I could not have asked more of him.

Making Choices through Active Learning

In addition, the Active Learning approach promoted independence as students made color choices. During the olfactory and auditory lessons, each student was able to select preferred paint colors for their project independently. Diane chose her colors by reaching out and grabbing the paint bottles, using facial expression to confirm the decision either by smiling or not smiling. Brian made his choice by swinging his arms around the bottles; after making a big motion he was able to reach out and grab the paint bottles that he preferred. I asked him a verifying question after each choice to confirm it. Brian gave me a smile indicating a definite “yes” 100% of the time. His teacher stated, “Brian was able to choose the colors he wanted to use for his project,” identifying his choosing as the moment of success during his art making. Zander, who also was able to
indicate his color preference by grabbing the paint bottle and handing it to me, was also able to repeat the color names as I introduced them to him one by one. Zander learned the names of the colors and independently chose the ones he preferred to use in his painting, demonstrating that Active Learning fostered students’ independence in making color choices during the olfactory and auditory lessons.

Reflection on the Active Learning Method

My own experience has shown that Active Learning encourages independence in students as they engage in activities. They autonomously learned cause and effect and independent movement as well as made choices and explored materials. I have studied and understood the philosophy behind Active Learning and what I am supposed to do during the activities. According to Active Learning philosophy, I was supposed to leave them alone and allow them to self-motivate for the activity; however, I had difficulty at times resisting the temptation to intervene in the students’ session without pushing them a little bit further than their current state. I also believe that I was empathetic and compassionate towards my students and that I tried my best to show confidence in the students’ activities and support their needs and wants. When a student was less active during art making, I tried to encourage them and became their cheerleader throughout the session. Throughout the session I continually repeated, “Keep going. You can do this. Move it around. Try it. Keep moving your hands.” Although my simple phrases contained only a couple of words, I believe those small encouragements provided support and motivated the students. Permitting them to be completely on their own during
activities was also difficult because I knew what they were capable of accomplishing on their own and wanted them to maximize their capabilities and move beyond them to attain greater independence.

**Flexibility**

[Image: Zander and Tactile Lesson, Photograph courtesy of Young-Ji Kim, © 2009]

Sculptamold Lesson Requiring Flexibility in Approach

Active Learning requires flexibility in the way the teacher structures and modifies the learning, the time spent on each activity, and varying amounts of assistance for the students. Because each individual student’s needs vary according to the materials, preferences, and physical movements, the teacher must be able to reorganize and transform the lesson during the course of the session.

For example, during the tactile lesson, the students used Sculptamold, a modeling material with a texture similar to cottage cheese. Zander had a difficult time interacting with the Sculptamold using his hands. He exhibited tactile defensiveness towards materials that are wet, gooey, slimy, and sticky; therefore, when he had to touch
Sculptamold, he struggled to interact with it. In the beginning of the session, I demonstrated how he could play with the Sculptamold by placing my hands in it and moving it around. He then grabbed onto my wrist and started to move my hand around the paste. Although he did not want to touch it on his own, he used my hand to interact with the material; however, he presented curiosity and interest in the material by voluntarily touching the surface of the Sculptamold 16 times during the 30-minute session. He tapped and touched the paste very gently, but quickly moved his hands away and wiped his hands off on his apron.

I tried to encourage him to touch the material with his hands, but I questioned the benefit of forcing him to interact with material that made him uncomfortable; so I quickly changed the plan and offered him painting tools to mix the Sculptamold. I provided him with a couple of choices: paintbrush, spatula, and scrubby tool. First, he chose the paintbrush to mix the Sculptamold, handling the paintbrush as if he were painting a picture, moving the brush in a circular motion and from side to side as well as poking the Sculptamold. For his next tool he moved on to a spatula, which he also used the spatula like the paintbrush. After a couple of minutes, he tried to scoop up the material with the spatula.

Zander was able to learn and taught himself independently how to use the spatula in various ways. Zander’s intervention specialist said, “I liked how when Zander would not touch the plaster anymore, Daisy allowed him to do hand-over-hand with her. She didn’t push him to do something he was not comfortable with.” Flexibility and
restructuring of the lesson provided the student with the opportunity to use Active
Learning that fostered independence, decision-making, exploration, and self-teaching.

Tactile Lesson Requiring Flexibility in Timing

Another example that demonstrated the need for flexibility when using the Active
Learning method dealt with the amount of time needed for an activity. Before the activity,
I had estimated the need for about 30 minutes for each student to explore, become
familiar, learn, and create art with the given materials; however, setting a specific
timeline for the activity was very stressful for me and the students. For example, during
the tactile lesson Brian spent about 20 minutes before he became exhausted with the
activity; however, it took Diane about 40 minutes to lose interest in the material.

If the students had finished interacting with the material after 15 minutes, I would
have felt the pressure to fill another 15 minutes by encouraging them to continue to play
with the material. I had to readjust my thinking because I realized that Active Learning
should be incorporated when the student also has the desire to interact with the material.
When I recognized my own inclination, I quickly concluded the session without further
promoting or encouraging the students. I should not force students to explore more or
create more art, but if they are finished or have lost interest, I need to end the session. By
contrast, some sessions went over 30 minutes to nearly 50 minutes. Ending the session
proved difficult when the students fully engaged in the activity. I understand that the
typical school operates on a strict time schedule in which each subject fits into the
student’s specific schedule; however, my students have about two and half hours to
interact with the materials. Activities usually last a minimum of five or ten minutes when students are not engaged to a maximum of one hour when they are fully interested in the materials. I can never predict how long each session will last with each student. I have to go along with the student and allow enough time for her or him to explore the materials in an appropriate amount of time from five minutes to an hour. Accommodating the needs of students with flexible time during Active Learning is crucial for them to explore completely and learn about the materials they need to create art.

Reflection on Need for Flexibility

At the outset of my teaching career, learning to remain flexible with my teaching time was difficult to master when teaching students with severe to profound disabilities. Flexibility was the opposite of what I was taught at the university, where time management was crucial in teaching students. I learned that I had to follow and complete the items on an agenda within a fixed period of time, but educating students with severe to profound disabilities differed considerably. My time and agenda were not important, but it was essential to adjust my time according to the students’ performance and engagement. Especially with Active Learning I had to train myself to avoid imposing a time limit during their activities. The student had control of time and the amount of it she or he wanted to use for an activity. At first, maintaining flexibility was challenging; but now I enjoy and anticipate the variable time used by the students. If I have extra time, I can provide them with a new activity that they might like even more (or less). In addition to time flexibility, I also needed to adapt to students’ preference on materials for the
activity. Sometimes when I took an hour of my time to prepare an activity for students, they were interested for only about five minutes. This kind of occurrence was very disappointing and discouraging to me, but it also helped me to improve, rethink, and restructure the activities to better serve and educate the students.

**Differentiated Communication Styles**

Communication between the teacher and the learner is crucial in education. The teacher needs to provide a clear message in order for the learners to understand what they are supposed to comprehend and achieve through their education; however, the typical meaning of communication changes radically when teaching students with severe to profound disabilities. Communication for students with severe to profound disabilities surpasses verbalization. They converse with another person through gestures and facial expressions; by gazing, blinking, reaching to indicate decisions; and with assistive technology and communication devices, such as various switches and computer usage. Throughout the sensory lessons, the students used various levels of communication to express their preferences, needs, likes, and dislikes.
For example, during the tactile sensory lesson, Diane expressed herself through facial expressions, gazing, and gestures to let me know whether she wanted the materials, liked or disliked the materials, and wanted to continue or end the session. I asked Diane questions at the end of the tactile session, such as, “Do you want to be done? What do you think? Do you want to play more?” She indicated to me that she was finished with the project by pulling her hands away from the pile of Sculptamold. This gesture indicated to me that she was no longer interested in the material and wanted a different activity to transition; however, I normally ask the question twice to make sure the student really meant what I thought she or he expressed to me. So when I asked her again, “Are you done?” Diane pulling her hands away from the Sculptamold was a clear sign of communication that she was finished with the project.

In addition, Brian exhibited a more advanced form of communication during his auditory sensory lesson than Diane. He liked to joke around, was ornery at times to create a scene, and wanted his audiences to exaggerate their expressions. When Brian interacted with the metal tray and attempted to drop it on the floor, I amplified my expression as if I were shocked that he threw the tray on the ground. He laughed and screamed with an excitement to communicate to me that he was having a great time. He was also able to vocalize throughout the session and responded to my short questions, yet I had no clear indication that he was actually responding to my question. He could have merely been reacting to my voice, but he at least provided me with an assurance of my lesson as I communicated with him.
Moreover, Brian taught me that I should look for more than one communication sign from the students. At the end of the olfactory sensory lesson, I asked Brian whether he was finished with his project, and he responded to me with a smile. I learned that a smile represented “yes,” and a frown indicated “no.” So I tried to take the tray of popcorn away from him, but each time he reached out and wanted to continue his interaction with the popcorn. This behavior gave me a mixed signal. Brian responded with a smile, indicating he was finished with the project; however, his gestures showed that he wanted to continue with the project. Finally, after asking the same question six times, he decided that he was finished and gave me a slight smile without gesture.

Zander, who was known as the highest functioning student in the school, communicated by using gesture and facial expression and by saying one or two words to convey his thoughts. Zander recognized people by name; for instance, when he came to class, I greeted him with “hi” in a loud enthusiastic voice.

Then he responded back, “Hello, Zander.”

So I asked him, “Hello! What is my name?”

Clapping his hands happily and excitedly, he responded, “Hello, Daisy.” Zander used short phrases or words to communicate with others; however, at times, his word choice was inaccurate as when he used the word green for identifying other colors.

When Zander started school, I was surprised that he knew his favorite color, which was green. Whenever I asked him, “What color do you want to use?” he quickly said, “Green” in a high-pitched voice. So I put green on his painting without any hesitation or question, yet as I grew to know Zander a bit better, I realized that the word
green did not indicate the actual color green but instead color in general. This misunderstanding of a word was evident during the olfactory sensory session. When we chose paint colors to use for his painting, I asked him, “What color should we use?” He looked up and told me with confidence, “green.” So I asked him to choose a color that he wanted to use, and he grabbed the orange paint bottle. He looked at the bottle and said, “green” So I redirected him and asked him to find green among the paint bottles. He took out pink and handed it to me.

I asked him, “What color is this?” and he indicated that the color was green. So I corrected him and said, “No, this is pink. Can you say pink?” He then repeated after me and said the word pink. Again, I asked him to choose a color, and he reached for the white paint bottle.

As he placed it on the table, he said, “greeeeeen” as he smiled.

So I told him, “this is white.”

Once more, I asked him to pick a color and he said, “green” as he selected blue.

So I told him, “That is not green. That is blue.” So I finally picked up a green paint bottle to show him the color green. I said to him, “this is green.”

He replied, “blue.” This anecdote shows that teachers need to know students well in order to communicate with them with full understanding because the students communicate at various levels; teachers can thus prevent any false impression in their communication with students.
Self-Reflection on Differentiated Communication Styles

My experience with students with severe to profound disabilities confirmed that teachers must be familiar with the student as a person before they can begin to teach him or her. The teacher must recognize the various communication levels and skills the student uses, how she or he expresses emotions, and the kind of communication to which she or he is most responsive. In addition, the teacher should also find out whether the student uses any kind of communication devices that can support and assist to deliver his or her thoughts and ideas. Diane, Brian, and Zander all had their own identifiable way of communicating with people. I tried my best to acknowledge their means of conversing and pay close enough attention to their voices throughout the sessions; however, video analysis facilitated my realization that I failed to notice small talk between our one-on-one interactions.

All three of the students had good head control: They were able to move their heads any way they desired unlike other students whose heads were fixed in one position or had no head control, causing their heads to fall however gravity pulled them. As soon as I placed the materials on their wheelchair tray or the table, Diane, Brian, and Zander all put their heads down to observe and interact with the material. When they placed their heads down towards the tray or the table, they used many facial expressions that I did not recognize until the video analysis. Randomly, I positioned my head at their eye level to see what they were doing or expressing, but my timing was off most of the time; and I did not see their smiles or frowns, mostly their beautiful smiles. Evidently, when I acknowledged their expressions during the session, they were very responsive and
sometimes their expressions grew broader or louder to have a conversation with me. Those moments were beyond exciting, and I felt that I created a strong bond between the students and me.

Communication through facial expression was very important for my students; however, the moments most precious to me were those involving their expression of their feelings through physical touch and eye contact. At different points in time, each student placed his or her hand on top of my hand or my arm and simultaneously made eye contact. This did not happen frequently, and I could be mistaken because the gesture might have resulted from involuntary muscle movements; however, my heart told me that placing students’ hands on mine was a purposeful act to tell me that they were having a good time, wanted assurance, wanted my approval, and trusted me. Obviously, they did not tell me these things, but through their touch and eye contact, I felt their affection towards me. I understood this affection only through my intuition. I believe connection between persons does not need actual words to express sentiment.

**Emphasis on Process**

![Diane and Olfactory Lesson, Photograph courtesy of Young-Ji Kim, © 2009](image)
Active Learning accentuates the process through which students independently explore materials. While the students are freely involved with the materials, they gain knowledge of the material and interpret their own understanding. To my students, final product did not mean much to them. The students were not worried about how certain color mixtures can make a painting unattractive; they were not concerned if they crinkled or ripped their artwork apart. (Teachers in fact felt lucky if the students did not eat their own artworks.) They did not compare their own artwork with the other students’ work; and they were not distressed if they ultimately destroyed their own artwork.

For example, when Brian worked with Sculptamold, he was unconcerned about how his final art product would look in the future. He went in and explored the material as much as he could while using arm and hand movements. During the process, he threw the material all over the place, splashed it on the table, got it all over him, tasted it, dripped it on the floor, and flung it into my mouth. He had no fear of exploring the Sculptamold. He was so free and allowed himself to enjoy the whole process. He was self-motivated during the process of exploration. As long as the students did not refuse, were interested in the materials, and had a good time during the process, I could not ask for more.

In contrast with Brian, I always had a higher expectation of Zander during his art-making process because he functioned at a higher physical and mental level than Brian. I wanted Zander to explore freely and enjoy the process like Brian, but I also wanted him to learn the names of the colors, tools, and small conversational words. For example, during the auditory sensory session, Zander was able to repeat 17 times voluntarily after
me to communicate and learn various words. When I presented a color and told him the name of the color—“This is yellow”—he repeated the name of the color after me, saying “Yeeeeeellooow.” In addition, by repeating the words after me, he also followed my demonstration. I asked him to press the tray down to move the marbles around as I showed him the downward motion with my hands. He repeated after me by saying, “Dooown” and followed the downward motion on the metal tray. The most enjoyable part of the demonstration occurred when I showed him how to smell the popcorn. I placed the popcorn near my nose and took a noticeably loud deep breathe for Zander to hear. When I asked him to smell, he followed my demonstration of taking a deep breathe as he smelled the popcorn. He was so lovable and encouraged me at the same time to be a good teacher. I truly cherish moments like these in my heart. The process of repeating the words and following my demonstration during art making was very important for Zander’s Active Learning experience: Later on he was able to continue with the project on his own without my demonstration. After learning what to do, he independently explored the various sounds made by marbles, paint mixture, and the texture of the plastic on top of the tray.

In addition, the learning process varies depending on the student. When I presented Sculptamold, Brian and Zander interacted with the material very differently. Although I presented the same material and had the same objective in my mind, the process may have been different for the two different learners. Brian was excited to use his hands to approach the tactile lesson; by contrast Zander hesitated to approach the tactile material to interact with it with his hands but enjoyed the process when he had a
painting tool to use. Both were aware of the material, but they had a different way of managing the process. The Active Learning method emphasizes the process for students; it also helps the teacher learn more about students’ preferences throughout the process of learning and art making.

Self-Reflection on Emphasis on the Process

My students benefited from incorporation of Active Learning in their art-making. The Active Learning method helped me concentrate on the processes of exploration and learning instead of the final product. I do not know how much of the term *art* my students comprehend and I do not refer here to the philosophical meaning of art but I wondered whether they knew the simplest everyday use of the terms *art or creating art*. Because I was unsure about how much they knew, I primarily emphasized the materials and the process of exploration. I placed less weight on the final product because students did not seem to know whether they were actually creating “art work,” nor did they know whether they were destroying their own artwork when they ate or ripped it. Their final product was actually the process in which they independently explored the materials. The appearance of the final product was of little significance; all that mattered was how much fun they had during the process of exploring and learning about the materials.

Furthermore, the process involved in the Active Learning approach provided many unforgettable moments. While Brian was in a process of exploring Sculptamold, he persisted in putting his hand in his mouth. Although Sculptamold is nontoxic, an approved product (AP) of the Art and Creative Materials Institute, I did not want him to
eat the substance. Because he kept placing his hand in his mouth, I wondered what the paste tasted like or if it even had a taste to it. Thanks to Brian’s sweeping arm movements, a tiny bit of Sculptamold landed on my tongue. It was very small amount, so I didn’t spit it out but joked about it as I made an eating sound. My curiosity was answered with Brian’s help. (Sculptamold did not have much of a taste!) I loved moments like these because they are part of being human and silly, memories that I can laugh about when I think of Brian or Sculptamold in the future.

Finally, I was very envious of Diane and Brian during the tactile sensory lesson. As I watched the video, I saw the freedom behind their process of making art. They did not hesitate, were unafraid, and did not think twice about how their artwork should turn out in the end. They moved their arms around the material unreservedly; whenever they wanted to eat the material, they just placed it in their mouth without worrying about the aftereffect; and they both made all the mess they wanted without getting into trouble. Many times I do not let myself have fun while creating art: I think too much, compare with others, worry about the outcome, suffer disappointment with my grades, and regretfully have little fun while making the artwork. At some point in the future, I hope to feel the great freedom of creating art as my students have shown me.
Persistence and Patience

Active Learning requires persistence in both the teacher and the students. In my position as the teacher, persistence was essential throughout the olfactory, auditory, and tactile sensory sessions because I had to maintain alertness to recognize the students’ needs and wants. Because the students could not verbally express their requests, I had to keep my eyes on the students continuously. In addition, as the students independently explored the material, I had to encourage them to keep the interaction dynamic and fun.

For example, during Zander’s tactile session, I had to persist in encouraging him to interact with the material. During the initial 15 minutes that he interacted with the Sculptamold with his hands, I continually encouraged him—at least 18 times. I waited for a bit and asked him to touch the material, and then Zander touched the material for a split second. I cheered and praised him when he touched it. I repeated the process over and over until I altered the lesson for Zander.

Another example occurred during Brian’s auditory lesson. Brian repeatedly attempted to drop the metal tray to the ground to create a loud noise. Every time he let the
metal tray fall off his lap, I had to pick up the heavy tray from the ground. The first ten times were fun—we were silly together—but picking up the tray 24 times or preventing the tray from hitting the ground eventually became annoying. For the benefit of the student, however, I had to persevere and not give up on the students’ exploration, learning, and fun. Brian’s behavior also showed his persistence. Concentrating, swinging his arms vigorously, and stretching his whole body involved a good deal of work. Throughout his 30-minute session, he attempted to drop or actually dropped the tray 24 times altogether; in other words he endured physically and mentally throughout the session because he was having fun exploring the materials. It was essential for both teacher and student to be persistent throughout the sessions in order for the students to benefit from the lessons.

Furthermore, Active Learning necessitates patience in both the teacher and the students. Through video analysis I recognized that the teacher’s patience was needed throughout the process of students’ exploration, whereas the student waited patiently while the teacher prepared for the exploration of materials. During three separate lessons with three separate students, I patiently waited each time for the students to interact independently with the materials. I tried to avoid any kind of hand-over-hand activity except for pouring paints on the paper. Each student needed help squeezing paint out of the bottle. Other than that, I avoided giving hand-over-hand assistance to the students because doing so keeps pace with the teacher’s timing, not the student’s. At times, I provided physical and verbal prompting, but I tried to allow the students to take the initiative to engage in independent exploration of the materials. Sometimes waiting could
take longer than expected; however, I knew that in order for the students to partake in Active Learning, I needed to wait patiently for their movement.

Students also required patience during their Active Learning session. The way I presented the students’ material was not by placing already-made materials on their tray. I tried to provide them the visual impression of how I prepared the materials. For example, when I poured the dry Sculptamold out of the box, I explained to Brian, “This is what it looks like out of the box, but we are going to mix it with water to make it all gooey.” I poured water and started to mix away from him for a bit because I didn’t want him to inhale the powder-like material. After the powder calmed down, I showed Brian how I mixed it with the water. In addition, when Brian needed more Sculptamold in the middle of his session, I mixed the dried material with water in front of him. He waited patiently for me to prepare the materials for him and anticipated what he would soon do with the mixture.

Another example derived from preparation for the auditory lesson for Diane. I placed the watercolor paper in the metal tray, taped it down, then placed the plastic wrap on top of it, securing it with more tape. As I put the plastic wrap on the metal tray, Diane waited patiently for the materials to be ready. I tried to make silly jokes and laugh as she tolerated the waiting period. She kept looking over and anticipated her interaction with the metal tray and the marbles. I was very thankful for the students’ patience while I prepared the materials for them.
Self-Reflection on Persistence and Patience

I believe working with another person to achieve a specific goal requires the persistence and patience of both parties. It does not matter whether they have different personalities, preferences, perspectives, or even a disability because they both try to achieve the same goal. My goal for this research was to use Active Learning methodology in my art class to help students explore and learn independently through various sensory lessons. Before I further elucidate the importance of the student’s actual exploring through Active Learning requiring persistence and patience, I must emphasize the significance of my relationship with the students. Teachers must facilitate students’ learning and help them improve and progress in their lives, but I believe the human connection is more important than a student–teacher relationship. I tried to establish a Daisy–Diane relationship, Daisy–Brian relationship, and Daisy–Zander relationship before I created teacher–student rapport. Once I know and understand who the student is as a person, it is easier for me to love them and be patient with them while I persist in my approach to teaching them. The school system where I worked at the time of the study was unique in the availability of time for one-on-one interaction with the students. Students needed one-on-one interaction to accomplish something; therefore, while cutting paper, squeezing paint out of the bottle onto the palette, applying glue, placing a paintbrush on paper, mixing colors together, and every other minuscule step in between that is involved in creating a painting provided that one-on-one relation. Consequently, while preparing and assisting during the project, the teacher can get to know the student better as a person. They show the teacher what they can do, how they show affection, and
how they express happiness and sadness as well as communicate their needs and wants in various ways, thus helping me to understand the true essence of each individual student. After I mentally sculpt an image of the student, I can jump in and try my best to be the teacher that she or he needs.

Furthermore, I heard from numerous people outside the field who say, “It takes a special person to take care of those children.” I strongly disagree with this statement because if we love someone, we can be persistent and patient despite the circumstances. I love the students in this study as much as I loved the typical children whom I taught in a public school setting. I believe once a person gives another person an opportunity to know who they are, creating a small room for that person in one’s heart is easy. That room may grow larger or stay as small as at the outset, but the majority of the people will expand the room for the other person when they understand and get to know the other better. Everyone is unique and different in her or his own way, and my students are as different as any others. They might have a harder time communicating, expressing, and understanding, but once the heart is open and the individual creates that small room in the heart, the small room will grow large enough to accommodate and accept the other.

Regarding the required persistence and patience, I remember one point when Brian was so excited about his Active Learning materials that he swung his arms as he did with the Sculptamold and metal tray. I was pleased and wanted to encourage him more as I drew near him. He swung his arms vigorously and forcefully around the material, and as he attempted to swing his arms around for the second time, he slapped my face. He had not aimed at my face but was displeased nonetheless. I maintained focus
on his intent, which was not to hurt me. He was simply happy to interact with the materials. I was at fault for coming so near his hand. The slap brought tears to my eyes; nevertheless, I had to persist and encourage Brian to continue interacting with the materials. I felt mixed emotions, but Brian’s broad grin and his high-pitched squeaky laugh acted as a bandage on my heart.

Analyzing the video, I observed that students were kindly patient with me during the session. Unable to watch the student’s facial expression while preparing the materials, I did not know what they were doing at the time. Most of the time, they watched every move or tried to turn toward me to watch my behaviors. While I prepared the materials, I tried to maintain the connection between the students and myself by making jokes and laughing. The students reciprocated by joining in, smiling and laughing along. They also showed that they were eager to interact with the materials by looking at the materials that I prepared and moving their hands toward the materials. I was extremely grateful that each student waited patiently for me without complaint, and I appreciated their patience with a teacher still learning in so many ways.
Deviation from Active Learning Philosophy in Practice

Figure 13: Zander and Sculptamold, Photograph courtesy of Young-Ji Kim, © 2009

In practice Active Learning requires teacher intervention that deviates from Nielsen’s philosophy to limit or eliminate teacher interference and involvement; however, I found this strict philosophy impractical in my art class and modified it to suit the materials and the students. I support the idea of Active Learning, but in order to keep my students safe, I could not strictly follow Nielsen’s recommendations for the practice of Active Learning methodology.

My field notes, video analysis, and reflection revealed my emphasis on students’ safety all through their interaction with the sensory materials. I did my best to keep in my mind that students needed to interact with the material independently and explore the materials through self-motivation. In typical student learning settings, teachers explain various safety concerns for selected materials and what precautions the students need to take. Teachers generally describe certain incidents and consequences if the students do not follow given directions; however, doing so was not an option with my students. I could verbally tell and physically demonstrate different ways to be safe with the materials,
but my students were unable to comprehend my explanations most of the time. They could not understand the consequences or predict what could happen as a result of their actions; therefore, I had to watch out for their safety while they interacted with the materials.

For instance, when Diane interacted with the metal tray covered with plastic wrap, I had to intervene continuously by recovering the tapes on the edges of the plastic wrap. Since the plastic wrap was a stiff material, it had potential to cut the student’s skin if it slid through the edges of the plastic. I tried to tape it and cover it the best as I could, but various movements by the metal tray caused the tape to come off in random places, so I had to reapply the tape while she engaged in her activity. The same occurred during Brian’s session. He vigorously moved and dropped the metal tray, causing a problem in keeping the tape intact on the tray. Whenever I saw the plastic coming loose on some part, I automatically placed tape on the edge of the plastic. Safety was crucial to prevent student injury.

An exceptional example of monitoring students’ safety occurred during the tactile lesson with Sculptamold. Because the paste was wet on their hands, students were curious and wanted to explore the material with their mouths. Sculptamold is an Approved Product (AP certified), a nontoxic material, but I did not want to risk their ingesting it. Diane and Brian continued to place their hands partially covered in Sculptamold in their mouths. They tried to lick the material off their hands by sticking their tongues out near the top of their hand. Even though I had an assistant with me to prevent them from eating the material, at times, they were so quick that it was difficult
for both of us to stop them before their hands reached their mouths. They also thought it was fun to place their hands in their mouths when my assistant and I tried to prevent or pulled their hands away. Although Active Learning emphasizes independent exploration of materials, protecting students from any kind of danger or injury through teacher intervention in the activity is essential.

Self-Reflection on Deviation from Active Learning Philosophy in Practice

The main reason for deviating from Nielsen’s recommendation to limit or eliminate teacher intervention was that by failing to do so, I could potentially put students at risk. Students commonly explored not only with their hands but also with their mouths. If I knew the student was inclined to place materials near or in their mouths, I tried to stay and have one-on-one interaction with her or him to maintain safety. Throughout the year, many incidents occurred in which students ingested random materials because we relied on independent exploration and learning in the Active Learning model. I believe that teacher supervision is crucial because outcomes are unpredictable when students do not understand consequences. I use AP certified nontoxic materials to create art, but doing so does not preclude danger or injury.

The Active Learning approach has been grounded in a respectable philosophy that purports to provide individuals with disabilities opportunities to explore and learn independently through activities involving materials and the environment. In my art teaching practice, however, following the methods of Active Learning rigorously was unrealistic when creating art with students with severe to profound disabilities. The
Active Learning approach helped me to learn and reflect intensely on treating each student with respect and love. It also opened my eyes to what students are able to accomplish and to avoid the frustration of dwelling on what students are incapable of achieving. In addition, the Active Learning approach led me to understand further the use of sensory materials to trigger students’ curiosity and interest, which led to their further exploration and education. I am very grateful that I was able to exercise the philosophy of Active Learning in my own classroom to learn what was successful, what needed modification, and what was ineffective and unrealistic for the students with severe to profound disabilities.

**Further Analysis**

As mentioned in Chapter Three, I interviewed each student’s intervention specialist to gain further insights. It became obvious that the intervention specialists were nervous about providing information in front of the voice-recording device. For example, I would ask them a question, and they would answer me with a short and quick answer instead of meaningfully reflecting on their response. When I included interview as a method for this study, I thought it would be easy for the intervention specialists to answer questions right after each session because they could then share what they just observed about the student. However, it was not as easy as I and the intervention specialist thought. I can understand now why it was difficult for them to answer the questions right after the end of each session. I believe the intervention specialists needed some time to rest and reflect before answering my interview questions. It does get pretty chaotic and difficult at
times considering the multiple needs of the students. The classroom can be, in varying
degrees, somewhat hectic and wild given the noise level of the students; and at times, the
students’ behavior can be dangerous. The students’ needs also provide a steady demand
of our time and attention. Therefore, I believe that interviewing was not a successful data
collection method for this thesis due to the condition of the intervention specialists’ state.

I also believe my baseline data provided limited usefulness for this thesis study.
For example, the students sat alone for the first five minutes without any interaction with
objects or a teacher. They were somewhat passive, providing their own self-stimulating
behaviors, were bored, and there was not much expression on their face, all indicating a
high level of disengagement. When they were provided with an object, toy, or Active
Learning materials, they were engaged for a while, and then would rest a bit, and finally
they reengaged with the objects provided. Lastly, when I appeared with some toys to
interact with them, they showed more facial expression, bodily gestures, and vocalization
throughout the last five minutes. Knowing and understanding these different phases
helped me to better understand that the students needed objects to interact with and they
all loved in particular the interaction with a person the best, which assisted me in
recognizing that human relationships are very important to my students.

Unlike the interview and baseline data, I believe video recording as a data
collection for this study was a successful method. Most of my understandings of my
students’ needs are from my own intuition. Since the students are limited to vocalizing in
one or two words or are non-verbal, I have to rely heavily on my intuitiveness to identify
the students’ needs and wants. Throughout this thesis, I reiterated that strong rapport with
the students is vital in understanding who they are as individuals. I believe video recording provided necessary distance to verify and reveal my relationship with the students. As I watched my behavior and their reaction to my teaching, I was able to see that what I knew about the students was valid. I was able to closely examine interaction between me and the students. It was clear to see that my intuition assisted in certain decision making, in understanding their needs and wants, in knowing their preferences, and in empathizing their emotions. These dynamics were revealed through the video recording, providing validity to this study.

**Conclusion**

In Chapter Four, I portrayed various outcomes and reflections on incorporating Active Learning into the teaching of students with severe disabilities through olfactory, auditory, and tactile lessons. I collected and summarized results and reflections on six different categories as follows. For students with severe disabilities, Active Learning (a) fosters student independence; (b) requires flexibility; (c) necessitates differentiated communication styles; (d) must focus on the process; (e) requires persistence and patience for both teachers and students; and (f) deviates in practice from its philosophy. Lastly, I included further analysis of the data collection: interview and video collection.

Evidently, Active Learning methods provide opportunities for exceptional accomplishments for the students as well as the facilitator. Through the Active Learning approach, I saw substantial improvement in students’ independence, which helped me to envision endless possibilities for each student’s potential abilities. In addition, the rigors
of the Active Learning philosophy provide guidelines that must be observed; however, I realized and learned that I could implement the Active Learning method in a modified form to fit the needs of students with severe to profound disabilities. Closely examining field notes, video recordings and analysis, interviews with intervention specialists, and reflections, I discovered insights about myself as a teacher, not only how I could improve my application of Active Learning in my class but also how I could acquire skills that I lacked, and how to improve as a teacher.
CHAPTER FIVE

REFLECTIONS AND IMPLICATIONS

Introduction

Journal entry December 19, 2008: “They don’t know. They are retarded.” What ignorant and callous people say about students with disabilities is often shocking. People who are unable to look past the students’ apparent disabilities are blind to my students’ capabilities; consequently, they are unable to experience the great joy and satisfaction that I feel when I see my students smile. I wish people could open their eyes and see beyond their apparent disabilities. I truly hope that someday their minds can be opened. I wish they could remove their blinders and catch a glimpse of the happiness that I experience each day. “Disability, according to Hahn, does not result from a child’s, youth’s, or adult’s failure to adapt to societal demands, but from society’s inability to adapt to the individual” (as cited in Blandy, 1991, p. 133).

Figure 14: Brian and Sculptamold, Photograph courtesy of Young-Ji Kim, © 2009

In this chapter, I will reflect on understandings and learning experiences as a person, as an art educator, and as a researcher as well as provide implications for teacher educators and for art classroom teachers. In addition, I will reflect on the process of
preparing this thesis and also will illustrate my deep understandings as a person and as a teacher.

**Personal Development**

Figure 15: Brian’s Olfactory Art, Photograph courtesy of Young-Ji Kim, © 2009

At the beginning of my career as an art teacher of students experiencing severe to profound disabilities, I was unprepared to teach them. I did not know where to begin, and I did not know what they were capable of learning. I had difficulty looking beyond their apparent disabilities. I started art lessons with a passive interactive approach, led by the adult assistants. In the teacher-centered lessons I provided and created art for the students, who watched me as I moved their hands to engage in hand-over-hand activities; and the students passively followed my lead as I tried to create artwork “with them.” When I look back, I see that I did not create artworks “with them;” instead, I created artwork for them while students remained inert or were forced to move their hands to create something devoid of autonomy in the creative process. I was trapped in my mind focusing narrowly on the students’ disabilities. I do not disapprove of the hand-over-hand method because it
allows those individuals without much independent movement to explore materials and to create art; however, I am very glad that I learned other strategies, such as Lilli Nielsen’s Active Learning, that are far more effective in developing autonomy in creating art with students with severe to profound disabilities (Nielsen, 2001).

Initially, I was skeptical about Active Learning because I focused on my students’ disabilities instead of their abilities. Active Learning concentrates on students’ abilities, but I kept telling myself, “My students cannot move like that. They cannot perform that kind of arm movement, and they cannot understand cause and effect.” My students taught me that I was no different from those “ignorant and callous” people about whom I wrote in my journal. Using the Active Learning method, students exceeded expectations, shattering what we associate with students with severe to profound disabilities.

For instance, when Brian was introduced to the auditory lesson with the metal tray and marbles, I did not expect him to learn quickly about cause and effect while he manipulated the materials. He went beyond my expectations, however, by having fun as he realized the effect of him dropping the metal tray—a loud noise. I was surprised to see Brian realize this on his own so quickly without my repeating the demonstration.

Zander also exceeded my expectation by illustrating that Active Learning can provide voluntarily exploration. I knew Zander engaged in tactile defensiveness with wet materials, so I expected that the tactile lesson would challenge him. I did not expect him to touch the material unless I provided demonstration and verbal prompting, yet Zander explored the material by voluntarily touching it because he was interested and curious about the material. The learning could have been different if I had continued to push him
to explore the material, or if I approached with hand-over-hand method. He explored the material at his own pace by tapping it, pressing it down, and using tools to manipulate it with various movements.

Finally, Diane also exceeded my expectation by demonstrating how Active Learning can enhance the individual’s preference. While Diane made choices for her paint colors, I expected her to answer me through her gaze; however, she was able to reach toward the paint colors she preferred for her project. I was surprised at times that she did not select colors when I put them in front of her, indicating that she did not want them. I grew to respect Diane because she did not try to please me by simply choosing the colors I presented to her, but she had a strong will to tell me what she preferred to use in her own art project. By using the Active Learning method, I was able to move beyond my narrow expectations of my students.

Each student who participated in this study taught me how effective the Active Learning method can be in creating art, surpassing all expectations for this study. The lesson that they taught me is the significance of autonomy in our life. People often neglect small decisions that they are able to make on their own; they come very naturally and sometimes they require little thought to determine what they want in this life. By contrast autonomy is not a concept that applies to students with severe to profound disabilities because they rely on others for their daily activities. They are dependent on others for their very survival; however, Active Learning provides some degree of autonomy in the students’ lives by allowing them to make their own choices, working at their own pace, starting and stopping whenever they want, and ultimately controlling
what they want in life. Although I am somewhat embarrassed to admit all my vulnerability and deficiencies, my personal reflections have brought me to a better understanding of my own evolution as a person who has matured to the point of respecting the values of my students.

**Art Educator Development**

Figure 16: Zander’s Auditory Art, Photograph courtesy of Young-Ji Kim, © 2009

Within traditional art education settings, teachers assess students by focusing on the art products as evidence of their learning. Students are able to construct portfolios with their own artwork to provide the evidence of their growth and development. According to Beattie (1997), the art portfolio is the “purposeful collection of student work that tells the story of the student’s efforts, progress, or achievement in given areas” (p. 15). My students’ “efforts, progress, or achievement” might not be so evident in a portfolio. In a typical art class, students illustrate how much they have learned about perspective through 2-D or 3-D perspective drawings; students demonstrate how much they learned about clay through various clay sculpting methods culminating in a final
clay project; and students exhibit their understanding through critique, written essays, and exams. Through various final products art educators are able to assess how much students learned and progressed; however, creating an assessment through the final product is not applicable in my art class. Only careful observation of my students’ art making process can help me assess their learning.

Active Learning facilitated my shift in focus to the process of creating art instead of the final product as evidence of students’ learning. I cannot assess students’ artwork with their end product because it does not mean much when I do not know what kind of involvement they achieved while creating the art. I cannot take my rulers out and measure and assess how far each student moved his or her paintbrush across the paper or give one of them an “A” because he or she was willing to interact with the materials. I need an assessment instrument that moves beyond what is visible in a final product. Simply looking at a student’s final artwork is inadequate to determine how much fun they had creating art, what kind of arm and hand movements were involved, how long they worked on it, what kind of facial expressions they made throughout, and what they learned while interacting with the materials. According to Hohmann and Weikart (1995), “[w]hile children’s creations may sometimes be messy, unstable, or unrecognizable to adults, the process by which children think about and produce these creations is the way they come to understand their world” (p. 18). For example, while Brian worked on the auditory lesson, no one can tell that Brian learned the concept of cause and effect. Just by looking at the painting, people cannot tell that Brian attempted to drop the tray over 24 times during a 30-minute session. As others look at Brian’s painting, they cannot hear all
the happy laughter he let out during the lesson. Jean Piaget asserted, “Knowledge arises neither from objects nor the child, but from interactions between the child and those objects” (as cited in Hohmann & Weikart, 1995, p. 15). The final product does not mean much when it does not portray all the unimaginable events that happened during the process of creating the artwork.

**Researcher Development**

After reviewing and analyzing my journal entries, data, video analysis, and teacher interviews, as a researcher I realized the holistic nature of Active Learning method. Flexibility, patience, perseverance, communication skills, and understanding the variability in communication skills cannot exist without one another while implementing the Active Learning method. I divided chapter four into categories to discuss my analysis and reflections, but through examination of each category I was able to look at the process holistically. I needed to be patient with my students in order to understand their communication skills and persevere while trying to be flexible to accommodate the
students’ needs. I needed to persevere to find out what my students wanted through their specific communication skills, and I required patience to understand their multiple needs by including flexibility in my materials and lesson structures.

For instance, while Zander was involved with the olfactory lesson with popcorn, I asked him 15 times if he was finished with the project. He told me that he was finished every time I asked him, but he did not want to stop his interaction with the popcorn as he reached out for more. So when I tried to take the popcorn art away from him, Zander reached out to interact with the popcorn. When I asked him, “Are you done?” he replied, “Yes”; then I took the popcorn art away, but he reached out for more interaction, so I placed it back on the table. I had to do this process about 15 times until he was finally finished with the project. I needed patience in order to understand Zander’s communication, both verbal and physical; and I persevered through his indecisiveness and tried to be flexible by continuing the process even after the time his session was over.

Another example of the holistic process involved in the Active Learning method occurred during Diane’s tactile session with Sculptamold. Diane had fun engaging with Sculptamold, but she also enjoyed putting her hand with Sculptamold on it in her mouth. She put her hand in her mouth about 35 times throughout the 30-minute session; therefore, I had to watch carefully and act quickly to stop her from putting her hand in her mouth. When Diane interacted with the Sculptamold and decided to place her hand in her mouth, I stopped her and redirected her to her tray where the Sculptamold was placed. Again this process repeated over 35 times throughout her session. I needed to be patient because I knew she enjoyed her interaction with Sculptamold, and I had to remain flexible, waiting
until she was finished with the engagement. I had to persevere and redirect her each time she tried to place her hand in her mouth and communicate with encouragement when she interacted without putting her hand into her mouth. Active Learning required the holistic process of the interrelatedness of flexibility, patience, perseverance, and understanding the variability in students’ communication.

Looking Beyond the Literature

Through this thesis research, many questions emerged as I worked with the students in close one-on-one interaction and gained a better understanding of the Active Learning method involving students with severe to profound disabilities. According to Hohmann and Weikart (1995), “[l]earning always occurs in the context of each person’s unique characteristics, abilities, and opportunities” (p. 15). Lilli Nielsen’s Active Learning emphasizes autonomy in the students’ learning through independent exploration of materials. It provides opportunities to learn from the student’s own abilities to explore and examine through each student’s unique characteristics. As the students are involved in Active Learning method while creating art, I wondered whether they considered
exploring with the art material as creating art? Evidently, students engaged in the learning process as they explored and examined the materials, but I wondered whether that could count as creating art? Does art have to be composed of an individual’s creativity, originality, and uniqueness? If so, then does my students’ artwork count as actual “artwork?” What is art to my students? I cannot answer these questions because I do not know how my students would answer my question, but I know that their miniscule movements do not resemble or even equal any movements by any other human beings as they create art of their own.

Implications for Teacher Education

After the Education of All Handicapped Children Act of 1975, an increasing number of students with disabilities entered the regular classroom setting, including art classes, throughout the nation. Reflecting Guay’s (1994) findings as mentioned earlier in Chapter One, I was not prepared to teach students with disabilities upon graduating from college, nor did my master’s program prepare me to teach students with disabilities. I
jumped into the field of special education blindly without much guidance from my previous education. I had a hard time finding written resources, such as handbooks, lesson books, guide books, and general teaching materials dealing with how to teach students with severe to profound disabilities; by contrast, an abundance of information is available on students with mild disabilities. “A lack of empirical information exists regarding the skills and experiences necessary for teachers with specialized expertise in severe disabilities” (Clark, Conroy, Ryndak, & Stuart, 2001, p. 96). I gathered my resources from intervention specialists and paraprofessionals who either have been working with the students for over ten years or who recently graduated with special education degrees.

Although art teachers feel unprepared to teach students with disabilities, they are at least willing to provide quality education for them by welcoming them to their art classes. According to Schiller (1999) “most art teachers are inclusive by nature and have welcomed children with various disabilities into their classrooms” (p. 10). Theories, practical suggestions, and research results can help educators to understand students with disabilities but only as readers. Openly welcoming students with disabilities into the art classroom without worrying too much about how prepared one is, the teacher can take a first step by having a small conversation with them or simply asking them what they like to jump start her or his knowledge about them.

Because most art teachers are unprepared to teach students with disabilities, implications from this study for teacher education may be helpful. I am a strong believer that teacher–student rapport is very important to create successful learning experiences
for students. Establishing rapport might be easy when students can express their needs and wants verbally to the teacher; however, when students cannot do so, the teacher is challenged to understand needs and wants. In order to experience teacher–student rapport before new teachers head out to the real world of teaching art, I believe colleges and universities should provide teaching experience with students with disabilities through practicum or student teaching. Many practicums consist of observation, field notes, and writing reports, but I believe actual interaction with the students with disabilities can provide quality experience unlike simple observation. Some universities and colleges do this where I believe preservice teachers should be placed in settings where they are able to interact with the students one-on-one and in group settings. After a couple of sessions of interaction, they should also try to practice teaching students with disabilities, creating and teaching a lesson or two, then have a reflective session where they can look back and learn from their mistakes and develop understandings.

In addition, preservice teachers should be familiar with the Individualized Education Plan (IEP) process and try to attend at least one IEP session. According to Thunder-McGuire (1999) “[t]he IEP is one touchstone for communicating a student’s school story” (p. 106). It is significant for art educators to participate in the student’s IEP. Doing so, the art teacher can add specific goals and objectives for the students so they can experience different materials, procedures, creative processes, and interaction with their peer group activities that can meet their needs. In order to understand, I believe the preservice teacher needs to attend an IEP meeting and try to create IEP goals with the intervention specialists for practice. The preservice teacher may think, “How can I use
this information to enhance students’ art learning experience?” and “How can I improve students’ lives in the art classroom with this information?” Contributions to the IEP can help the student to practice a similar goal in other classes. For example, the art teacher may have an objective stating, “[i]ndependently, John will cut art materials (i.e. paper) by using adaptive scissors in three out of five tries in a 30-second period.” If this objective could be implemented in other classes that involve scissor activity, the student would accomplish his or her objective sooner as a result of practice in several subject areas.

Furthermore, preservice art teachers should try to work with occupational therapists to create adaptive art tools for a specific student in their practicum. I highly recommend this practice because I have done so with positive results. If the preservice teacher attends the IEP conference or at least reads the student’s IEP, then he or she would be able to identify the student’s designated occupational therapists. The preservice teacher could then try a couple of art activities with the student to see how the tool can be modified to fit the needs of the student in creating art. The tool could be as simple as a marker holder or as complex as an easel that fits on the student’s wheelchair, which would allow the preservice art teachers and occupational therapist to see the work from the student’s own perspective.
Implications for Art Classrooms

Figure 20: Zander’s Tactile Art, Photograph courtesy of Young-Ji Kim, © 2009

Because the school at which I currently teach provides education exclusively for students with disabilities, inclusion is not an issue as it is in public school settings, where for students with disabilities, “[a]rt is a class that is often used as a test case for inclusive planning; if a child can ‘make it’ in art then perhaps he is ready for other classes as well” (Schiller, 1999, p. 10). The art classroom provides the link between regular classroom settings and exclusive classroom settings, where many students with special needs are placed. This notion places additional responsibility on art teachers to create successful experiences for the students with disabilities to find the values of the school through art making. The inclusive art classroom can also create student–student relationships in which interaction between students can occur. Schiller (1999) asserted, “[a]rt is a discipline that is very deeply connected to the emotions and humanness of people; it is something that needs to be shared in all of its facets with all children” (p. 10). Through art making, typical students can take turns assisting students with disabilities to learn how
to help and interact with them as the art teacher facilitates between them. This promotes “normalizing experiences” for students with disabilities in educational settings in which both students with or without disabilities accomplish the same objectives within the art curriculum. Art educators do not need to change the class goals for the student because of disabilities; however, it is essential for the student to achieve equivalent goals through adaptation or modification of the art lesson.

Regarding art education for the students with disabilities, the art teacher must acknowledge the students’ abilities before their disabilities; however to do so is often difficult because of their limited communication skills and fine and gross motor skills. Recognizing the student’s ability is not an overnight achievement; however, through careful observations, descriptive data, such as the IEP or Individualized Habilitation Plan (IHP), and sharing information with other professionals at school, the teacher is able to see student’s abilities and potential.

Art educators can easily acquire knowledge through research; however, applying the information during art instruction is very demanding. I believe that when art teachers are comfortable with the students with disabilities, they are ready to implement various strategies, such as the Active Learning method, to enhance the student’s learning experience. Active Learning can be modified to fit the needs of each student with or without disabilities. In order to implement Active Learning successfully in an art classroom setting, the teacher must recognize several essentials, including the need for adequate sensory materials. The art teacher must allow the students to explore and interact with the materials at their own pace without excessive teacher intervention,
stepping back and encouraging independence. Finally, the art teacher must respect the student’s choice making as long as it does not create any safety issues.

When incorporating Active Learning in art lessons, the art teacher cannot always provide immediate directions and materials, one-on-one sessions, or give detailed modified instructions because he or she may want to settle the student and get her or him started on the project. What does the student with disabilities do in the meantime? In general, the student waits passively until the teacher provides the adaptive tools and modified instructions. More constructively, the teacher could provide the student with an Active Learning board or bar that includes various materials or art tools.

As shown in Figure 21, the Active Learning board contains a variety of material with which the student can interact, particularly textured tools that can engage a student waiting for further instruction. Instead of letting students with disabilities wait, the art teacher can provide them with various sensory objects to enhance their experience of the
world. Doing so may make extra work for art teachers, but the students’ learning time should not be wasted by allowing them to sit passively, disengaged from the world.

Furthermore, the art teacher should strive for a strong rapport with the student’s family or guardian. Encouraging involvement of these individuals through short memos, e-mails, or cards to let them know how the student is performing in art class can promote positive relationships. For example, I try to take as many pictures as possible when I see the student smiling while exploring with art materials. By sending the pictures home, I let the family or guardian know that the student enjoyed the interaction with the art materials. This also allows the family or guardian to share a similar experience with the students that they may not have been able to have at home before. By sharing information with the family or guardian, art educators can create a strong relationship and a support for the art education of the student, thereby developing trust in the art teacher working with their child.

Finally, recognizing that art teachers are not alone in the field of educating students with disabilities is imperative. According to Gerber and Fedorenko (2006), “[a]rt teachers often work apart from the special education and collaborative process in teaching special needs students” (p. 162). Increased collaborative work with other teachers will facilitate cohesiveness, which will eliminate confusion for both the teacher and the student. Focusing on relationships with other teachers as well as developing relationships with other professionals, such as physical therapists, occupational therapists, speech language pathologists, intervention specialists, paraprofessionals, habilitation assistants, and family members, is crucial. Each specialist has a different expertise that
can help facilitate the students with a broader range of problem-solving opportunities. Furthermore, with the collaboration of others, decisions about the goals, instruction, curriculum, and related services are the result of group input from individuals who share the same goal: improving the student’s learning experience in school. Sharing information and creating solutions with collaborating team members will help to balance responsibilities and assure accountability. Art teachers need a supportive group that can foster new ideas, provide support when mistakes are made, and encourage them never to give up on the student.

**Final Reflection**

Becoming a teacher or teacher educator is a lifelong process of continuing growth rooted in the personal. Who we are and come to be as teachers and teacher educators is a reflection of a complex, ongoing process of interaction and interpretation of factors, conditions, opportunities, relationships and events that take place throughout our lives in all realms of our existence—intellectual, physical, psychological, spiritual, political, and social. (Cole & Knowles, 1995, p. 12)
When I was a senior in college, I could not wait to graduate and start teaching. I did not enjoy studying and did not understand why professors repeatedly insisted upon writing in journals and reflecting on my own teaching. I failed to realize that in order to teach students, I had to study and reflect continuously to grow and develop to be a better teacher. I now clearly see why professors emphasized self-reflection in my education courses. After I entered the teaching profession, I repeatedly asked myself questions about being a teacher for students with severe to profound disabilities: How am I doing? Am I teaching them the right materials? What should I have done differently? How can I modify the project in the future to enhance the students’ experience? Did my students learn anything from this project? Did I listen to my students’ voice? How can I improve myself as a teacher? These ongoing reflective questions lingered through my mind each day as I drove home from school, but asking these questions was as far as I got without answering any of them. Frankly, I asked those questions out of a self-confidence that I
felt I lacked as a teacher. Through this thesis research, however, I have been able to reflect to a great extent, partially because of added pressure to finish the research; but in some measure I enjoyed the in-depth reflection that I was unable to do before. Reflecting on my teaching through video analysis, field notes, and journals, I wanted to dig deeper to know more about myself as a person and as a teacher.

At the outset of this research, I was nervous about trying the Active Learning method to which I had been recently introduced and implementing it in the art-making process. Doing so was challenging because the method required a break from a defined structure in order to fit the needs of my own students. I knew the core philosophy of the Active Learning method created by Lilli Nielsen, but I had no choice but to deviate from the guidelines to achieve balanced learning experiences for the students. I felt like a rebel as I broke the rules to achieve the picture-perfect Active Learning session. In a way, I felt as if I were creating a video that portrayed “What not to do during an Active Learning session.” Frustrated, I recognized my mistake of interfering as the student tried to eat art materials. I asked myself, do I just let them eat Sculptamold because it is nontoxic and the material is labeled as an approved product? Does eating count as part of Active Learning? Or do I interfere and redirect students to further their exploration with the materials? I decided to go with the safe route by interfering and redirecting. As I continuously intervened, my frustration grew; however, after finishing the olfactory lesson with all three students, I realized that I did not need to create picture-perfect Active Learning as long as I support autonomy in my students’ art making. I understood that as long as I respect the student’s choice, listen to their voices, encourage
independence, and try my best to accommodate their needs, I fulfill the role of the facilitator of Active Learning. I was relieved to realize that the method calls for modification to fit the needs of my students.

The answers to my reflection hardly capture the intricacy of the experience that I had with my students. How can I express the warm feeling that I had when Diane placed her hand on my hand as a gesture of physical affection? How can I describe the happiness that I felt when Brian looked straight into my eyes and gave me the brightest smile? And how can I illustrate the excitement that I felt when Zander thoroughly enjoyed interacting with the materials? The actual experience that I gained through this study was worth the struggle and effort to complete the thesis. Nothing indicates to me that I did a good job as a teacher implementing Active Learning in art-creating experiences as much as seeing the happiness and excitement in each of my students’ radiant smiles.
# ART LESSON PLAN

**Time:** 9:00-11:30am & 1-3:30pm  
**Date:** December, 2008  
**Location:** Art room 5  
**Instructional Staff:** Daisy, Intervention Specialist, and Paraprofessional  
**Theme:** Auditory Stimulation: Marbles and Metal Tray

## Goals & Objectives:

1. Students will independently move their feet, hand(s), or fingers to explore given art materials.
2. Students will independently manipulate given art materials repeatedly.
3. Students will express their preference of either liked or disliked of the materials and the project.

Implementing Active Learning method to provide autonomy in student’s art making.

Paint with everyday object that the students are familiar and unfamiliar with.

To create art with auditory stimulating materials when the student manipulates with the metal tray and marbles, if necessary, verbal and/or physical prompting will be given.

To create art with independent arm movements however if the student need hand over hand assistance, staff

## Procedures & Materials:

**Materials:**
- 20-30 Marbles, Metal Tray, Watercolor Paper, Paints (Acrylic, Florescent Tempera, Metallic), Plastic Wrap (made from laminating machine), strainer, plastic bowl, masking tape, scissors, Vibrating half-hemisphere sensory toy

**Procedures:**

**(Prepare this before the student comes)**
1. The plastic wrap from laminating machine could be an extra excess from laminating papers from previous projects.
2. Cut the plastic wrap big enough to wrap around the metal tray.
3. Make creases all four sides of the plastic wrap for the metal tray so later when placing plastic wrap on the metal tray it fits right on.
4. Tape the vibrating half-hemisphere sensory toy on the bottom of the metal tray so that the metal tray can rotate 360 degree with the round part facing down.

**(With the student)**
1. Allow the student to explore with marbles on the metal tray. Let them move the marbles around the metal tray to hear the sound of glass hitting the metal and marbles rolling around the tray.
will allow help.

Modification of: **Creative Expression and Communication:**
Students create artworks that demonstrate understanding of materials, processes, tools, media, techniques and available technology. They understand how to use art elements, principles and images to communicate their ideas in a variety of visual forms.

Bench mark A: Demonstrate knowledge of visual art materials, tools, techniques and processes by using them expressively and skillfully.
1. Demonstrate beginning skill in the use of art materials and tools
2. Demonstrate skill and expression in the use of art techniques and processes

Bench mark B: Use the elements and principles of art as a means to express ideas, emotions, and experiences.

Bench mark C: Develop and select a range of subject matter and ideas to communicate meaning in two and three-dimensional works of art.

<table>
<thead>
<tr>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Allow the student to choose paint colors they prefer. (pick about 3-5 colors)</td>
</tr>
<tr>
<td>3. Place watercolor paper in the metal tray and tape it around so it does not move when the marbles roll around.</td>
</tr>
<tr>
<td>4. Assist student to pour paint on the watercolor paper (hand over hand, help them hold the bottle, or squeeze paint from the bottle)</td>
</tr>
<tr>
<td>5. After the paints are poured on the paper, put about 20 marbles in the tray and cover the tray with the plastic wrap. Using masking tape, tape around well so it will not cut the student when they move his/her arms around.</td>
</tr>
<tr>
<td>6. Give the metal tray to the student and allow them to move the tray in various directions. The metal tray should be able to move 360 degrees.</td>
</tr>
<tr>
<td>7. Allow the student to explore and hear the sound of the marbles rolling and hitting on the metal tray for about 15 minutes.</td>
</tr>
<tr>
<td>8. Encourage the student to move his/her arms around to create movements for the metal tray.</td>
</tr>
<tr>
<td>9. Remind the student that he/she is mixing paint while the marbles are rolling in different directions.</td>
</tr>
<tr>
<td>10. When the student is finished exploring the materials, uncover the plastic wrap from the metal tray.</td>
</tr>
<tr>
<td>11. Take the watercolor paper out of the tray and show the student their final art product</td>
</tr>
<tr>
<td>12. There is not much of cleaning up to do other than cleaning the metal tray and marbles</td>
</tr>
</tbody>
</table>
Examples:

Diane, 2008

Zander, 2008

Brian, 2008
Appendix B

ART LESSON PLAN

**Time:** 9:00-11:30am & 1-3:30pm  **Date:** December, 2008  **Location:** Art Room #5  
**Instructional Staff:** Daisy, Intervention Specialist, and Paraprofessional  
**Theme:** Olfactory Stimulation: Painting with Popcorn

<table>
<thead>
<tr>
<th>Goals &amp; Objectives:</th>
<th>Procedures &amp; Materials:</th>
</tr>
</thead>
</table>
| 1. Students will independently move their feet, hand(s), or fingers to explore given art materials. | **Materials:**  
Clothing Protector, Plastic Bags, Plastic Tray, Plastic Bowl, Watercolor Paper, Microwave, Microwavable Popcorn (extra butter), Paints (Acrylic, Florescent Tempera, Metallic), Wet Wipes/Towels |
| 2. Students will independently manipulate given art materials repeatedly. | **Procedures:**  
1. Check with the intervention specialist about each student’s IEP goals. See if they can accomplish any of their IEP goals and objectives. |
| 3. Students will express their preference of either liked or disliked of the materials and the project. | 2. Prepare the student by putting on clothing protector and covering the student’s wheelchair tray with a plastic bag for an easy clean-up. |

Implementing Active Learning method to provide autonomy in student’s art making.

Paint with everyday object(s) that the students are familiar and unfamiliar with.

To create art with a material that provides olfactory sensory, if necessary, verbal and/or physical prompting will be given.

To create art with independent arm movements however if the student need hand over hand.

4. Microwave the popcorn freshly out of the bag and pour it into the plastic bowl and place it around the student’s nose to let them smell the popcorn.

5. Also place some popcorn on a plastic tray for the student, so they can explore with his/her hands.

6. After they are done engaging with the popcorn, prepare watercolor paper on a plastic tray.

7. Allow the student to choose paint colors they prefer. (pick about 3-5 colors)

8. Assist student to pour paint on the watercolor paper (hand over hand, help them hold the
assistance, staff will allow help.

**Modification of: Creative Expression and Communication:**
Students create artworks that demonstrate understanding of materials, processes, tools, media, techniques and available technology. They understand how to use art elements, principles and images to communicate their ideas in a variety of visual forms.

**Bench mark A:** Demonstrate knowledge of visual art materials, tools, techniques and processes by using them expressively and skillfully.

3. Demonstrate beginning skill in the use of art materials and tools
4. Demonstrate skill and expression in the use of art techniques and processes

**Bench mark B:** Use the elements and principles of art as a means to express ideas, emotions, and experiences.

**Bench mark C:** Develop and select a range of subject matter and ideas to communicate meaning in two and three-dimensional works of art.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.</td>
<td>Place popcorn on top of the paint and allow student to mix the colors together with the popcorn using his/her hands.</td>
</tr>
<tr>
<td>9.</td>
<td>While the student is mixing colors, remind him/her to smell the popcorn.</td>
</tr>
<tr>
<td>10.</td>
<td>Allow them to explore at least 15 minutes.</td>
</tr>
<tr>
<td>11.</td>
<td>After the student is done exploring the popcorn and paint mixture, clean his/her hand with a wet wipes/towels.</td>
</tr>
<tr>
<td>12.</td>
<td>Get all the popcorn off the painting and allow the student to see his/her final product.</td>
</tr>
<tr>
<td>13.</td>
<td>Let the paint dry on the drying rack.</td>
</tr>
</tbody>
</table>
Examples:

Brian, 2008

Zander, 2008

Diane, 2008
Appendix C

ART LESSON PLAN

**Time:** 9:00-11:30am & 1-3:30pm  
**Date:** December, 2008  
**Location:** Art room 5  
**Instructional Staff:** Daisy, Intervention Specialist, and Paraprofessional  
**Theme:** Tactile Stimulation: Sculptamold

### Goals & Objectives:

1. Students will independently move their feet, hand(s), or fingers to explore given art materials.  
2. Students will independently manipulate given art materials repeatedly.  
3. Students will express their preference of either liked or disliked of the materials and the project.

### Procedures & Materials:

#### Materials:

- Dried Sculptamold, Water, Hard Board Canvas, Plastic Tray, Plastic Bag, Plastic Bowl, Wet Wipes/Towels, Painting Tools (for students who are tactile defensive)

#### Procedures:

**(Prepare for the students)**

1. Cover the student’s wheelchair tray with the plastic bag for easier clean up.  
2. Scoop some dried Sculptamold onto the plastic tray. (This part gets very messy because the powder from Sculptamold)  
3. Pour water on dried Sculptamold and mix it together. (Use cold water so Sculptamold does not dry fast)  
4. While mixing, check for consistency and try to make it similar to cottage cheese consistency or thicker.

**With the student**

1. Place canvas on the student’s wheelchair tray (put name and date).  
2. Allow the student to feel the texture of the canvas.
Modification of: **Creative Expression and Communication:**

Students create artworks that demonstrate understanding of materials, processes, tools, media, techniques and available technology. They understand how to use art elements, principles and images to communicate their ideas in a variety of visual forms.

Bench mark A: Demonstrate knowledge of visual art materials, tools, techniques and processes by using them expressively and skillfully.

5. Demonstrate beginning skill in the use of art materials and tools
6. Demonstrate skill and expression in the use of art techniques and processes

Bench mark B: Use the elements and principles of art as a means to express ideas, emotions, and experiences.

Bench mark C: Develop and select a range of subject matter and ideas to communicate meaning in two and three-dimensional works of art.

3. Put Sculptamold on the canvas. (Try to make it fun, like dropping it from high up, and create some sounds) So that students are not afraid of interacting with Sculptamold
4. Allow the student to explore with his/her hands. If they have a difficult time mobilizing their hands, try using feet instead.
5. Sometimes verbal or physical prompting might be needed.
6. Allow the student to explore until Sculptamold gets hard.
7. Place it on the drying rack to let it dry. It takes about 24 hours to dry.
8. Clean the student’s hands/feet with wet wipes.
EXAMPLES:

Brian, 2008

Zander, 2008

Diane, 2008
REFERENCES


