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The inclusive art classroom: Time and strategies

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The Inclusive Art Classroom: Time and Strategies

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Abstract

Art teachers are required to teach inclusive art classes that provide instruction for general education students and their mentally disabled peers. This study reveals the amount of time an art teacher needs to prepare for and teach the exceptional education students in an inclusive art classroom during school, at school after hours, and at home. Successful teaching strategies are identified. The following recommendations should be taken into consideration: educational institutions should require that preservice teachers take classes on exceptional education, and school districts should provide inservice workshops on teaching inclusive classes to general education teachers, including art teachers.

I. Introduction

Art teachers are required by law to teach students who have mental disabilities in the same class with their general education peers in an inclusive art class room. They often are not trained to work with exceptional education students. In order to prepare for the inclusive classroom they must spend a considerable amount of extra time preparing for disabled students. By researching disabilities and strategies and collaborating with experienced adults, art teachers can run a successful inclusive art program.

A. Background of the Study

I began my teaching career in the spring of 1986 with a Virginia certification to teach general education grades K-7. Although I was not certified for exceptional education and had not taken a single exceptional education course, I was hired to teach an exceptional education class for the final few months of the spring semester in a middle school in Northern Virginia and assumed the responsibility of a full time exceptional education teacher. I had no training, but I worked with the exceptional education teacher and the paraeducator and used my instincts for the remaining two months of that school year. The next four years I was assigned to teach general education 6th grade. I taught 6th grade Social Studies, Reading, and Science. While working to acquire my B.F.A. in art education, I taught 4th grade for two years in Central Virginia where many of my students had learning difficulties. After receiving my certification to teach art in grades K-12, I taught art at all levels in public and private schools for the latter part of my career.

I was never trained to teach students with exceptional needs, and I assumed they would be taught in a self-contained classroom just like when I was a student in the 1970's. However, after I switched from teaching academics to art in the 1990's, more students with learning disabilities were mainstreamed into my classes on a regular basis.

Public Law 94-142, the Education for All Handicapped Children Act, has been in effect since 1975. This law is now known as IDEA which stands for the Individuals with Disabilities Education Act. The law requires that students with disabilities receive a free appropriate public education (FAPE) in the least restrictive environment (LRE). Art class, which is classified as a general education class, is one type of the least restrictive environments for a majority of intellectually and physically impaired students. The law requires that I, and all public school art teachers, provide art education for exceptional needs students.

As I conduct this study in a rural county in Virginia, I teach almost every exceptional needs student. Since 2009, the decline in the economy has contributed to larger class sizes and teachers that retire or leave often are not replaced. The self-contained classroom which used to operate under the direction of two teachers now operates with just one. The county cannot afford another exceptional education teacher, and some students who qualify for the self-contained exceptional needs classroom are now mainstreamed into general education classrooms where teachers and specialists work to make accommodations and modifications to address individual needs. There are also fewer paraeducators to work with students. Some of the students who formerly were assisted by paraeducators now come to art independently.

My beliefs about teaching exceptional education students in art classes have evolved. At first I complained that I was not certified to work with their unique difficulties. I wanted them to come to art class during a period set aside just for them because it was difficult teaching them at the same time as the general education students. When I taught lessons for exceptional education students I discovered several problems. Students finished their work in much less time than I planned because they were not able to concentrate on their art as long as general education students. My lessons did not adequately address their individual needs because I was not fully aware of their abilities. It was frustrating because I planned things for them that they could not do. Sometimes I over-estimated their abilities, and sometimes I underestimated what they would be able to accomplish. Eventually I realized that the paraeducators and I were helping them too much. By trying to make their art look “right,” we were denying them the opportunity to express themselves. As a result of my reflections my art teaching has evolved to encourage exceptional needs students to make their own art by including them in the same lessons planned for general education students with appropriate adaptations. My experience teaching exceptional needs students has convinced me that inclusion is good for all of the students. Pupils enjoy and respect each other in my art classes. Many children volunteer to sit with the exceptional education students to talk to them and help them with their art. Often positive relationships develop between the two groups.

I was interested in exploring teaching strategies that would be successful with my exceptional needs students. Each exceptional education student has unique disabilities and needs. Each year new students arrive with a new combination of disabilities; therefore, my research and lesson adaptations will be an ongoing process until I retire.

Making accommodations and modifications to meet the individual needs of my students was time consuming. I researched disabilities, the Individualized Education Programs (IEPs) for each student, and strategies for accommodations. In addition to planning for the lessons, I made adaptations to the materials, the equipment, and my classroom. I was interested in documenting the time it takes for an art teacher to develop lessons that meet the unique needs of the exceptional needs students. This study may demonstrate to other art educators how to plan for and meet the needs of exceptional needs students who are mainstreamed into their own inclusive art classrooms.

B. Statement of Purpose

The purpose of this thesis is 1) to determine the extent of planning and preparation time necessary for art teachers to meet the needs of every student regardless of ability level in an inclusive art classroom and 2) to document teaching strategies that are successful with exceptional needs students.

C. Statement of Need

Literature on the subject of inclusive art classrooms indicates that teachers need to devote extra time to plan for accommodations that are necessary to meet the needs of exceptional needs students. The law requires that teachers create lessons to meet the needs of learning-disabled students who are mainstreamed into art classes. Most art teachers lack adequate training for teaching disabled students because few courses are required for art teacher certification.

Many art teachers enter the education system knowing very little about how to teach exceptional needs students. Teaching students with varying ability levels,

collaborating with paraeducators, and giving quality time to both general education and exceptional needs students at once is a difficult and time consuming task. Teachers need to be creative, innovative, and administrative to insure that all students in an inclusive classroom get what they need out of an art course (Gerber and Guay, 2006, p. 8-13).

Extra time is needed for art teachers to prepare for and accommodate learners with exceptional needs. Art teachers may not be aware that know that they should perform the following tasks in order to run inclusive art classes:

- Art teachers should educate themselves by researching the specific disabilities exceptional needs students bring to the art room.
- Art teachers should meet with exceptional education teachers and specialists to discuss students' needs and disabilities.
- Collaboration with paraeducators and even parents is necessary to develop effective programs.
- Art teachers should read over IEPs in order to understand students' needs and to know what accommodations are required in their other classes
- In addition art teachers will spend a considerable amount of time in the classroom working one-on-one with exceptional needs students and collaborating with paraprofessionals who are assigned to help them.

Art teachers who have not had training in how to teach students with high needs must be proactive by researching ways to accommodate exceptional needs, creating adaptations to lessons and equipment, and seeking advice from professionals who specialize in working with exceptional needs students (Gerber and Guay, 2006, p. 6). If art teachers are expected to teach exceptional needs students, they need to know how

much time it takes to provide adequate services. Experimentation is necessary because students are unique and have individual needs. The art teacher must reflect on what strategies are successful and which ones are not and re-plan. This becomes a cycle of problem-solving on the part of the art teacher (Gerber and Guay, 2006, p. 10)

D. Research questions

The research questions for this study include:

How much time is necessary 1) to research the individual needs of exceptional education students assigned to inclusive art classes? 2) to make appropriate adaptations to materials, equipment, and the classroom for exceptional needs students? 3) to provide individual assistance to exceptional needs students while meeting the needs of every individual student in an inclusive art classroom? 4) to collaborate with others to meet the needs of exceptional needs students? 5) for planning lessons to meet the needs of exceptional education students during the school day, after school hours, and at the teacher's home? 6) What art teaching strategies are successful with exceptional needs students?

E. Limitations

This study has limitations specific to the school environment in which it was conducted. Observations were recorded by one certified art teacher. She relied on consultations with the exceptional needs teacher and other specialists who normally work with the exceptional needs students. During the fall semester when the study was conducted at a middle school in rural Virginia, not all exceptional needs students attended art classes. Results were affected by the number of exceptional needs students assigned to art classes, the enrollment of each art class, and the characteristics of the general

education students assigned to art classes. Each exceptional education student was an individual who had needs specific to himself or herself. The budget was limited and therefore materials were limited to what was affordable. The resources for research were limited to those available at Carrier Library at James Madison University, student IEPs provided by the middle school and articles and information available on the internet.

F. Definition of Key Terms

Exceptional Education- Exceptional education is a more current term for special education. Students with mental disabilities or with a combination of mental and physical disabilities who are unable to succeed in general education classrooms are referred to as having exceptional needs. Exceptional needs students have cognitive/intellectual disabilities that range from mild to severe. In this thesis *exceptional* will refer to cognitively disabled students some of whom also have physical disabilities.

Learning disabilities - refer to neurological disorders that make learning in academic settings and social interactions difficult. Learning difficulties do not necessarily stem from a learning disability and include Attention Deficit Disorder, Dyslexia, and Autism.

IEP (Individual Education Program) Different sources refer to the IEP as either an individualized education plan or an individualized education program. The IEP is a component of IDEA. It describes both a student's learning and his behaviors and how to measure them. Both current and long term goals are considered. A team composed of teachers, specialists, administrators, and parents meet annually to update the IEP. It is like a "traveling record" that allows teachers to view what previous teachers taught a

student and to build a curriculum for the individual student that caters to his strengths and interests. (Gerber, 2010, p. 14)

Intellectual disability -

“Intellectual disability is a term used when a person has certain limitations in mental functioning and in skills such as communicating, taking care of him or herself, and social skills. These limitations will cause a child to learn and develop more slowly than a typical child. Children with intellectual disabilities (sometimes called cognitive disabilities or mental retardation) may take longer to learn to speak, walk, and take care of their personal needs such as dressing or eating. They are likely to have trouble learning in school. They will learn, but it will take them longer. There may be some things they cannot learn” (National Dissemination Center for Children with Disabilities, 2011, p. 1).

Inclusion- takes place when including learning disabled, cognitively disabled, and physically disabled students participate in the lessons being taught to students in the general population. With inclusion learning disabled students are exposed to the same material at the same time in the same classroom with their peers who do not have disabilities. Adaptations to assignments, materials, and equipment are made in order for exceptional needs students to succeed in an inclusive classroom.

Public Law 94-142- established in 1975, also called the *Education of All Handicapped Children Act*, insures that all children with disabilities get a *free appropriate public education (FAPE)*.

IDEA- or the *Individuals with Disabilities Education Act*, is the new name for PL 94-142. It was revised and renamed in 1990. The latest revision was made in 2011.

General education- refers to student populations who do not require the services of exceptional education programs.

Accommodation- An *accommodation*, according to thefreedictionary.com, is something that meets a need. “An accommodation provides the student with the necessary tools to access the same material as the other students” (Hunter & Johns, 2006 p. 48).

Adaptations- include changing “the tools, media or lesson plan to meet a certain goal” (Loesl, S. D., 2006 p.108).

Modification- A *modification* is when an art teacher changes the process or product in order for an individual student to achieve a level of competence (Loesl, S. D., 2006, p. 108). “A modification changes the content of the material” (Hunter & Johns, 2006 p. 48).

LRE (Least Restrictive Environment)-

LRE means that a student who has a disability should have the opportunity to be educated with non-disabled peers, to the greatest extent appropriate.

The student should be provided with supplementary aids and services necessary to achieve educational goals if placed in a setting with non-disabled peers. If the nature or severity of his/her disability prevents the student from achieving these goals in a regular education setting, then the student would be placed in a more restrictive environment, such as a special school or a hospital program. Generally, the less opportunity a student has to interact and learn with non-disabled peers, the more the placement is considered to be restricted. (uslegal.com, para 2)

Paraeducators- are also known as aides, paraprofessionals, instructional assistants or educational assistants (Guay, 2003, p. 20). Paraeducators perform a variety of duties for students with difficulties. In the art classroom they should enable students to express their own ideas using their own minds and hands as much as possible by, for example, taking

dictation, making materials accessible to them, questioning them and reminding them of steps to go through, and positioning materials and artwork so that they can reach it.

Planning includes creating lessons for the general education students then developing ideas for adaptations (accommodations and modifications) to meet the individual needs of exceptional education students, purchasing materials to meet requirements for adaptations and evaluating work to check student progress. Planning is one of the headings on charts used to record daily time and activities with exceptional needs students during research for this study.

Troubleshooting- Unlike planning a lesson that will proceed as it was written, troubleshooting “expects that things will go wrong and tries to prevent or minimize potential problems” (Gerber, 2006, p. 27).

G. Procedural Overview

For this study, time will be documented when researching, planning for, preparing for and teaching exceptional needs students. Time spent by the teacher during school, after school, and at home will be noted. Teaching strategies that are successful with students will also be documented. This study will provide information on the amount of time needed to properly prepare for and accommodate exceptional needs students in art, and it will provide information on successful strategies to use for an inclusive art classroom. Comparisons need to be made in order to provide perspective on the complexity of successfully running an inclusive classroom. Time spent preparing for art lessons at school will be compared with time spent after contract hours at school and at the teacher’s home in order to indicate the amount of work effective art teachers do

during and outside of the regularly scheduled school day. Comparisons will be made between classes that include exceptional needs students and classes that do not, and between classes that include exceptional needs students who have mild disabilities and can work independently and those who have severe disabilities and cannot work independently. Comparisons will be made between strategies that work well for general education students and exceptional education students; between exceptional education students who work well independently and those who cannot; and between the varying conditions exceptional education students may possess.

II. Literature Review

A. Overview

Art classroom populations include students from general education programs and students who are mainstreamed into art classes from exceptional education programs. Exceptional students' abilities vary from mildly mentally disabled to severely mentally retarded. Not only do students have mental disabilities, they may also have physical impairments and emotional concerns. Disabled students who have high needs usually come to class with paraeducators or aides. Paraeducators often lack education about learning disabilities, and they may lack training to be instructors.

Art teachers may not feel prepared to teach students with learning disabilities. There is little training and few courses that are required in art teaching licensure programs to meet the needs of exceptional students. According to Allison (2008) and Loesl (1999),

Art teachers frequently report feeling uncomfortable and frustrated when students with special needs are integrated into their art classrooms. This comes as little surprise when we consider that art educators' preservice training often covers special needs in a cursory fashion, if at all (as cited in Bain and Hasio, p. 34).

Literature offers advice on how to include exceptional education students who are mainstreamed into art classes, advises teachers how to work with paraeducators, and offers suggestions on how to make adaptations for exceptional learners. Beverly Levett Gerber, a leader in merging art education with exceptional education, advises that "there is no instant magic pill or quickie course that can teach about students with special

needs” (Gerber, 2011, p. 11). Art teachers and exceptional needs teachers learn while teaching; their experiences with exceptional needs students are their training.

Literature reveals that it is a complex process to plan and prepare for an inclusive art class. Research does not reveal data on how much time is involved to actually run an inclusive classroom. Art teachers have to study their exceptional students’ IEPs (individualized educational programs) to learn about their individual disabilities, research and collaborate with the exceptional needs teacher and other specialists to develop lessons and strategies to meet their needs, research strategies that work with specific learning and physical disabilities, and experiment with strategies in their classrooms to determine which ones work with their students. Much time and commitment goes into planning and preparing for inclusive lessons (Guay, 2006, p. 10).

Public laws require that students with disabilities be mainstreamed into classes with general education students when possible. “Subject areas considered non-academic [are] most frequently targeted for mainstream placement. Art [is] one of these” (Guay, 1995, p.52). Art teachers must be creative when designing inclusive lesson plans that motivate students. They must be innovative when constructing the least restrictive learning environments (LRE) for exceptional pupils.

Art teachers need to take leadership roles in order to effectively run inclusive art classrooms. They should be leaders who are able to direct paraprofessionals to assist students in ways that benefit them. They must take the initiative to talk to the exceptional needs teacher, speech therapists, and occupational therapists to acquire modes of

communication for students who cannot speak, and to acquire equipment and methods to enable students to manipulate materials (Guay, 2006, p. 10).

This review will investigate the specific learning disabilities of the students who are part of the inclusive art class in a middle school in rural, Virginia. Their learning disabilities will be defined. Definitions of specific learning disabilities, such as autism, cerebral palsy, or fragile X syndrome, are general descriptions that are not a perfect fit for individual students. Each student is unique. This study will describe the unique characteristics of each student in this particular middle school and the strategies that are successful with them.

B. Learning Theories that Support Inclusion

Theories behind public laws that direct inclusion of special needs students in art classes with general education students involve the idea that there are many different types of intelligences. Howard Gardner (1991) devised seven learning styles. Visual arts cater to four of the intelligences very well. These are visual-spatial, bodily-kinesthetic, interpersonal, and intrapersonal. Some children will find more success with art than they will with other subjects because of their learning styles. The visual arts can also involve musical, linguistic, and logical-mathematical learning styles. When visual arts teachers design lessons that allow students to make their own choices about the art they create the possibilities are infinite and opportunities for students with any and all intelligence types can thrive and benefit. There is also the idea that some mental qualities, such as dyslexia, that are viewed as a disability in academic classes, may be an asset to an artist. People with dyslexia have a heightened sense of spatial relationships (McPhail, Pierson,

Goodman, Noffke, 2004, p. 472) and this means that they are visual-spatial learners; a characteristic associated with artistic talent. Beverly Gerber in her 2011 Lowenfeld lecture referred to several artists who are successful despite their disabilities and very likely are successful due to their “disabilities.” In an interview for LD Online (2010) established artist Robert Rauschenberg explains how his dyslexia is an asset to his art-making. "I got hooked [on printmaking]. Also because I am dyslexic, I was very good at the print workshop economically, because I can see backwards and forwards at the same time! I don't have to proof it, I can already see it!" (LDOOnline, 2010, para 4).

The theory that “disability is not an inherently biological condition, but a result of disabling environments” supported the development of the Americans with Disabilities Act, ADA , in 1990. The ADA calls for “‘reasonable accommodations’ in public and in the workplace” (Derby, 2011, p. 96). Another theory which supports inclusion is that it promotes socialization. Through social interaction disabled students and general education students may gain a better understanding of each other which, in the right conditions, deconstructs social barriers and misconceptions about disabilities leading to tolerance of differences (Glass, Barnum, Jenkins, with Hurel, 2010, p.12).

C. Public Laws and Exceptional Education

Art teachers need to know that students with disabilities have a right to attend their art classes with the general education students. Teaching art is not an easy task and it becomes more complicated when instruction has to be individualized to meet students’ unique needs. All students deserve quality attention in the art classroom regardless of

how severe their disabilities may be. The National Art Education Association (NAEA) offers literature on teaching students with disabilities.

The following public laws are based on civil rights. Public Law 94-142 (1975) is the Education for All Handicapped Children Act. It was revised and renamed in 1995 and is now known as the IDEA or the Individuals with Disabilities Education Act. IDEA calls for education for all disabled students in the least restrictive environment, (LRE). This means that, whenever possible, students with disabilities will be mainstreamed into classes with general education students. In severe cases the LRE for a disabled student is in a self-contained special education classroom. The Americans with Disabilities Act, (ADA), establishes that disabled students will receive reasonable accommodations at school and there are policies for free appropriate public education (FAPE). Rogers (1993) provides a description of inclusion:

Full inclusion or inclusive education refers to the ‘commitment to educate each child to the maximum extent appropriate in the school and classroom he or she would otherwise attend. It involves bringing support services to the child (rather than moving the child to the services) and requires only that the child benefit from being in the class (rather than having to keep up with the other students) (as cited in Guay, 1995, p. 52).

The International Organization on Arts and Disability, called Very Special Arts, VSA, supports arts programs because they are viewed as subjects that enable the concept of inclusion. Inclusion engages both “students with and without learning disabilities by incorporating multimodal approaches and accommodating a range of abilities, learning styles and skills” (Glass, 2010, p.5). Multimodal approaches refer to the multiple intelligences devised by Gardner (1993). Because art can involve several forms of

intelligence it enables nearly every student to find some sort of success and it can be used to reinforce subject matter taught in academic classes (Glass, 2010).

D. Normalization

Normalization is an idea or concept whereby students are not set apart from others. With normalization students are enabled to do some of the same things as general education students. One way to normalize, for example, is to give students “analogous routines: preparation and clean-up, creative production of art, critiques, display of art, participation in group discussions, activities, and fieldtrips” (Guay, 1993, p.59). Inclusion involves normalization; this means including everyone as much as possible.

In order to normalize students, art teachers need to conduct research. Teachers can learn about managing an inclusive classroom by consulting with colleagues, attending conferences, and reading books on differentiating learning for the disabled. To “maximize” learning, disabled students can be included in cooperative groups. Teachers should also keep journals to analyze the methods they use. Students can engage in “partial participation” of lessons and be graded on their intent and effort rather than the product. By providing opportunities for students to make choices and make their own “marks,” art teachers can “empower” them to create authentic art. Art teachers must create an environment that induces normalization by organizing and labeling materials, communicating with paraprofessionals, the special education teacher, and the students, seating disabled students with general education students when possible, and adapting equipment, tools, materials, and objectives to meet the needs of all students (Guay, 1993, p.58). “Normalization focuses on the classroom system. It does not seek to provide

simplified art or in any way to separate or segregate students, but rather makes instructional provisions that accommodate the diversity” (Guay, 1993, p. 62).

E. Teacher Preparedness

Art teachers may not be familiar with the laws concerning students with exceptional needs (PL 94-142, IDEA, FAPE). Bain and Hasio’s (2011) article on preparing pre-service teachers to teach art to students with special needs recommends practical courses that train them through field experience where they gain first-hand experience in the classrooms working with learning disabled students. In Professor Lucy Andrus's ATS 325 Arts and Special Needs course at Buffalo State College students are required to keep a reflective journal that is essential to analyzing the lessons they designed for students and the experiences they had with them (Bain, & Hasio, 2011, p. 34). All teachers who work with mainstreamed students should make this part of their routine. Bain and Hasio’s (2011) article is important for informing institutions of the necessity of pre-service training for teaching learning disabled students. Such courses would need to address the complexities of planning for and managing an inclusive art class that contains students of multiple and varying abilities and disabilities, paraprofessionals, and managing materials, equipment, and the physical environment of an inclusive classroom.

With cuts in funding for education and increases in cases of Attention Deficit Disorder (ADD), Attention Deficit Hyperactivity Disorder (ADHD), and Autism Spectrum Disorder (ASD) and greater survival rates for babies and children with birth defects art teachers will encounter an increasing number of learning disabled students

being mainstreamed into their art classes. They must be prepared to meet the needs of these students (Guay, 1993, p. 58).

F. Paraeducators

Art educators should be strong leaders if they are going to meet the challenges of creative planning and classroom management required for inclusive classes. Art teachers must be able to communicate with paraeducators on how to empower students to create their own authentic artwork, and they need to be assertive and professional when advising paraeducators about the curriculum. Paraeducators have been described as “the gatekeepers of authentic art production” (Causton-Theoharis, & Burdick, 2008, p. 169-171). Causton-Theoharis and Burdick’s (2008) qualitative study on paraeducators was built on the themes Guay (2003) discovered when she conducted her qualitative study on how art teachers dealt with mainstreaming and inclusion. When paraeducators enable students to create original artwork they “open the gate.” When they “present physical and symbolic barriers to individual student engagement” they “close the gate” (Causton-Theoharis, & Burdick, 2008, p.171).

Examples of “closing the gate” include paraeducators that bring students to class late or talk to them about irrelevant topics during instruction this interferes with “physical access” to art curriculum. When paraeducators do art for students and impose their own ideas on them they “interrupt authenticity.” Redoing artwork that does not look like the teacher’s model “alters art production.” Simply having paraeducators sitting at the table with semi-independent disabled students may interfere with socialization that could take

place between general education and special education students (Causton-Theoharis, & Burdick, 2008, p.171).

Paraeducators can also “open the gate.” They are an asset to the class when they enable art teachers to carry out methods that allow inclusion and normalization to take place. General education students can benefit from instruction and aid from paraeducators as well as exceptional students. Paraeducators enable the teacher to work with the class as a whole when they assist students in need. They can “ensure access” to instruction and materials, “support authenticity” by providing opportunities for students to make choices and manipulate materials, and they “honor curriculum” by following the art teacher’s lesson objectives (Causton-Theoharis, & Burdick, 2008, p.175).

When Guay (2003) set out to observe art teachers she noticed that the paraeducators were doing a considerable amount of the work. Both Guay (2003) and Causton-Theoharis and Burdick (2008) stressed that art teachers must support the students as well as the paraeducators. Paraeducators are not replacements for teachers. Art teachers need to communicate with students as well as “provide guidance and support to the paraeducator” (Causton-Theoharis, & Burdick, 2008, p.179). Research revealed that paraeducators usually came to art class having no idea what the lessons would entail or what duties were expected of them. Teachers needed to communicate with them and even teach them art techniques to pass on to the students.

Teachers should communicate with paraeducators before the art class, so that they know what will be expected of them and their students. This may be done during a planning period, if the art teacher has one, before school starts if the paraeducators and

teacher are free from duty to talk, or by sending lesson plans via email. Having instructions written on paper available to paraeducator at the beginning of class is helpful. It is also possible to consult with paraeducators during class provided that students can work independently while the consulting takes place. Paraeducators make it possible for teachers to meet the needs of all of the students in an art class. Without them, differentiated instruction would be difficult to carry out without neglecting other students.

G. Studies on Time Teachers Work

Several studies have been conducted on the amount of time academic teachers spend teaching the core academic subjects of Language Arts and Reading, Math, Social Studies, and Science. No studies were found that indicated how much time teachers spent on teaching, planning, preparing materials for, and evaluating exceptional needs students. No studies were found that dealt with the amount of time art teachers spend on work (planning, teaching, evaluating, preparing materials, etc.). No studies were found on the amount of time teachers of any subject spent preparing for, teaching, and evaluating students with special needs who are mainstreamed into their general education classes.

An article by Marty and Stephen Swaim called “Teacher Time” examines the total amount of time American teachers work during a typical week and the amount of time they put into planning and marking papers. It also compares the time teachers in the United States work with the amount of time teachers in other economically advanced countries spend working per week. The authors indicate that teachers in the U. S. spend approximately 60 hours a week teaching, planning, preparing lessons and materials, and having meetings during school and planning and evaluating student work outside of

school. “A few simple calculations show that teachers who spend time planning for each class period and paying attention to each student’s work have no choice but to work about 60 hours per week or more” (Swaim , 1999, p.3). This article also reveals that United States teachers spend more time instructing students at all levels than teachers in any other nation in the study “except for the high end of the range for [secondary education in] England” (Swaim , 1999, p.5).

The Organisation for Economic Co-operation and Development (OECD) provides charts and data on how much time teachers spend teaching in its member countries. The Organisation for Economic Co-operation and Development (OCED) is concerned with developing policies that are aimed at improving the economic conditions as well as the social well-being of the world’s people. The U. S. has been a member since 1961. The OECD compares time teachers spend working, as well as salaries and class sizes for countries all over the world. The information provides “insight on the demands placed on teachers in different countries” and what affects the “attractiveness of the teaching profession.” One of the tasks the organization performs is to “compare how different countries’ school systems are readying their young people for modern life.” (OECD, 2012, p. 422) United States teachers spend more hours working than most other countries in the world. According to the OECD the average amount of time teachers worked around the world in 2009 was approximately 800 hours at primary levels and approximately 700 hours at secondary levels. In the U.S. teachers worked over 1,000 hours for both primary and secondary levels. (OECD 2012, p. 424) This information may include but is not specific to art education and the time art teachers spend on students with special needs.

The study on time for this thesis is unique because it focuses on an art teacher and on time spent educating exceptional needs students. It connects with the statement of need in chapter one. All of the studies conducted on the time teachers spend working were based on academic teachers who taught general education students. The subjects examined were what are considered core subjects such as math, science, and language arts.

H. Adaptations

Art teachers have to invent methods for teaching in inclusive class settings. Multimodal methods of instruction depend on the lesson and the needs and interests of the students. In order for some disabled students to make the artwork, teachers have to provide tools and materials that are adapted to meet special needs. There are “low-tech” and “high-tech” options to consider. Low-tech options include such things as foam grippers for markers, large handles on paint brushes for easy gripping, handle extensions, and “helping-hands” scissors. High-tech options include computers, software programs and adaptive peripherals. Art teachers should be knowledgeable about technology that will enable students with severe disabilities to create art. Wexler (2011) provided an example of how technology was used with a student with Down Syndrome in her research.

We found that drawing on the SMARTboard fulfilled several of [Judy’s] requirements: instant gratification, a need for quick transitions and changing dynamics, and her desire to work big, to perform, and interact with others. Working gesturally on the SMARTboard, which necessitated her to reach and move, also satisfied her energetic personality (Wexler, 2011, p.62).

Art teachers have to plan how to use classroom space to effectively promote normalization and inclusion. Ample room for manipulation of wheel chairs and similar equipment needs to be considered. Seating arrangements should enable socialization between general education and special education students. Organization, labeling, and storage of materials and tools foster independence, creativity, and normalization. All of these considerations must be carried out when instruction is adapted and differentiated to meet the diverse needs of exceptional students while also meeting the needs of their general education peers in an inclusive art class (Guay, 2006, pp10-12).

I. General Descriptions of Specific Cognitive and Physical Disabilities

Exceptional needs students at the middle school in rural Virginia where the study is conducted have a range of disabilities and health impairments: visual impairment, mixed bilateral hearing loss, Pierre-Robin Sequence, attention deficit hyperactivity disorder, (ADHD), and intellectual disabilities resulting from Down syndrome, autism spectrum disorder, fragile X syndrome, cerebral palsy, and microcephaly. Most of the students are identified as having multiple disabilities meaning they have a combination of more than one disability. It is common for students who have mental disabilities to also have physical disabilities (Blandy, 1994; Gerber, 2006; Loesl, 2006; Wittenstein and Sovin, 2006; Geisser & Geisser, 2006).

Sight and hearing and motor control problems often make up a combination of physical impairments students might have. Students may be congenitally blind (blind since birth) or adventitiously blind (vision was lost after memories and concepts have been established). Students who have visual impairments have varying degrees of

blindness depending on the individual. The categories are legally blind, low vision, functional vision, and functional blindness (Wittenstein & Sovin, 2006, p. 128). Legally blind is defined as

best corrected visual acuity of 20/200 or less in the better eye; or a visual field limitation such that the widest diameter of the visual field, in the better eye, subtends an angle no greater than 20 degrees, as measured with a Goldmann III4e or equivalent size stimulus” (Lighthouse International 2013, para 2).

Basically this means that a person with 20/200 vision sees from 20 feet away what a person with 20/20 vision sees from 200 feet away (Wittenstein & Sovin, 2006, p, 128).

Low vision is a term that denotes a level of vision that is 20/70 or worse and cannot be fully corrected with conventional glasses. Low vision is not the same as blindness. Unlike a person who is blind, a person with low vision has some useful sight. However, low vision usually interferes with the performance of daily activities, such as reading or driving. A person with low vision may not recognize images at a distance or be able to differentiate colors of similar tones. Most people develop low vision because of eye diseases (University of Michigan Kellogg Eye Center, 2012, para 1).

One can infer from Wittenstein and Sovin’s (2006) information that functional vision and functional blindness are subcategories of low vision. People with functional vision and functional blindness would need to use braille to read, but may have characteristics described in the description for low vision. As with other disabled students teachers should refer to their IEP’s and consult with teachers and specialists to design lessons and adapt materials to meet the needs of the visually impaired. There are schools for the blind in most states, so one can assume that a majority of visually impaired

students would attend these schools (Texas school for the blind and visually impaired, 2013). Students with visual impairment attend inclusive art classes. Students who have mental retardation in combination with visual impairment do attend the exceptional education programs and inclusive art classes.

“Deafness is more than just not hearing” (Geisser and Geisser, 2006, p. 139). It is very important for children to learn a language whether it is manual communication, American Sign Language (ASL), oral communication, cued speech, finger spelling, or total communication methods. Oral communication involves learning to read lips. Cued speech complements speech and lip reading by signing the sounds of speech as one talks in order to differentiate sounds such as consonants (b and p, v and f) that may look the same to the deaf when reading lips. Manual communication uses “hand shapes, signs, gestures, bodily movement, facial expressions, and finger spelling exclusively,” a visual language with no oral communication (Geisser & Geisser, 2006, p. 144). ASL is a natural language in its own right. It does not use voicing, and it includes all of the types of gestures in manual communication. “It has its own grammatical and linguistic structure. Since it has its own grammar, punctuation, and syntax, it also has various regional dialects and slang as in all languages” (Geisser & Geisser, 2006, p. 144). Finger spelling is spelling out every word by spelling it with the signing alphabet. Total communication is using a combination of all of these methods. Not all deaf students use the same methods. Hearing loss ranges from mild to profound. Some students may have hearing aids and others may have cochlear implants (Geisser & Geisser, 2006).

A cochlear implant is very different from a hearing aid. Hearing aids amplify sounds so they may be detected by damaged ears. Cochlear implants bypass damaged

portions of the ear and directly stimulate the auditory nerve. Signals generated by the implant are sent by way of the auditory nerve to the brain, which recognizes the signals as sound. Hearing through a cochlear implant is different from normal hearing and takes time to learn or relearn. However, it allows many people to recognize warning signals, understand other sounds in the environment, and enjoy a conversation in person or by telephone (National Institute on Deafness and Other Communication Disorders, 2011).

Human beings think through language. Without developing language people's thinking is limited. Deaf students who have limited language skills will produce art that is below the ability for their same aged peers, for example a middle school aged child who communicates with the language ability of a second grader will render art that is on the level of a second grader. Hearing people are constantly receiving information through hearing; they do not even need to see images related to information to comprehend what is heard. Deaf people miss a lot of information that we take for granted. Art teachers need to be aware of the different ways that deaf students communicate in order to relate to them and to meet their needs. Just like people with any disability no two deaf people are alike. Art teachers should read deaf students' IEP's and collaborate with teachers and specialists who work with them and with the students' parents (Geisser & Geisser, 2006, pp. 144-147).

Students with motor control problems vary in what parts of the body are affected and what combination of problems they may have. Problems affect fine motor skill, gross motor skills, the upper torso, and/or the lower body. Motor control problems may be caused by cerebral palsy, or they may be neuromuscular problems resulting from genetic diseases such as muscular dystrophy and Lou Gehrig's disease. Accidents, violence,

illnesses, and surgeries may cause physical disability and brain injury conditions that cause neuromuscular problems (Loesl, 2006, p. 108). Students who have problems with fine motor skills may have trouble holding things, turning things in their hands, or they may not be able to use both hands. Students with gross motor skill problems have trouble reaching for things, lifting things, and raising their hands. Upper torso problems affect a student's ability to control the head, upper torso, and arms, and harnesses that support the upper torso may affect movement. Students may have trouble may have hand tremors or uncontrolled spastic flailing of the arms that may send materials flying off of surfaces. Students with lower torso problems usually are confined to a wheel chair or have to walk with leg braces and crutches of some type and have trouble participating in tasks such as passing out supplies or cleaning up. They also have trouble using equipment like the potter's wheel and using the tables if their chair does not fit. Art teachers may study IEP's and collaborate with teachers, parents, and specialists to understand student's conditions and meet their needs.

Cerebral palsy has to do with the brain and the ability to control one's muscles which affects motor control. Cerebral refers to the brain and palsy refers to a weakness or problems in controlling one's muscles. A problem in the brain causes a person to have difficulty controlling his/her muscles. Different areas of the brain can be affected meaning one person with cerebral palsy may have problems with different muscle groups than another. Cerebral palsy may occur before or after birth. Some possible causes are: genetic conditions, abnormal blood supply to the brain before birth, infections, bleeding in the brain, lack of oxygen, severe jaundice and head injury. Symptoms of cerebral palsy

range from clumsy/awkward movements to inability to move (Cerebral Palsy FactSheet, 2013).

Pierre Robin Syndrome (or Sequence) is present at birth. The jaw is smaller than average, and this causes the tongue to fall back in the throat creating breathing difficulty. Other symptoms are cleft soft palate, high-arched palate, small jaw with small receding chin, repeated ear infections, small opening in the roof of the mouth which causes choking, and a tongue that is large for the jaw. Complications involve breathing difficulties especially during sleep. The breathing difficulties can cause low blood oxygen and ultimately brain damage. Other complications include choking episodes, congestive heart failure, death, feeding difficulties and pulmonary hypertension. As children with Pierre Robin Syndrome grow the lower jaw becomes near normal size and choking and feeding problems subside (PubMed, 2012) Students with Pierre Robin syndrome may have trouble communicating because speech is hard to comprehend and ear problems may affect the students' hearing.

Students who have Attention Deficit Hyperactivity Disorder (ADHD) show characteristics of being inattentive, hyperactive, and impulsive (Kizner, February 9, 2012). ADHD is the official medical diagnostic label for a cluster of those symptoms. (The Diagnostic and statistical Manual of Mental Disorders, Fourth Edition (DSM-IV-TR:American Psychiatric Association, 1994) (as cited in Smith) lists ADHD in three subtypes: ADHD, predominantly inattentive type; ADHD, predominantly hyperactive-impulsive type; and ADHD, combined type (Smith, 2001, p. 18). There are different combinations of these characteristics depending on the child. One student may show characteristics that are predominantly hyperactive-impulsive, another's characteristics

may be predominantly inattentive, and a third student may show a combination of hyperactive-impulsive- and inattentive characteristics. Each category of characteristics has a list of symptoms. Students who present 6 or more of those symptoms or combinations of symptoms can be labeled ADHD. Following are a few examples of symptoms for each of the three types of ADHD characteristics. Symptoms of inattention are being distracted and unable to focus, forgetfulness, disorganization, and daydreaming. Symptoms of hyperactivity are an inability to sit still for long periods of time, constant talking, and fidgeting with objects within one's reach. Symptoms of impulsivity are being impatient and acting without thinking of the consequences (Kizner, February 9, 2012).

Autism spectrum disorders (ASD's) are complex lifelong developmental disabilities defined by behavioral impairments in social interaction, verbal and nonverbal communication and perceptual organization (American psychological association, 2013). ASD's "affect the way a person relates to the world" (Brower, 2007, p. ix). An average of 1 in 110 American children has autism spectrum disorder. The disorder affects all races, ethnic groups, and socioeconomic levels. Autism spectrum disorder is a pervasive developmental disorder (PDP) that includes several categories: Autistic Disorder, Childhood Disintegrative Disorder, Asperger's Disorder, and Rett's Disorder. Autism is evident within in the first three years of life. "Symptoms vary in degrees of severity, from mild to severe impairments" Students with autism may have communication impairments that range from being mute to language dysfunctions characterized by one-sided conversations. (Kizner, February 16, 2012). Children with autism may have impairments with relating socially to others. They may have sensory impairments as well. Many autistic students possess repetitive behaviors and restricted interests. Characteristics are

unique to individuals and occur in various combinations and in varying degrees of severity (Kizner, February 16, 2012). Although no two children with autism are alike, it is important for teachers to be familiar with the characteristics of autism in order to develop strategies for teaching autistic students.

Leo Kanner, M. D., an American child psychiatrist, is credited for identifying autism. In 1943 he noted the classic characteristics in children that he studied. At around the same time Hans Asperger, M. D., a pediatrician who had a special interest in developmental disorders and worked at the Children's Hospital, University of Vienna in Austria, published a paper on children who presented similar but milder characteristics than Kanner's subjects. Asperger's disorder has been associated with high functioning/less severe autism (Leidel, 2008, p. 2). In the future there is a possibility that the Asperger's label will no longer be used. In the spring of 2013 the Asperger's diagnosis was scheduled to be dropped from the DSM-IV, Diagnostic and Statistical Manual of Mental Disorders fourth edition (Steenhuysen, 2012).

Fragile X syndrome (FXS) is a genetic condition. Fragile X is so named because of an unusual appearance of the X chromosome of affected individuals.

Uncoiling of the strands of genetic material in the chromosome at the FMR-1 (fragile site mental retardation-1) site make it look as if one end of the chromosome is breaking off. The gene FMR-1 that functions abnormally in fragile X is located at the position of the apparent fragility of the X chromosome (Barnicoat and Carmichael, 2004).

A defect in the FMR-1 gene can cause the body to produce too little of a protein that the brain needs to grow properly. Boys have only one X chromosome and are, therefore, more likely to have severe developmental problems and intellectual disabilities as a result

(PubMed, 2011, September 6). “Fragile X syndrome is the most common inherited cause of learning difficulties, affecting a child’s ability to tackle key skill areas such as literacy and numeracy, and causing behaviour problems and social anxiety” (Dew-Hughes, 2004, p. i).

Symptoms of fragile X are presented in both behavioral and physical characteristics. Although Fragile X has some consistent features an individual’s genetic make-up determines the severity of its affects. Some children may be of average or above average intelligence, some may have mild learning difficulties and others may have severe learning disabilities and autism. Fragile X syndrome can cause autism (Hagerman, 2004). Behavioral symptoms are

hand clapping and biting, hyperactive or impulsive behavior, mental retardation, speech and language delay, and a tendency to avoid eye contact. Physical characteristics are flat feet, flexible joints and low muscle tone, large body size, large forehead or ears with a prominent jaw, long face, and soft skin” (PubMed, 2011, September 6).

In most children with fragile X the range of learning disabilities is mild to moderate (Hagerman, 2004, p. 9). In some cases mental retardation can be severe. “Children with fragile X have distinctive physical and behavioural characteristics, which combine shyness with attentional problems, impulsivity, hyperactivity, poor eye contact, stereotypical behavior, perseverative speech and a good sense of humour” (Hagerman, 2004, p. 13).

Students with mental retardation can learn, but they learn differently than general education students. Mental retardation is one of the correct terms to use when describing students with cognitive disabilities. Some terms run the risk of seeming derogatory or

may be confusing to interpret when people have tried to steer away from uncomplimentary labels. Mental retardation can be mild or severe. “Even the most limited student can be reached when the student’s own functioning level determines the lesson’s goals and methods” (Gerber, 2006, p. 68). In order to meet the needs of exceptional students, art teachers must take extra time to plan and analyze lessons and to make necessary adaptations. The most common learning problems of students with mental retardation are: “attention to irrelevant details; poor short term memory; concrete rather than abstract thinking; poor judgment and reasoning skills; and the cycle of failure that can be a consequence” (Gerber, 2006, p. 69).

The most common genetic determinant of significant intellectual disability is Down syndrome (Patterson and Lott, 2008, p,3). People with Down syndrome have 47 chromosomes instead of the normal amount of 46. Trisomy 21 is the term for the condition that occurs when there is an extra copy of chromosome 21. The extra chromosome causes defects in the brain and body. Just as with autism and fragile X syndrome, the severity of symptoms vary from mild to severe depending on the individual. Children with Down syndrome have a marked appearance; the head may be smaller and abnormally shaped and the eyes appear upwardly slanted. Other symptoms are “flattened nose, separation between the bones of the skull, single crease in the palm of the hand, small ears, small mouth, and wide, short hands with short fingers” (PubMed, 2012, May 16). Physical development may be delayed and adults are shorter than average. Children with Down syndrome can have heart defects, eye problems (most need glasses), hearing problems, and hip dislocation problems. Behavioral symptoms are “impulsive behavior, poor judgment, poor attention span, and slow learning” (PubMed,

2012, May 16). It is not uncommon for students of Down syndrome to become depressed and frustrated as they become aware of their limitations (PubMed, 2012, May 16).

Microencephaly refers to an abnormally small head. Micro means small and cephal is derived from the Greek word for head. The head is small because the brain has not developed normally. This condition causes cognitive and neurological defects (Soul, 2011). Students with microcephaly may have mental retardation and motor control problems.

The inclusive art classroom hosts students with a wide range of disabilities that include the ones discussed here. Art educators will spend a considerable amount of time researching students' disabilities in order to understand them. Having knowledge of learning and physical disabilities will enable art teachers to develop strategies to teach exceptional students. See Appendix B for strategies to use with various disabilities students.

J. Strategies in the Literature

General strategies will work in all classrooms whether inclusive are not. Strategies used for students with exceptional needs will benefit any student.

There are effective teaching strategies and approaches that can reach a wide range of students of differing abilities. When these strategies are put together, they form a framework for lesson planning and behavior management. These sound teaching practices offer an additional bonus because they can be adapted for a variety of student ages and disabilities (Gerber, 2006, p. 28).

Organization, routine, expectations and consistency are keys to a successful inclusive art classroom. Organization involves careful planning and arranging classroom space. The organized art teacher plans in advance. Paraeducators and exceptional education teachers can be notified of lesson plans ahead of time. Classroom space and materials can be arranged and labeled for student and paraeducator use. Supply drawers, shelves, and cabinets should be uncluttered and easy to access and maintain (Guay, 2006).

Routines should be well developed and taught to the students so that they know what is expected of them when preparing to work, staying on task, and cleaning up when class ends. All students should have responsibilities for distributing materials and for cleaning up. Even small tasks can be done hand over hand with students who have little control of their limbs in order to enable them to take part in routines (Guay, 2006).

Along with routines teachers should have clear expectations for students. Expectations depend on students' specific abilities and needs. Expectations have to be taught and reinforced with students and paraeducators. When organization, routines, and expectations are utilized with consistency learning can take place and students can develop ideas and solve creative and communicative problems on their own (Guay, 2006, p. 12).

Troubleshooting and task analysis are paramount strategies. When troubleshooting the art teacher plans the lesson, but rather than expecting it to go as planned he/she expects that things may go wrong and preplans alternatives or adaptations to the lesson in order to prevent potential problems. The art teacher needs to think like an exceptional education teacher. He/she must have knowledge of students' personal and

interpersonal problems and an understanding of students' learning and behavior needs (Gerber, 2006, p. 27-30). "Assume nothing. Troubleshooting recognizes that students may not understand the directions or remember skills taught in previous lessons" (Gerber, 2006, p. 30). Collaborating with the exceptional needs teacher and studying student's IEP's is a good way to gain knowledge about students. Art teachers have the right to view student's IEP's and can even offer to help develop IEP's (Burnette & Lokerson, 2006, p. 24; Hunter & Johns, 2006, p. 45)

Task analysis requires that the teacher determine what a student is capable of doing on his own and which tasks will require assistance. In order to help exceptional needs students with directions the task is broken down into smaller steps that are introduced one at a time to insure success. Tasks can be broken into as many steps as necessary and tailored to meet individual student's needs (Gerber, 2006, p. 77).

Doris Guay (2006) suggests these strategies that work well in all inclusive classrooms: having students work for a group grade, and asking the group or other classmates for help before asking the teacher; calling on students, including exceptional needs students, to repeat the instructions ("re-explaining") and having students demonstrate to check for understanding. Various authors offer strategies for working with exceptional students. "Sound teaching practices can be adapted for a variety of student ages and disabilities. ... Teaching practices and principles that work well in one classroom can... be as relevant in the art room as in the special education program" (Gerber, 2006, p. 28). Marshall researched strategies that work well with exceptional students. She includes strategies for ADHD, strategies for Mental Retardation, and

general strategies for students with exceptional needs. Explanations of her strategies are located in Appendix B.

Summary

Students with learning disabilities often do quite well in the arts. Art class is often a place where they find success and gain a feeling of accomplishment and achievement. Research has revealed that, in order to follow the laws that direct mainstreaming students so that they may learn in the least restrictive environment, art teachers deal with a very complex classroom dynamic that teachers in other fields may not experience, at least not on the same convoluted level. Research directs that art lessons should include every student in the class regardless of ability or disability. In order to do this, teachers need to adapt objectives to accommodate student abilities and meet their interests. Adaptations should be made when students' physical disabilities require it. When evaluating work, teachers should look at whether objectives have been met, and in cases of disability, "partial participation" and learner intent will play a part. A few teaching guides have been written to give suggestions for adaptations and planning for learning disabled students in the art classroom. Many art teachers are not aware of adaptations, nor are they knowledgeable about the common disabilities students have.

How might one plan a lesson on one point perspective for a sixth grade art class that includes severely mentally-disabled and physically disabled students, their paraeducators, and general education students that also include children who are gifted? One point perspective is not an easy concept for the average sixth grader. Strategies for working with exceptional students were offered in much of the literature, but an article

that documents what an art teacher goes through to enable inclusion would be insightful and useful. Just as no two exceptional needs students are alike no two inclusive classrooms have the same combination of students. No literature revealed how much time would be required to do research, plan for diverse learners, make adaptations, shop for special tools and materials, collaborate with other professionals and parents of disabled students, to arrange the room, and to store and label materials and equipment. The purpose of this study is to offer more examples of how effective strategies work in the inclusive classroom and to demonstrate the amount of time and effort required to run an effective inclusive art classroom.

III. Methodology

A. Design

This thesis investigates the complex task of managing and running an inclusive art classroom through survey research, journaling and data analysis. The research design includes 1) recording the planning and preparation time necessary for teachers to run an inclusive art class room: and 2) documenting successful art teaching strategies for exceptional needs students.

The method used was based on the *teacher research* method, also known as action research (Parsons and Brown, 2002), proposed by Hubbard and Power (1999).

Teacher research is ... initiated and carried out by teachers in their classrooms and schools. Teacher [researchers] focus on problems they are trying to solve in their own classrooms. [This] research involves collecting and analyzing data as well as presenting it to others in a systematic way. Teacher research is based upon close observation of students at work [with the purpose of] helping the teacher-researcher understand her students and improve her practice in specific, concrete ways. [The] notion of understanding learning from the students' perspective is central to teacher research (Hubbard & Power, 1999, pp. 1-5)

Data was collected on three separate charts completed by the art teacher: during school, after school, and at home. Each chart documented the time required for planning and preparation in each of the following categories: research, adaptations to lessons, collaboration, planning, and teaching strategies. The research design also included recording in a journal the preparation and teaching time required to effectively meet the needs of every student. Journal notes were transferred to charts for analysis.

B. Context/Sample

This study was conducted at a middle school in rural Virginia. The middle school was a public school which housed a self-contained exceptional needs education classroom and a program that served cognitively disabled (exceptional needs) middle school students. Students with exceptional needs who receive most of their instruction in a self-contained classroom were mainstreamed into art classes with their peers. The amount of instruction for each grade level in the school was as follows: 6th graders attended art for six weeks of instruction, seventh graders received twelve weeks of art instruction, and eighth graders received eighteen weeks of art instruction. This study was limited to the observations recorded by one certified art teacher, and her consultations with the certified exceptional education teacher, the principals, and other specialists who worked with the exceptional needs students.

Individualized Education Programs/Plans (IEP's) for each of the exceptional needs students were provided by their teacher. Each student's characteristics were noted and researched so that equipment and materials best suited for their abilities could be provided. By consulting the exceptional needs teacher and other specialists, such as therapists, methods for communicating with students were devised.

C. Instrumentation

Instrumentation for this study included three charts and a journal that were used to collect data. The items on the charts represented each of the broad categories that required additional time for planning and preparation to meet the needs of exceptional education students. The broad categories were: time spent during teaching contract hours

at school, time spent at school after contract hours, and time spent at the teacher's home. A chart was created for each category. Each chart included seven columns for recording data. The columns included spaces for recording the date, notes on what occurred and the time devoted to each of the following areas: research; adaptations to and preparation for lessons, room, materials, and equipment; teaching and assisting; collaborating with teachers, specialists, administrators, parents; planning (including purchasing materials and evaluating work); and strategies used. Information was recorded daily. (See appendix A for sample charts.) The journal consisted of personal daily note taking to help identify successful art teaching strategies.

D. Procedure

The research proposal entitled "The Inclusive Art Classroom: Time and Strategies" was prepared and submitted to James Madison University's Institutional Review Board, IRB. The IRB determined that the proposal did not need IRB approval because the art teacher was the subject of this study rather than the students. There is no identifiable information in this paper and no way to link the data to the source. No other human subject interaction or intervention was involved in this study. Students associated with this study were given fictitious names. Preparation also included meeting with the exceptional needs teacher to coordinate the integration of exceptional needs students and to determine individual student characteristics.

Each day the teacher charted time spent preparing for and working with exceptional needs students. The teacher also documented what was taught, the adaptations made to lessons and the classroom, the research done, and collaborations with

other adults while at school during regularly scheduled hours indicated on her teaching contract as well as time spent at school after hours and time spent at home on evenings and weekends. This documentation was made in written form on charts created on word documents. Time was noted in the following categories: research, planning, adapting lessons, adapting materials, adapting the classroom, clean-up for dependent students, purchasing special equipment and specific art materials, collaborating with adults who were knowledgeable about students' needs, and time spent teaching exceptional needs students in the classroom.

In order to meet the diverse needs of all of the exceptional education students assigned to art at the middle school adaptations were made. The methods for accommodations included: 1) adjusting lesson plans to suit individual students' needs, 2) making adaptations to the classroom , materials, and equipment to meet the needs of exceptional education students who had cognitive disabilities that ranged from mild to severe so that the environment was conducive to the needs of exceptional students at the same time that it was conducive to the needs of general education students, 3) preparing the art classroom and materials ahead of time to accommodate high needs students, 4) making comparisons between categories in order to provide perspective on the time needed to meet the need of every student and 5) being consistent and accurate when observing and recording data (Golafshani, 2003, p. 600).

E. Proposed Data Analysis

Time spent by the teacher planning for and working with exceptional students was totaled in three categories: during the regular school hours indicated on the teaching

contract, at school after contract hours, and at the teacher's home evenings and weekends. Comparisons were made between the time spent at school during and after contract hours, and at home. Each day, time, and activities related to preparing for and teaching exceptional needs students were noted on a chart and documented in a journal so that comparisons of time could be made between categories and between the time spent during school hours, after hours at school, and at home.

IV. Results and Interpretations

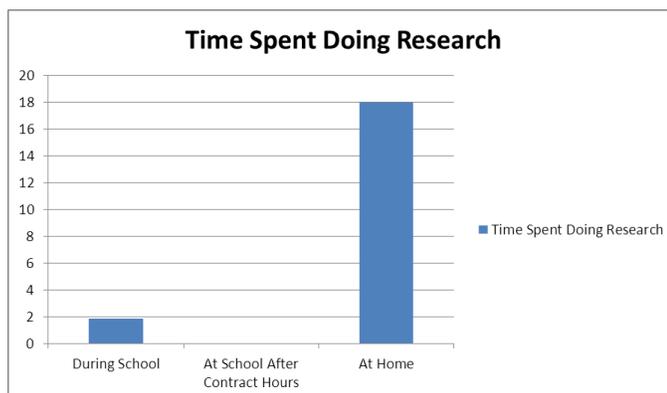
This chapter presents the results of research to determine the extent of planning and preparation time necessary for art teachers to meet the needs of every student regardless of ability level in an inclusive art classroom. Interpretations are based on data and journal entries used to document time and strategies during one semester at a public middle school in rural Virginia. Graphs are included to demonstrate the amount of time devoted to research, making adaptations, teaching and assisting students, collaborating with teachers, specialists, and parents, and planning for exceptional education students. The composite results are represented on an additional chart. Results and interpretations for each of the research questions follow.

A. How much time is necessary to research the individual needs of exceptional education students assigned to inclusive art classes?

Results

During one semester a total of 18 ½ hours were devoted to researching the needs of exceptional education students assigned to the art classes. Only 32 minutes were spent on research during the normal school day (7:45 a.m. – 3:30 p.m.). No time was spent on research at school after teaching contract hours. A majority of the time, 17 hours and 58 minutes, was devoted to research at home in the evenings and on the weekends. Figure 1 illustrates the time used on research in hours.

Figure 1. Time spent doing research in order to run an affective inclusive art classroom.



Interpretations

During the teaching day, there was no time to do research. During the first semester four out of seven classes were inclusive classes that served students from the general education program as well as students from the self-contained exceptional education program. During two of those classes, a paraprofessional attended with two students who were dependent on assistance. I had to use every moment I wasn't working with general education students helping exceptional needs students. Art classes that contained only general education students also demanded my constant attention. Students needed advice, assistance, demonstrations, help finding materials, and sometimes discipline.

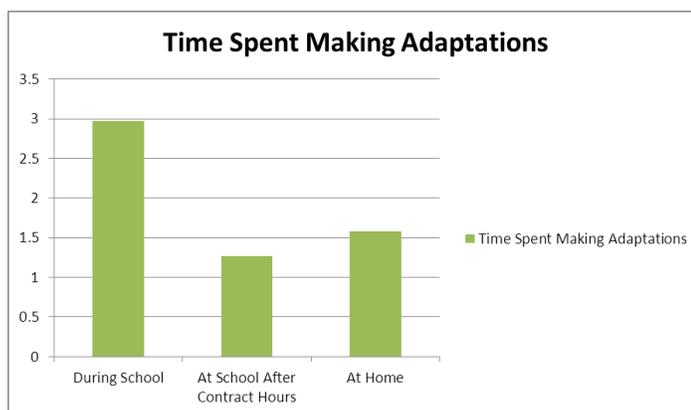
Very little research was done at school during or after contract hours. After school, time was committed to other necessary tasks such as organizing and cleaning the classroom after students made art all day, preparing materials to get ready for the next day, collaborating with other adults, and evaluating student work.

B. How much time is needed to make appropriate adaptations to materials, equipment, and the classroom for exceptional needs students?

Results

Over the course of the semester when this study was conducted adaptations were made to the classroom, equipment, and materials in order to suit the needs of seven exceptional education students. During school 2 hours and 58 minutes were used making adaptations for those few students. At school after contract hours, in addition to time being spent doing tasks to prepare for general education students, 1 hour and 16 minutes was spent on adaptations for exceptional needs. At home in the evenings and on weekends, while doing research, 1 hour and 35 minutes were spent trying to make adaptive equipment and adapting materials to suit students' needs. See Figure 2 for data on hours spent making adaptations.

Figure 2. Time in hours spent making adaptations to meet the needs of exceptional education students.



Interpretations

Most adaptations were made during the school day because teaching students with exceptional needs involves trouble shooting. I had little formal training in teaching students with exceptional needs and therefore did research on adaptations for specific disabilities. The exceptional needs students were individuals who had their own unique combination of problems, and their own unique personalities. What worked with one student did not necessarily work with another. IEP's gave a brief description of students' disabilities and goals. Collaboration with the exceptional needs teacher provided more insight on students' personalities and needs. Having over 16 years' experience teaching, I had a good idea of what to expect from general education students, but knowing what a student with severe disabilities could and could not do was not evident until the student was in the midst of the lesson. Often I had to make quick decisions and adapt lessons, materials, and equipment on the spot. The paraeducators and I worked together experimenting with exceptional needs students by letting them try several methods and materials before discovering what was successful. During art class the paraeducator, and occasionally specialists, and I experimented with students and adaptive handgrips, scissors, paint brushes, etc. and communication devices.

Nearly the same amount of time was spent making adaptations at school after school hours and at home. At school after contract hours, time was spent, preparing directions for paraeducators, and arranging and labeling materials so that exceptional needs students and paraeducators would have a consistent, organized place to find them. I did most of the planning and evaluations of student work at home. Adaptations were made to lesson plans to meet individual exceptional students' needs. I also experimented

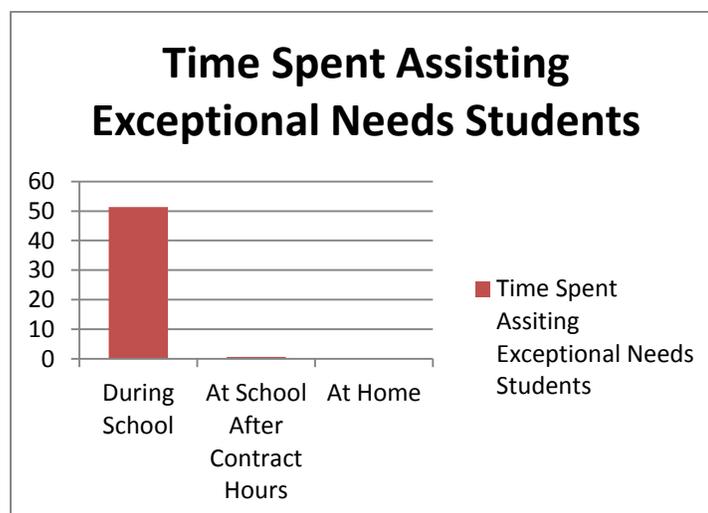
by making and trying out adaptive equipment, such as hand grips from newspaper and milk jug handles, as I was researching about it.

C. How much time is needed to provide individual assistance to exceptional needs students while also meeting the needs of every individual student in an inclusive art classroom?

Results

During school 51 hours and 19 minutes, or 12% of the instruction time for art in a semester, was spent providing individual assistance to seven exceptional needs students while also teaching general education students some of whom also had learning disabilities. Calculations based on the school calendar reveal that 450 hours were allotted to art instruction for the 90 day semester at the middle school where this study was conducted. I was absent one of those days and assemblies and field trips during the holiday season interrupted some classes; therefore, I spent approximately 434 hours instructing art students during the semester. Thirty-eight minutes were spent assisting students after contract hours and zero minutes were spent assisting students at home. The following graph in figure 3 illustrates the hours spent teaching and assisting exceptional needs students over the course of a semester.

Figure 3. Time in hours spent assisting individual students with exceptional needs while meeting the needs of every individual student in an inclusive art classroom.



Interpretations

One could easily predict that more time was spent assisting students during school. What is interesting is the amount of time I spent assisting students over the course of a semester. More paraeducator assistance would have freed me to work with the whole class. One paraeducator accompanied two students who were confined to wheel chairs. These students had poor motor control, one was visually impaired, the other hearing impaired. In order for both of these students to participate the paraeducator worked hand-over-hand and hand-under-hand with one student while I did the same with the other student.

Students who did not come with a paraeducator from the self-contained exceptional needs classroom often needed assistance and may have benefited from having one come with them. One eighth grade class, two seventh grade classes, and one sixth grade class served exceptional education students who were not accompanied by a

paraeducator. When a paraeducator assisted two students during a seventh grade art class she had to spend so much time on a student who had both fragile X syndrome and autism that she was unable to assist the student who had Down syndrome, and he needed a lot of assistance. I had to sit down with the student who had Down syndrome and another student with learning disabilities to help them do many of the tasks that general education students could do easily, such as mixing paint for color-mixing exercises. In another seventh grade class, I often had to provide one-on-one assistance to two students, one who had autism and mental retardation and another with mild mental retardation from the general education population. Three sixth grade students, one with mild mental retardation and ADHD from the self-contained classroom, another with learning disabilities, and one with mild autism required constant attention and one-on-one assistance. The student from the self-contained class had to leave early to catch a special bus each day so he was allowed to work until the last minute; therefore, his classmates and I often cleaned up for him.

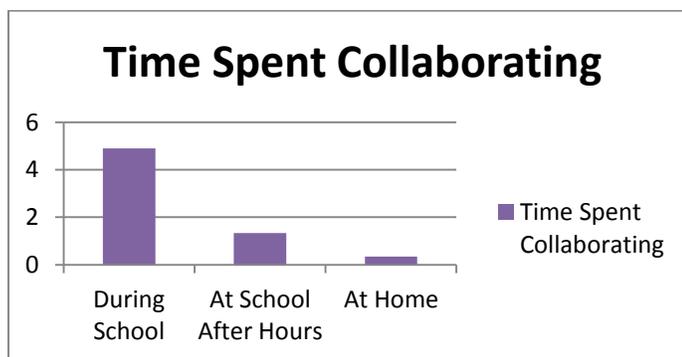
After school one day I spent thirty-eight minutes repairing a sixth grade student's clay artwork. This is the student who needed to leave art class early each day to get his transportation home. Repairs included reinforcing areas that were too thin and weak, and scoring and applying slip where the student failed to do so, and then cleaning up the mess and returning materials and equipment to storage. (Care was taken not to alter the student's design in any way other than to strengthen what otherwise would not have been substantial.)

D. How much time is needed to collaborate with others to meet the needs of exceptional needs students?

Results

During school four hours and nine minutes total were spent collaborating with the exceptional needs teacher, speech therapist, physical therapist, occupational therapist, one parent and the paraeducators. Fifty-seven minutes of the time during school were spent in an IEP meeting where collaboration took place with a parent, the principal, specialists, and the exceptional education teacher. Collaboration with either the exceptional education teacher or paraeducators took place at school after contract hours for one hour and twenty minutes over the course of the semester. Twenty-one minutes were spent collaborating at home via email. Figure 4 illustrates the hours spent collaborating.

Figure 4. Time in hours spent collaborating with the exceptional needs teacher, paraeducators, specialists, and parents.



Interpretations

Most of the collaboration took place between the exceptional needs teacher and myself during contract school hours. We collaborated before classes began, during lunch, and after students had gone home. Both the exceptional needs teacher and I sometimes stayed at school after contract hours in order to get all of their work done; therefore, we were often available to each other at school after work hours. I was fortunate that the exceptional needs teacher was willing to help. She made copies of IEP's and gave them to me right away. Time was also spent collaborating with paraeducators during class or after school. Collaboration occurred with specialists, such as speech therapists, occupational therapists, and physical therapists, on days that they observed and assisted during art class. During an IEP meeting I collaborated with specialists and a parent. The parent was helpful in giving suggestions about how to work with her child, who was nonverbal, and, in return, was pleased to learn how her child enjoyed art. The specialists and exceptional needs teacher were quick to praise my efforts in the presence of the principal for working so hard to accommodate the exceptional needs students in my art classes.

When doing research on adaptations at home, I would email the exceptional education teacher about using communication devices, to find out if the students used them in the self-contained classroom and, if so, to ask if the devices could be used in art class. I communicated with the exceptional needs teacher by email both at home and during school. I also asked about using a Smart Board, hand grips, special scissors, wheel chair trays, and whether or not a student could make art if we removed him from his wheel chair. The exceptional education teacher and specialists appreciated the art my

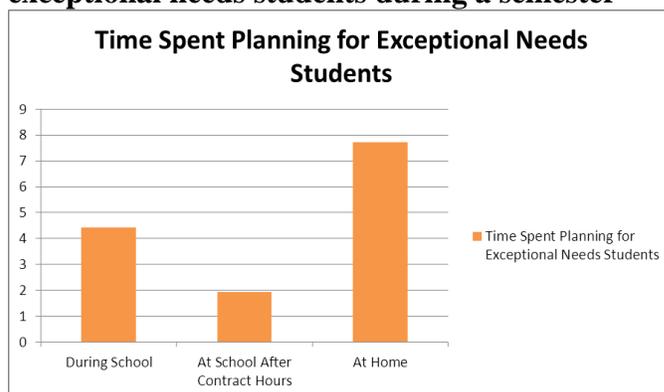
questions and requests and came to art class very soon after collaborating to bring communication devices and adaptive grips. The specialists were also fascinated with my homemade handgrips made from newspapers and tape and asked to borrow them.

E. How much time is needed for planning lessons to meet the needs of exceptional education students during the school day, at school after school hours, and at the teacher's home?

Results

I first planned lessons for the general education students, and once that was completed, additional time was taken to plan for exceptional students. An additional four hours and forty-five minutes were spent planning for exceptional needs students during school. At school after contract hours an extra one hour and fifty-five minutes was spent planning for exceptional needs students. Most of my planning took place at home. An additional seven hours and forty-four minutes of my personal time were spent at home in the evenings and on the weekends, and even during the holidays, planning for exceptional needs students. See Figure 5 for the graph that illustrates the amount of time spent planning for exceptional needs students during a semester.

Figure 5. Hours of time spent planning for exceptional needs students during a semester



Interpretations

Planning included planning lessons, purchasing materials, and evaluating work. Exceptional needs students were going to be exposed to the same lessons as the general education students; therefore, time used for initial planning was not noted. Time was documented when planning for exceptional education students. The lesson was analyzed and broken into simple steps and accommodations and adaptations were made to meet the needs of each unique exceptional education student.

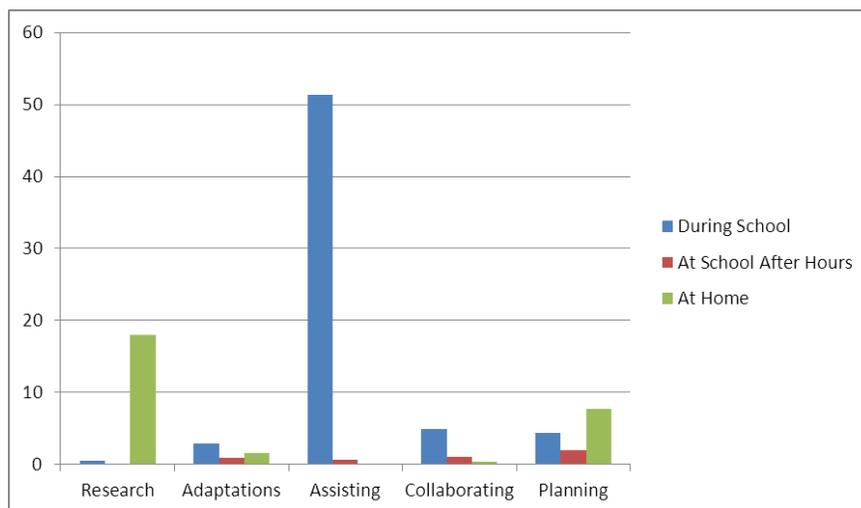
After researching how to make adaptive equipment I experimented by making hand grips to help those with poor motor control. I looked through catalogs and on the web to find and purchase equipment made especially for students with motor control issues, such as loop scissors, and jumbo crayons. I also shopped at craft stores, dollar discount stores, and stores such as Wal-Mart to find materials to make adaptations and to find materials on short notice. Time spent shopping at stores was documented as time spent at home for this study.

Evaluating work for exceptional needs students did not take a considerable amount of time because there were only eleven students throughout the semester. Higher functioning students in seventh and eighth grades kept a sketchbook like their classmates and sixth graders kept a portfolio of all of their work in a folder to take home at the end of the 6 weeks. Evaluating their projects and sketchbooks took about the same amount of time as it did for general education students. Time was taken to write notes on the back of some work to explain to parents of students, especially those of students who could not speak on their own, what their child had done and the accomplishments they had made.

Most of the time spent planning during the school day was evaluation of student work. During school, planning accompanied collaboration and adapting materials and equipment. At the school where this study took place I had a short interval of six weeks during which I had forty-five minutes daily of planning time, otherwise planning at school had to take place before classes began, during lunch, and after classes ended for the day. Time spent planning, after school included evaluation, and shopping on the internet and in catalogs.

Studies on the amount of time teachers spend working revealed that most good teachers take work home and spend a considerable amount of their unpaid personal time on it. See “time studies” in chapter two. Most of the work teachers took home was evaluation and planning. I, as an art teacher, was no different. Time at home was also spent planning lessons, researching, evaluating work and looking for adaptive equipment and materials in catalogs, on the web, and at stores. Figure 6 shows a composite chart of the total time I spent preparing for and teaching exceptional needs students.

Figure 6. Composite Chart of Total Time Spent on an Inclusive Art Classroom.



F. What art teaching strategies are successful with students who have exceptional needs?

A brief description of specific students who attended the inclusive art classroom for this study at the middle school in rural Virginia is provided below and is followed by the strategies used specifically for each student. Eight students were involved in this research including two sixth graders, four seventh graders, and two eighth graders. They have been assigned false names to protect their identity. Eighth graders are presented first, then seventh graders, and finally sixth graders because that is the order that they were scheduled to attend art classes at the middle school in the study.

Two eighth grade art students attended two different inclusive Art 8 classes. One was sent to art without a paraeducator and also attended some general education classes during the school day. The other student was completely dependent on adult assistance and was accompanied by a paraeducator.

Rhonda had an intellectual disability and adaptive deficits, as well as, the Pierre Robin Sequence which qualified her for services under the category of Multiple Disabilities.

Strategies used for Rhonda were:

- Task analysis: 1) The student's ability levels were used to design the methods to carry out the lesson. 2) Complex tasks or lessons were broken into smaller steps that the student could handle. 3) Materials that better suited the student were substituted, for example Inovart Printfoam was substituted for linoleum when printmaking.
- The student was allowed to make marks on her paper using the same tools as her classmates and to do tasks based on her understanding and abilities. Participation was foremost for her when she found certain activities to be difficult. (When her classmates drew a house using one point perspective she tried to use the ruler and a vanishing point, at first, but later cut shapes out of paper to make a paper house.)
- Individual, one-on-one, assistance was given when needed.
- The teacher gave demonstrations on how to complete a task every time it was necessary.
- The teacher questioned the student often to check for understanding.
- Praise and words of encouragement were given for effort and successful solutions.

- The teacher did not “sweat the small stuff” and was patient when mistakes were made or materials were wasted.
- The student was always encouraged to make her own decisions when possible.
- The student was encouraged to use her imagination.
- The art teacher gave the student immediate feedback on questions, responses, and efforts.
- The student was encouraged to make art based on her personal feelings.
- Her choices were limited to keep tasks simple.
- The student was encouraged to express her feelings about subjects she used in her art and to discuss her feelings about the forms she made.
- The student was asked questions she could easily answer during class discussions/critiques of art works.
- The student was expected to help with distribution and clean-up of materials and equipment.

Cindy had mental retardation, seizure disorder, orthopedic impairment, cerebral palsy, visual impairment and speech/language impairment. All of these problems made her eligible for exceptional education services under the identification of Multiple Disabilities. Cindy was confined to a wheel chair, received all of her nourishment through a feeding tube, could not use the restroom, could not speak, could not see very

well, and depended on assistance from a paraeducator or teacher. She could cry out when she was in pain and would laugh, assumedly, when she found something to be humorous.

The following strategies were used or tried for Cindy:

- Task analysis: 1) The student's ability levels were used to design the methods to carry out the lesson. 2) Complex tasks or lessons were broken into smaller steps that the student could handle. 3) Materials that better suited the student were substituted, for example Inovart Printfoam was substituted for linoleum when printmaking.
- One-on-one individual assistance.
- Hand-over-hand and hand-under-hand assistance.
- As the assistant moved the student's hands she described what the student's hands were doing out loud to the student.
- The student was encouraged to make choices about colors, materials, and placement of elements and materials.
- Nonverbal forms of communication were provided: A communication board with pictures was presented to her to make choices. An auditory communication device with a "yes" or "no" button was available for her to push to communicate. The teacher could record her voice on another device to create specific choices depending on the need.

- A communication board with objects glued to it, such as paint brush, pencil, and crayon, was presented to her to make choices.
- Art projects were developed with the tactile aesthetic in mind.
- Assisting adults helped the student use sense of touch, smell, and hearing to explore media. (The student was given the noisiest squeaky brayer to use hand-over-hand for printmaking because the sound and feeling intrigued her.)
- When possible the teacher or paraeducator helped the student assist with clean-up using hand-over-hand technique to clean brushes in a container of water, or to use a wash rag to clean her chair tray.
- Adapted handgrips made of newspaper and tape, a tennis ball with a hole cut in one side for inserting media and tools, and Model Magic that could be strapped to her hand with a soft Velcro strap were used to help her be more independent.
- Paper was taped to a board that the teacher or paraeducator held in a position for the student to be able to make marks.
- Any marks the student could make, on her own, were encouraged and proudly displayed.
- Lines made by the student on her own when using the Model Magic hand grip strapped to her hand were reinforced by the paraeducator on the Inovart Printfoam for print making and with a glue gun on drawings so that the student's work would be more visible to the sited and so that she could feel what she had made.

- Social interaction with other students was encouraged. (For example, general education students were allowed to push her chair to and from her class, talk to her, show her things, and touch her with adult supervision.)
- The student was seated at a table with general education students.
- The student was praised for any efforts she could make for any task.
- The student was rewarded for her efforts. (At the end of class, she was encouraged to move her arm to knock her drawing board into the floor to hear it “bang”. This took a lot of effort and concentration on her part. The noise made her laugh.)

Five students in seventh grade required special attention to complete art assignments. Three students were from the self-contained exceptional education classroom. The other two had mild mental retardation and worked with resource teachers when they needed help that was not available to them in the general education setting. The strategies listed focus only on the most severely disabled students from the self-contained classroom. The mildly mentally disabled students covered the same material and used the same media as general education students with some one-on-one attention from the teacher and classmates. Sammy was diagnosed with autism.

The following strategies worked best with Sammy:

- Task analysis: 1) The student’s ability levels were used to design the methods to carry out the lesson. 2) Complex tasks or lessons were broken into smaller steps

that the student could handle. 3) Materials that better suited the student were substituted.

- Visual examples of what sort of end product was expected were used.
- Several variations of a lesson were created for him to explore because he completed tasks very fast.
- Rewards, such as computer time, were given for doing tasks
- The student was given a specific amount of time to stay on task and reminded periodically of how much time was left to work on it.
- Taking turns getting materials and using the computer was encouraged and rewarded with praise and doing desired activities.
- Use of idioms and other figurative language was avoided. Directions were simple and stated concretely as possible.
- The student was given choices as much as possible.
- The student's interests were used to motivate him. His interests were used to build new interests.
- The student was allowed to make marks on his paper using the same tools as his classmates and to do tasks based on his understanding and abilities. Participation was foremost for him when he found certain activities to be difficult.
- Individual, one-on-one, assistance was given when needed.

- The teacher gave demonstrations on how to complete a task every time it was necessary.
- The teacher questioned the student often to check for understanding.
- The student was asked questions he could easily answer during class discussions/critiques of artworks.
- The student was expected to help with distribution of materials and clean-up.

Helen was a mildly mentally retarded student who was mainstreamed into general education classes but relied heavily on the resource teacher to succeed in school. She would have fared better in the self-contained classroom setting, but according to her resource teacher the self-contained classroom had reached capacity and the county could not afford to place her there because, if they had, they would have been required to hire a second exceptional education teacher.

The following strategies were used with Helen:

- Task analysis: 1) The student's ability levels were used to design the methods to carry out the lesson. 2) Complex tasks or lessons were broken into smaller steps that the student could handle.
- Individual, one-on-one, assistance was given when needed.
- The teacher gave demonstrations on how to complete a task every time it was necessary.
- The teacher questioned the student often to check for understanding.

- Praise and words of encouragement were given for effort and successful solutions.
- The teacher did not “sweat the small stuff” and was patient when mistakes were made or materials were wasted.
- The student was always encouraged to make her own decisions when possible.
- The student was encouraged to use her imagination.
- The art teacher gave the student immediate feedback on questions, responses, and efforts.
- The student was encouraged to make art based on her personal feelings.
- Her choices were limited to keep tasks simple.
- The student was encouraged to express her feelings about subjects she used in her art and to discuss her feelings about the forms she made.
- The student was asked questions she could easily answer during class discussions/critiques of art works.
- The student was expected to help with distribution and clean-up of materials and equipment.

Jason met the criteria for mental retardation, other health impairment, fragile X syndrome, speech/language impairment, and autism caused by the fragile X syndrome. Jason was also very hyperactive having ADHD. The paraeducator had to devote constant attention to him because he would get up out of his seat to run and grab other students’

art work, touch other students, grab paint and glue bottles and pour out their entire contents, etc. He was obsessed with shoes, and preferred painting and clay.

These strategies were used with Jason:

- Task analysis was used. 1) The student's ability levels were used to design the methods to carry out the lesson. 2) Complex tasks or lessons were broken into smaller steps that the student could handle. 3) Materials that better suited the student were substituted. Toxic materials were forbidden because the student put things in his mouth.
- Visual examples of what sort of end product was expected were used.
- Several variations of a lesson were created for him to explore because he completed tasks very fast.
- The student was given a specific amount of time to stay on task and reminded periodically of how much time was left to work on it. A timer on an iPad was displayed for him to see.
- Use of idioms and other figurative language was avoided. Directions were simple and stated concretely as possible.
- The student was given choices as much as possible.
- The student's interests were used to motivate him. His interests were used to build new interests.

- The teacher did not “sweat the small stuff” and was patient when mistakes were made or insignificant amounts of materials were wasted.
- The student was always encouraged to make his own decisions when possible.
- The student was encouraged to use his imagination.
- The art teacher gave the student immediate feedback on questions, responses, and efforts.
- His choices were limited to keep tasks simple.
- The student was encouraged to express his feelings about subjects upon which he based his art and to discuss his feelings about the forms he made.
- The student was seated with peers for social interaction and peer assistance.
- The student was encouraged to help with distribution and clean-up of materials and equipment.
- The student was rewarded with computer time when tasks were completed.
- The student was asked questions he could easily answer during class discussions/critiques of artworks.
- The student was allowed to make marks on his paper using the same tools as his classmates and to do tasks based on his understanding and abilities. Participation was foremost for him when he found certain activities to be difficult.
- Individual, one-on-one, assistance was given constantly.

- Dangerous tools and fragile objects were hidden or locked in the storage closet.
(The student liked to throw and break things.)
- The teacher gave demonstrations on how to complete a task every time it was necessary.
- The teacher questioned the student often to check for understanding.
- The teacher did not “sweat the small stuff” and was patient when mistakes were made or insignificant amounts of materials were wasted.
- The student was always encouraged to make his own decisions when possible.
- His choices were limited to keep tasks simple.
- The student was rewarded by being allowed to paint freely when tasks were completed.
- The student was seated alone with the paraeducator to prevent him from distracting classmates and destroying their artwork.
- The student was expected to help with clean-up of materials and equipment.
- Assisting adults helped the student use sense of touch, smell, sight and hearing to explore media. Tasting had to be discouraged often.

Aaron had Down syndrome with the diagnosis of mental retardation and exhibited global delays in cognitive skills and adaptive skills. He was also eligible for related services in physical therapy and speech and language. Understanding Aaron’s speech was almost impossible.

Aaron was served using the following strategies.

- Task analysis: 1) The student's ability levels were used to design the methods to carry out the lesson. 2) Complex tasks or lessons were broken into smaller steps that the student could handle. 3) Materials that better suited the student were substituted.
- Yes/no questions were used to check for understanding and to allow the student to participate in class discussions.
- The paraeducator learned and used sign language to communicate with him.
- Visual examples of what sort of end product was expected were used.
- Several variations of a lesson were created for the student to explore in order to troubleshoot what materials and concepts he would be able to perform.
- Use of idioms and other figurative language was avoided. Directions were simple and stated concretely as possible.
- The student was always encouraged to make his own decisions when possible.
- The student's interests were used to motivate him.
- Individual, one-on-one, assistance was given when needed.
- The teacher gave demonstrations on how to complete a task every time it was necessary.
- The teacher questioned the student often to check for understanding.

- Praise and words of encouragement were given for effort and successful solutions.
- The teacher did not “sweat the small stuff” and was patient when mistakes were made or insignificant amounts of materials were wasted.
- The student was encouraged to use his imagination.
- The art teacher gave the student immediate feedback on questions, responses and efforts.
- The student was encouraged to make art based on his personal feelings.
- His choices were limited to keep tasks simple.
- The student was encouraged to express his feelings about subjects he used in his art and to discuss his feelings about the forms he made.
- The student was expected to help with distribution and clean-up of materials and equipment.
- The student was asked questions he could easily answer during class critique of artworks.

Forest was a sixth grader who attended the eighth grade class with Cindy because both were in wheel chairs and needed assistance from a paraprofessional. Forest received exceptional education services under the category of multiple disabilities because of the following conditions: moderate to severe mixed bilateral hearing loss, cerebral palsy, speech/language impairment, and microcephaly. Forest could cry out when upset, laugh when happy, and pick things up with limited movement in his hands. He wore a hearing

aide, but usually grabbed it off his head and threw it in the floor. He liked to push everything set before him away or onto the floor.

The following strategies were used with Forest:

- Task analysis: 1) The student's ability levels were used to design the methods to carry out the lesson. 2) Complex tasks or lessons were broken into smaller steps that the student could handle. 3) Materials that better suited the student were substituted.
- One-on-one individual assistance.
- Partial participation was used. (The student would choose materials and placed them where he wanted them and the paraeducator or teacher would adhere them to the artwork for him.)
- Hand-over-hand and hand-under-hand assistance.
- The student was encouraged to make choices about colors, shapes, and media.
- Nonverbal forms of communication were provided: A communication board with pictures was presented to him to make choices. He could also knock once for "no" and twice for "yes". An auditory communication device with 3 choice buttons was available for him to push to communicate. (The teacher could record her voice on the device to create specific choices depending on the need.)
- Art projects were developed with multiple senses in mind. (Assisting adults helped the student use sense of touch, smell, sight, and hearing to explore media)

- When possible the teacher or paraeducator helped the student assist with clean-up using hand-over-hand technique to clean brushes in a container of water, or to use a wash rag to clean his chair tray or the table.
- Adapted handgrips made of newspaper and tape, a tennis ball with a hole cut in one side for inserting media and tools, and Model Magic molded to fit his hands were used to help him be more independent. (He would not tolerate having a grip strapped to his hand. It made him feel confined and controlled.)
- Paper was taped to a board that the teacher or paraeducator held in a position for the student to be able to make marks.
- Any marks the student could make without assistance, were encouraged and proudly displayed.
- Social interaction with other students was encouraged. (For example, general education students were allowed to push his chair to and from his class, talk to him, show him things, and give him “high-fives” with adult supervision.)
- The student was seated at a table with general education students.
- The student was praised for any efforts he could make for any task.
- His personality was used to determine activities and to motivate him. (When he did not want to participate, he threw materials into the floor. He communicated displeasure by trying to bite assistants or himself. He was allowed to rip paper and throw it in the floor which he enjoyed. This was good for his motor skills, calmed his frustrations and provided collage and paper mache materials.)

- When speaking to the student, the teacher faced him sitting level with him for face-to-face communication.
- Directions were spoken simply and clearly.
- Noise was kept to a minimum when possible. (Some days music was played while students worked.)

Three students required individualized attention in the sixth grade inclusive art classroom. Only one student, Joel, attended the self-contained exceptional education classroom. The other two students attended resource classes to help them cope in the general education setting and were able to function more independently, but needed one-on-one assistance daily; and therefore, were included in the documentation of time spent assisting mentally disabled students. Strategies listed below were used for all of the students but concentrated on Joel. Joel, a very amiable student, had a combination of attention seeking and impulsive behaviors paired with an intellectual disability and ADHD that negatively impacted his progress across school settings, including academic areas.

Strategies for Joel are listed below:

- Task analysis: 1) The student's ability levels were used to design the methods to carry out the lesson. 2) Complex tasks or lessons were broken into smaller steps that the student could handle.
- The student needed reminders to stay on task and to ask permission to do almost anything.

- Opportunities for the student to complete tasks independently were provided, and he was encouraged to solve his own problems before asking for help.
- Examples of projects were shown to him, but he was encouraged to be an original thinker.
- The student was encouraged to use his imagination and make his own choices.
- The student was seated where he and the teacher could easily communicate with each other and where the teacher could keep a watchful eye on him.
- Directions were repeated to him daily as needed.
- Instructions were said, written and demonstrated.
- Tasks were demonstrated any time the student needed them.
- The teacher remained patient.
- The student was allowed to move and stand to satisfy his need to use energy.
- Harmless behaviors were ignored and attention was redirected to the assigned task.
- Activities were planned to keep the student focused and busy the entire time he was in art class.
- The student was asked to repeat directions back to the teacher when his attention wandered during instructions.

- The student was assigned duties to distribute and clean up specific materials, and to clean up his own messes.

The following strategies were useful when working with paraeducators:

- Making a written copy of directions for the paraeducator(s) prior to class so that they would know what to do.
- Meeting with the paraeducator prior to class to discuss art lessons.
- Sending plans by email. (The exceptional needs teacher wanted any plans that were sent to paraeducators to also be sent to her.)
- Making checklists for the paraeducator to let her know what to do with students in her care and help her organize steps to tasks and materials.
- Preparing the materials and media that exceptional needs students would be using and having it ready with instructions where the paraeducator could find it each day. This saved the art teacher valuable time and energy during class.
- Periodically checking on the paraeducator and her student during class.
- Making sure paraeducators were allowing students to do as much artwork independently as possible, participating at least partially if severely disabled.
- When there were not enough paraeducators, the art teacher worked one-on-one with the disabled students herself.

V. Conclusions and Recommendations

This chapter presents the conclusions of the research to determine the extent of planning and preparation time necessary for art teachers to meet the needs of every student regardless of ability level in an inclusive art classroom. Recommendations are based on interpretations of data and journal entries used to document time and strategies during one semester at a public middle school in rural Virginia.

A. How much time is necessary to research the individual needs of exceptional education students assigned to inclusive art classes?

Conclusions

Most of the time spent doing research was completed at home, or outside of school in the evenings and on the weekends because there was no time for research at school. The research involved reading the students IEP's to find out what conditions placed them in the exceptional needs self-contained classroom. Copies of IEP's were provided by the exceptional education teacher and were packed up and carried home to be reviewed by the art teacher. Exceptional students' conditions were diverse; therefore, a considerable amount of time was needed to research each one and several types of sources had to be used including journal articles, books, and websites.

Recommendations

Teaching art is not an easy task and it becomes more complicated when instruction has to be individualized to meet students' unique needs.

- Art teachers should be proactive in educating themselves to teach exceptional needs students.
- Art Teachers should be familiar with the laws. Students with disabilities have the right to attend art classes with the general education students. Be familiar with IDEA, LRE, ADA, and FAPE.
- Principals should provide art teachers with time during the school day to research the individual needs of their students.
- School districts should provide staff development to ensure that teachers are aware of the laws that regulate students with disabilities.
- School districts should provide staff development opportunities for art teachers to develop teaching strategies for working with special needs students.

B. How much time is needed to make appropriate adaptations to materials, equipment, and the classroom for exceptional needs students?

Conclusions

Most of the adaptations were done the first week or two of teaching the inclusive art classes. Once the adaptations were in place, less time was needed to maintain them. The room was arranged to suit wheel chairs. Supplies were placed in a designated area and labeled so that students could find them. Special loop scissors and helping-hand scissors, jumbo crayons, adaptive-grip paint brushes, and washable paints were purchased along with other adaptive materials. Potentially dangerous tools and materials were moved out of sight so that general education students could have access to them but the

students who should not have had them could not find them. As the art courses progressed the art teacher discovered individual exceptional needs students' abilities and adaptations were made to equipment and materials as needed.

Recommendations

After doing research to learn about students, an art teacher should note what is needed to accommodate students and make adaptations to the classroom prior to students' first art class. As the art course progresses adjustments can be made as necessary.

- Art teachers should make lists of equipment and materials they need to accommodate disabled students and share these lists with the exceptional needs teacher and the principal. The exceptional needs teacher may have some materials and equipment on hand to send to the art room. The principal may have funds set aside that can be used to support the inclusive art classroom.
- The exceptional needs teacher should share requests for adaptive materials and equipment for the art room with specialists (OT, PT, ST) who may be able to make more suggestions or provide some things.
- The principal should allow the art teacher to purchase needed items for adapting the art classroom and art lessons. The principal should make sure funds are available to make such purchases.
- The principal should notify the administration in the school district of the art teacher's needs.

- The school district should make sure funds and equipment needed for the inclusive art classroom are available, and if equipment or furniture needs to be built the school district should make sure someone does so promptly.

C. How much time is needed to provide individual assistance to exceptional needs students while also meeting the needs of every individual student in an inclusive art classroom?

Conclusions

A reality of the inclusive art class is that art teachers will have to devote a considerable amount of time to helping disabled students. The inclusive art class requires more effort and work than the general education art classes do and causes the teacher more stress. Often the art teacher may have to choose between helping a disabled student or a general education student if no paraeducator is available or if a disabled student is very distracting. Instructions may not be presented as precisely when working with the exceptional and general populations in the inclusive classes because the art teacher is pulled in two directions, for example directing the paraeducator or chasing after the FXS student who has grabbed materials he should not have. The inclusive art class may fall a little behind the schedule of non-inclusive art classes, meaning it may take more time to cover material and complete student artwork in the inclusive classes.

Recommendations

- Art teachers should collaborate with exceptional education teachers, principals, and the school guidance department who schedules the dependent students to

insure that students who attend the inclusive art class have a paraeducator to assist them.

- Art teachers should request that inclusive classrooms are not overwhelmed with too many dependent exceptional needs students at one time.
- If a student is too disruptive and distracting for the inclusive art class an art teacher should request to have him remain in the inclusive classroom or attend art independently if possible.
- The exceptional needs teacher should provide the art teacher with advice and information on his students including copies of or access to IEP's.
- Principals and guidance departments should insure that exceptional needs students are scheduled to attend inclusive art classes when paraeducator assistance is possible and to make sure all students in an inclusive classroom are learning in the least restrictive environment.
- Art teachers should take initiative to attend IEP meetings.
- Principals and exceptional education teachers should make sure the art teacher attends IEP meetings.
- The school district should provide enough paraeducators to assist disabled students.

D. How much time is needed to collaborate with others to meet the needs of exceptional needs students?

Conclusions

Collaboration is a necessary part of running an inclusive art classroom. A good exceptional needs teacher is open to sharing information about his/her students and grateful that the art teacher takes interest in providing his/her students with beneficial instruction. Collaboration will make the art teacher's job working with exceptional students easier. If there is little time to conduct research the exceptional needs teacher, the physical therapists, speech therapists, and occupational therapists, parents, and paraeducators all can describe disabilities and offer advice about students to help the art teacher develop lessons and make accommodations. Parents offer a different perspective because they know their child intimately, and they can tell you what they want for their child. It is also important to share successes with parents. Learning about achievements their child has made is an opportunity to bring joy and a sense of pride to parents. The art teacher can inform parents of information they may not have known about their child, such as telling a mother that her nonverbal son's preference for color is blue, information that can be applied to life skills, such as having a student choose what to wear.

I became a leader when I asked about adaptations for my students who had disabilities because specialists who may not have considered helping me with disabled students in the art classroom were motivated to make accommodations. The exceptional education teacher was grateful that another teacher had made considerable efforts to meet

the needs of her students, and discoveries made by the art teacher could be applied in her classroom as well.

When planning and doing research at home I sent emails to the exceptional needs teacher and resource teachers asking for advice and information. They answered promptly and this led to face-to-face collaboration. Emails also enabled other teachers to prepare information, such as, copies of IEP's before meeting me.

Recommendations

- Art teachers should seek advice from exceptional needs teachers, resource teachers, principals, specialists, and parents in order to understand the best ways to teach art to individual disabled students.
- Art teachers should inform the exceptional needs teacher about problems and to share successes.
- Exceptional needs teachers should cooperate with the art teacher and inform specialists of the art teacher's requests and needs.
- Art teachers should be included in IEP meetings and offer suggestions for student development.
- Principals should work with art teachers and exceptional needs teachers when problems arise with student performance, behavior or scheduling.
- Principals should make sure the art classes are covered when the art teacher needs to attend an IEP meeting.

E. How much time is needed for planning lessons to meet the needs of exceptional education students during the school day, at school after school hours, and at the teacher's home?

Conclusions

Art teachers will have to spend additional time planning for students with exceptional needs. They should develop one art curriculum for all of the students in the inclusive art class. Art teachers will have to be innovative when adapting the curriculum to meet individual needs. Students are individuals; therefore, there may be exceptions to sticking with a certain curricula, but the teacher should not stress out trying to make a separate lesson for every high needs student. All studio assignments should be open-ended so that all students can work on their own levels. Every student benefits from open-ended assignments. Some things may be difficult for them, and sometimes they will surprise the art teacher with what they can do!

Recommendations

- Art teachers should not create an entirely separate lesson for exceptional needs students. They should just adapt the lesson that general education students are doing.
- When a student cannot do anything that is planned for the general education class, art teachers should have materials available that interest her. Provide daily directions for the paraeducator to try with her.

- When plans do not work out, art teachers should not give up but be persistent and develop alternative plans and strategies.
- Principals should provide art teachers with time during the school day to plan for the individual needs of their students.

F. What art teaching strategies are successful with students who have exceptional needs?

Conclusions

Depending upon the disabilities of the child, some teaching strategies worked better than others in the art lessons. However, each of the eight students included in this study required task analysis, were given praise for accomplishments, were encouraged to make their own decisions and their own marks and forms, had their work displayed, and except for students who were unable to communicate or move their hands, demonstrations and directions were repeated whenever the student required them to be.

Recommendations

- Art teachers should adopt strategies as needed to meet the needs of individuals.
- Art teachers should provide students with individualized tasks for completing artwork.
- Art teachers should be prepared to demonstrate tasks as often as necessary.
- Art teachers should be prepared to provide one-on-one assistance to each exceptional needs student.

- Art teachers should seek books and articles that list effective strategies. Most sources offer similar strategies that will provide a good starting point for planning art lessons and working with disabled students.
- Art teachers should be current in their field by participating in professional organizations such as the National Art Education Association (NAEA). The NAEA offers excellent and relevant literature for art teachers. The books recommended in Chapter Two are invaluable. Two books that all art teachers should read (and purchase) are *Reaching and Teaching Students with Special Needs through Art* edited by Beverly Levett Gerber and Doris M. Guay and *Understanding Students with Autism through Art* edited by Beverly Levett Gerber and Julia Kellman. Several articles have been published by the NAEA in journals such as *Art Education* and *Studies in Art Education*, and they continue to be written to keep art teachers updated with the latest news and advice on teaching in inclusive art classrooms. See Appendix D for a complete list of articles used for this thesis.
- Universities and colleges should make the recommended books required reading for pre-service art teachers in their college and university art education courses.
- Principals and school districts should offer staff development workshops on developing strategies for inclusive classrooms.
- School districts should offer recertification points for taking classes on exceptional education and running an inclusive classroom.

- School districts should provide tuition for such courses.

Working with exceptional needs students and seeing them succeed in art is a rewarding experience. Just like most children, children from exceptional education programs look forward to art class. It is one of the highlights of their school day. Be patient, have a sense of humor, and enjoy the children.

Appendix A

This appendix contains samples from pages of each chart used to document time and activities. The following abbreviations are used: “min” standing for minutes, “hr” standing for hours, “EE” standing for exceptional education, and “GE” stands for general education.

A. Time Spent and Notes on Exceptional Needs During School

Date	Research	Adaptations to and Preparation for Lessons, Room, Materials, Equipment	Teaching and Assisting	Collaborating	Planning (includes purchasing materials and evaluating work.)	Strategies Used	Time Totals
9/4		10 min Helen and Sammy finished early so I gave them a private mini lesson on perspective. I provided photographs and, with help from a volunteer student, Sammy drew a horizon line, vanishing point, and orthogonal lines on a photo to identify one point perspective. Helen was unable to see where to place the ruler to find the vanishing point. I helped her when I could.	5min worked with Rhonda to make details on her human figure drawing 10 min drew hand over hand with Forest until he tried to bite, then left him alone Cindy drew hand over hand with Pam, paraeducator. 10m I shaded areas on Cindy's drawing hand over hand with her. 5 min Quieting Joel over the duration of the class. 5 min discussing the School of Athens with him. He had a lot of comments and questions.	Talked to speech therapist about communicating with Forest. He had a button to push last year. Told her I wanted a way for Hunter to participate in discussions about art. She was glad to hear it. 5 min (See Adaptations) - -gave a volunteer student instructions on helping Sammy		Modeling. Hand over hand.	35min
10-11			Cindy had doctor appointment. Forest happy, put stickers on his fish shape that he drew hand over hand with Pam. I instructed paraeducator and speech specialist to let Forest and Cindy make choices about what stickers he wanted to stick. 30m Helped Sammy make his spout. 25m	Talked to Pam about Forest and Cindy. Speech specialist worked with Forest and discussed ways he could communicate. 10m		Hand-over - hand	

B. Time Spent and Notes on Exceptional Needs Students at School after Hours

Date	Research	Adaptations (preparation of materials and room/equipment)	Teaching and Assisting	Planning (Includes Purchasing materials, and evaluating work)	Collaborating	Strategies	Time Total s per Day
9/18			20 min 3:50-4:10 Worked on Jay's clay- to remove and repair clay stuck to the mold used with too damp clay		8min Talked to Ms. B., EE teacher, about scheduling students and performance of paraprofessionals		28 min
9/19			7 min Cleaned up after Forest and Cindy who are totally dependent 11 min Made additional repairs to Jay's clay scored, slipped, and welded pieces that would fall off later		4:00-4:10 10 min Ms. B. consulted me about working with Rhonda & scheduling time for Forest to come to art		28 min
9/20					5 min Talked to Ms. B about Rhonda trying another class to decide between it and art. She was dropping chorus.		5m

C. Time Spent and Notes on Exceptional Needs Done at Home
(Continues on next page.)

Date	Research	Adaptations to lessons	Collaboration	Planning (includes purchasing materials and evaluating work.)	Strategies	Time Total
9/23/12	90 min Reading literature			15 min Planned adaptations for EE students in all grades.		105 min
9/26	90 min. Research on strategies to use with exceptional needs students.					90 min
9/27				Planned for next week's lessons for general ed. Students. Looked into buying supplies for Special needs students and general ed. Students. 15 min out of 60 min of shopping		15 min
9/28				Evaluating Joel's work. 10 min Evaluating Sammy's and Helen's work. 17 min		27min
9/29				Planning for Rhonda's lessons for next week. 17min 20 min planning for Cindy and Forest, Sammy and Helen. Sammy and Helen will do clay and should need help as problems arise in class. Spent about 15 min each student grading their portfolios and sketchbooks. 7 Learning disabled/exceptional needs students. Lindsay, Cindy, Forest, Sammy, Helen, Kirby, and Joel = 105 minutes.		142 min
10/13	Read Reaching and Teaching Students with Special needs through art. Gathered information on strategies and adaptive equipment. 6 hr 18 min					6 hr 18 min (378min)
10/14		Made adaptations to lessons for EE				5 min

		students. 5 min				
10/16		Made 2 handgrips out of newspapers and masking tape to try with Cindy and Forest. Homemade newspaper grip. Used newspaper and masking tape. Poke a pencil through a hole so that grip and pencil are perpendicular to look like a "+" or "t". 20 min				20 min

Appendix B

This thesis is concerned with teaching students who have mental retardation and multiple disabilities, who come from the self-contained exceptional needs classroom, and are included in the general education art class. The strategies provided focus on exceptional needs students rather than general education students who have milder learning disabilities. Most of these strategies will benefit the general education population, as well. This thesis does not discuss students with normal intelligence who have learning disabilities and/or physical disabilities; however, strategies for students with physical disabilities have been included because many students with mental disabilities also have physical disabilities and Attention Deficit Hyperactivity Disorder (ADHD).

Strategies for ADHD

Milissa Marshall, in her thesis paper titled *Mainstreaming Students with Special Needs in the Art Classroom*, lists strategies that she has cited from several sources. Duquette (2001) suggests the following strategies for working with students with ADHD (as cited in Marshall, 2006, p. 74):

- Seat the student in close proximity to the teacher, say the student's name, and cue him/her to listen.
- Plan for a variety of activities, keep directions simple, and encourage with praise.
- Say, write, and demonstrate all instructions.
- Have the student repeat directions back to the teacher.

- Provide individual assistance.
- Post objectives/directions in the same spot daily.
- Practice tolerance and patience.

Pierangelo (2004); (as cited in Marshall, 2006, p. 74) provides the following strategies for students with ADHD:

- Accept late work and give partial credit.
- Display rules, give behavior prompts, and enforce clear consequences.
- Focus on one concept at a time.
- Repeat directions and summarize key information.

Strategies for Mental Retardation

(includes Down syndrome and Fragile X Syndrome-severe cases)

Gerber (2006) offers these strategies for working with students with mental retardation. Always include the following for lessons (Gerber, 2006, p. 63-67):

- Use a task analysis of the procedures.
- Be an innovator; adapt lessons, materials, and equipment to suit students' needs.
- Use a student's own functional level to determine the lesson's goals and methods.
- Use a troubleshooting process of the vocabulary.

- Do not assume students will be familiar with everyday vocabulary words and will understand directions.
- Questions students frequently to review the directions.
- Involve students in the decision-making process as much as possible.

Gerber (2006) offers these strategies for review for mentally retarded students (Gerber, 2006, p. 72):

- Shorten the directions.
- Focus only on the relevant details.
- Remind students of the steps to take.
- Repeat directions to check understanding.
- List procedures (with pictures when necessary) and post them on students' tables.
- Make individual checklists of the directions. Students can see their progress as they check off each step. Checklists also help paraeducators make sure students are on track.

Hammill and Everington (2002) recommend using the methods direct instruction and verbal rehearsal. Verbal rehearsal involves teaching the student to describe either aloud or silently to himself the action he is taking. This method provides “visual, verbal and auditory input, a multi-sensory teaching approach that can reach more students,” (Marino & Gerber, 1990; Mercer & Snell, 1987, as cited in Gerber, 2006, p. 73).

Direct instruction strategies are as follows:

- Introduce one or two concepts at a time, accompanied by demonstrations.
- Use a variety of questions to review.
- Provide immediate feedback to student responses and efforts.
- Reward students with praise for correct responses and efforts.

Duquette (2001); (as cited by Marshall, 2006, p. 69). suggests the following strategies for teachers of students with mental disabilities

- Make directions as simple as possible and get the student's attention before giving them.
- Provide demonstrations.
- Give students as much individual attention as possible, and enlist a peer buddy to help as needed.

Pierangelo (2004); (as cited by Marshall, 2006, p. 69) offers the following techniques for teachers to help students with mental retardation:

- Educate yourself about mental disabilities.
- Emphasize the student's strengths and create opportunities for success.
- Read the student's IEP and talk to his/her exceptional education teachers.
- Provide immediate feedback.

- Teach life skills whenever appropriate.
- Involve the student in group activities.
- Work with the student's parents and communicate about how the pupil is doing.

Pappalardo (1999); (as cited in Marshall, 2006, p. 70) recommends the following strategies for working with mentally retarded students:

- Utilize multisensory approaches.
- Allow and encourage a student to do his own work.
- Use the hand-over-hand technique when appropriate.
- Let the student's ability rather than his/her chronological age guide lesson planning.
- Accept answers with praise.
- Encourage the student to discuss art forms, how they were created, and how they make the student feel.

James (1983); (as cited by Marshall, 2006, p. 71) provides the following strategies for teaching mentally retarded students:

- Create activities that will have a personal meaning for the student.
- Teach at a slower pace as needed.
- Show examples of the product at various stages of completion.

- Supplement directions with images and handouts.
- Allow for short-term activities with immediate rewards.
- Maintain orderliness to foster security and confidence in the student.
- Alert the student before asking a question.
- Limit the student's choices.

Putnam (1992); (as cited by Guay, 1999); (as cited by Marshall, p. 72) recommends the following strategies:

- Modify student response methods; point rather than verbalize.
- Reduce the complexity of a studio project.
- Modify the level of learning for the student by developing objective at the lower levels of Bloom's Taxonomy.
- Work on prerequisite skills or media processes according to the ability level of the student.
- Create a unique curriculum related to the curriculum of the class but one that is more functional or creatively pleasurable.
- Allow the student to participate in the class as an artist's apprentice, learning and doing one aspect of a studio process.

The following methods are recommended by Guay (1999); (as cited by Marshall, 2006, p. 73):

- Each student in an art class, regardless of disability, needs to engage in and learn skills that represent the major intentions of art education, creating art and responding to art.
- Students with severe disabilities must be provided with opportunities to make choices and learn functional art skills and behaviors that serve them in succeeding in educational and community environments.
- Target skills for students with severe disabilities must be age appropriate and lead to independent choices and spontaneity.
- Target skills for students with severe disabilities may be those embedded in natural art studio routines such as cooperating with peers, set-up and clean-up , securing and organizing personal supplies, creating developmentally appropriate levels with a variety of media, and displaying artwork.
- The student engages in the art behaviors that he or she can do, regardless of how small. Steps of a studio assignment may be eliminated, or different media, processes, and tools may be substituted.
- Observation of the student's actions and choices provides the art teacher with clues to appropriate instructional objectives.

Strategies for the Hearing Impaired

The following strategies were provided by Geisser & Geisser (Geisser & Geisser, 2006, pp. 139-158):

- “First do, then talk.” Demonstrate then give the directions.
- Directions should be presented in clear, simple statements.
- Speak normally, not too soft, too loud, too slowly, too fast, or in an exaggerated manner.
- Speak directions at the same eye level as the student so they can read lips, gestures, and expressions. Sit if students are sitting, stand if they are standing.
- Check for understanding by having students repeat directions.
- Move seating to a horseshoe formation or a formation suitable for communicating with teacher and peers. Deaf students rely on group interaction.
- Make sure students speak one at a time. Have students stand to speak or raise their hands.
- Point to the student who is speaking and repeat what was said for clarity.
- Keep environmental sound to a minimum because students with poor hearing have difficulty filtering extraneous noise.
- When a student requires that the teacher use a remote microphone the teacher should turn it off after giving instruction.
- Be aware hearing impaired students can read lips when anything is said in their presence.
- If a student has an interpreter, speak to the student not the interpreter.

- Always give a written copy of the notes, outlines, steps, or directions to the student.
- If showing a projection or presentation in a dark room, shine a light on the interpreter or yourself when speaking.
- Make sure the hearing-impaired are aware of what is being said in the class so they won't feel that the conversation is about them.
- Have a plan for emergencies such as fire drills so that students know where to go. Check closets, storage rooms, rest rooms, etc. for deaf students during drills and emergencies.

Loesl (2006) offers these strategies for hearing impaired students:

- Place students close to the area where instruction is being given.
- Provide visual materials that can help in the discussion and understanding of tasks: images, texts, and samples of the process necessary to create an art assignment. Have examples from previous students to show what is expected. Students should always be encouraged to use their own ideas, but a sample may get the message across better than verbal communication.

Strategies and Advice for Teaching the Visually Impaired

Strategies for Visually Impaired students were provided by Wittenstein and Sovin (Wittenstein & Sovin, 2006, pp. 127-137):

- Help students develop the use of their other senses to gather important environmental information.
- Observe the *tactile aesthetic*; if the artwork ‘feels right’ to the visually impaired student it does not need to ‘look right’ for the sighted person.
- Anchor containers for liquids so that they cannot be easily knocked over; use short containers rather than tall ones and short brush handles if possible. Call on the industrial arts class to help design container holders with three-dimensional shapes that students can feel (triangles, squares, etc) to represent different color paints that are glued in front each hole in which a paint jar can be secured.
- Keep the room organized and consistent. Take the blind student on a tour of the room to show them where things are located: lead her, have her touch areas and objects while a verbal description is given. Alert students to any changes that are made in the room arrangement.
- Lessons should concentrate on fine motor and tactile skills.
- Choose materials wisely. Keep toxic materials out of reach. Be aware that some students may want to explore materials by putting them in their mouth.
- Encourage student independence as much as possible. Encourage students to make their own choices.

Loesl offers these strategies for aiding visually impaired students (Loesl, 2006, p. 115):

- When students have trouble seeing projections, the Smart Board, or the dry erase board have smaller images printed, or directions and notes printed, or samples to view at their work area during discussions.
- When possible have glue line traced images for students to feel. “Students can trace over the raised image with fingers as it is discussed and can get information through auditory, visual, and tactile means.”

Strategies for Autism Spectrum Disorder

Some autistic students are born with an innate talent for art and will do well in art class, but a majority of autistic students will find difficulty because of a limited imagination and trouble with motor control. “If one cannot visualize, it follows that skills requiring creativity will be a struggle.” Color and odor can be a problem when students have sensitivity issues. Brower (2007) offers these strategies (Brower, 2007, pp. 18-19, 40-41, and 94):

- Encourage use of skills in a safe environment
- Offer a range of opportunities to explore materials
- Remember that the pupil may find it difficult to express opinions about art and artists
- Use visual stimuli to heighten interest and support work
- Be aware of sensory reaction to resources and materials
- Use lessons to support skills such as turn-taking and peer interaction

- Interpret idioms and figures of speech literally and tell students exactly what you mean. Rules should be stated as directions on what students should do specifically. Try listing rules positively as do's rather than do not's.
- “Watch your decibels.” Keep noise levels low and do not shout.
- Create a predictable routine: Warn of change whenever possible. Explain why the change is going to occur. Emphasize the things that are consistent about the day. Be prepared for the reaction and offer security.
- Make it visual. Reinforce the oral instruction with quick reference written instructions. Provide a visual time table or cue cards based on individual need. Include symbols if necessary.

Eren (2010) offers these strategies for working with children with autism spectrum disorder:

- Post classroom rules.
- Provide a written schedule for each period or subject.
- Use task analysis for multi-task assignments or projects.
- Give concrete, specific directions.
- Provide choices to open-ended questions.
- Use visual supports such as graphic organizers in reading and writing activities.
- Provide a checklist for organization.

- Apply rules consistently.
- Identify and use compensatory strategies to stretch limited interests, for motor skills issues, for language skills issues, and for emotional issues.
- Prepare students for transitions.
- Pre-teach vocabulary and key concepts in specific subject areas.

Strategies for Motor Control Problems

These strategies are provided by Loesl (2006):

- Allow students to work without help even if they look like they are struggling if it is the student's choice to be independent.
- Allow partial participation. The student does part of the work that he is able to do and the paraeducator does what the student cannot. Then the student does another part of the task and the art is created by student and paraeducator going back and forth until the art is completed. If the student cannot do any of the task assistants should take directions from the student and follow through as the student observes.
- Allow the student to make as many choices as possible. Paraeducators and teachers should try to use colors and place parts as directed by the student.
- Hand over hand assistance should be used when students cannot control hands. Gently help the student while allowing the student to be as independent as possible.

- Hand under hand was recommended by a physical therapist at the school where the study for this thesis was conducted. It is less restrictive. This method allows students more independence and freedom of choice because they can stop doing the activity if they want to withdraw their hand.
- Remove students from wheelchairs when possible depending on the activity, for example, if a group is gathered in a circle on the floor.
- Make adaptations to equipment and materials to suit individual students' needs. See Appendix C for Adaptations.

General Strategies for Students with Exceptional Needs

Guay (1999); (as cited in Marshall, 2006, p. 76)

- Plan for a well-designed classroom that allows students to be seen, to move in clear pathways, and to easily and quickly access all important areas.
- Establish rules and routines for entering and exiting, getting work and supplies, moving about the room, appropriate working behavior, getting help, and cleaning up.
- Use immaterial rewards such as letting students help mount and display artwork, giving positive feedback on assignments, allowing students to use special materials, participation in end of class privileges and art games, allowing students to listen to music during class, including students in field trips and talks by guest artists.

- Reward students with tangibles, when appropriate, with tangibles such as sticker, treats, and complimentary notes home or to special educations teachers.

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