

**EFFECTIVE CLASSROOM ENVIRONMENTS FOR STUDENTS WITH DISABILITIES
AND THOSE PRENATALLY EXPOSED TO DRUGS AND ALCOHOL**

by

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CERTIFICATION OF THESIS/PROJECT CAPSTONE WORK

We, the undersigned, certify that this project entitled EFFECTIVE CLASSROOM ENVIRONMENTS FOR STUDENTS WITH DISABILITIES AND THOSE PRENATALLY EXPOSED TO DRUGS AND ALCOHOL by Dawn J. Manzella, Candidate for the Degree of Master of Science in Education, Curriculum and Instruction, is acceptable in form and content and demonstrates a satisfactory knowledge of the field covered by this project.



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EFFECTIVE CLASSROOM ENVIRONMENTS

EFFECTIVE CLASSROOM ENVIRONMENTS FOR STUDENTS WITH DISABILITIES AND THOSE PRENATALLY EXPOSED TO DRUGS AND ALCOHOL

ABSTRACT

This study's aim was to investigate teachers' and parents' perceptions of characteristics of effective learning environments in a small rural county in Western New York for students in elementary school with disabilities or an individualized education plan (IEP), including children who have been prenatally exposed to drugs and alcohol. The second purpose is to investigate how these classroom environments contribute to students' social/emotional and sensory development. My main questions are, what are elementary teachers' and parents' perception of the characteristics of an effective learning environment for young children with disabilities or an individualized education plan (IEP), specifically children prenatally exposed to drugs and alcohol? The participants were Kindergarten and first grade students in a special education classroom from a rural elementary school in western New York. The study was comprised of qualitative research including interviews with my participant's teachers and families. The quantitative research including an observation scale of participant behavior and classroom environment. The results were then compared to the appropriate information found within the literature review. The results indicated a specific need for appropriate classroom environments with the use of sensory and social/emotional interventions. The students responded positively the routine, schedules, and classroom set up put forth by the classroom teacher. The classroom was arranged for optimal student success.

Keywords: disabilities, drugs and alcohol, prenatally exposed

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Introduction

In the 21st century, there is an unpredictable number of children within the United States that have been identified as having a medical or educational disability (Currie & Kahn, 2012). Effective educators work to create and maintain a classroom environment that engages children, while keeping them as independent as possible (Watson & McCathren, 2009). It is extraordinarily challenging to pinpoint a current definition of a disability, since every child with a disability has individual needs. Currie and Kahn (2012), propose the definition of a disability as “an environmentally contextualized health-related limitation in a child’s existing or emergent capacity to preform developmentally appropriate activities and participate, as desired, in society” (p. 3). Identifying a child as having a disability allows the child to receive services for their limitation. Overtime the definition of the word has been ever-changing due to the recent increase in children being identified as having a limitation or disability. The factors for the recent increase are due to the advanced screenings, offered services, and the range of specific conditions that are considered to be disabling (Currie & Kahn, 2012).

Children with disabilities often receive their education through the services of a special education classroom. A classroom such as these, allow a child to be in the least restrictive environment, while receiving appropriate individual support. Children diagnosed with a disability, specifically in the early childhood setting should have access to appropriate interactive materials, activities, peers, and teachers to the child’s fullest extent possible to maximize learning and enjoyment (Watson & McCathren, 2009). An effective educator is able to observe student’s specific achievements and hurdles; in doing this, teacher instruction can be modified if needed. One area that this may help benefit a special education teacher is observing student behavior and interaction in the classroom environment. Teachers have the potential to “adjust the

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physical classroom environment, programming, and teaching methods” (Watson & McCathren, 2009, p. 7). Special education teachers are able to implement the pervious strategies, due to staff discussions about student curriculum, classroom arrangement, daily schedule and routine, and teacher approach to student redirection (Watson & McCathren, 2009).

A special education classroom environment, within a public-school system, typically addresses many diverse types of student disabilities. One of these types of disabilities is children who have been medically diagnosed as being prenatally exposed to drugs and alcohol. Prenatal exposure to drugs and alcohol “is a condition which results from alcohol exposure during the birth mother’s pregnancy. The severity of fetal alcohol syndrome (FAS) (and drug exposure) varies from child to child, but the defects presenting with this syndrome are not reversible” (Jackson, 1993, p. 13).

Special education students need a great deal of assistance and support. This assistance and support requires school personnel to assist students to fill the gap where challenges may arise. Many states have decided to cut their special education funding due to financial reasons. This fact could cause a great deal of distress, because these students need the most attention. Special education is a necessary component to our educational system. Just as typically functioning children desire and deserve an appropriate education, they do as well. Unfortunately, this is not always the case (Milsom, 2006). Students with disabilities typically have a negative school experience due to teacher, student, and administration misunderstandings. Many children with special needs are misunderstood, leading to frustration and possible bully. Research suggests that teachers and administrators tend to have negative feelings towards students with special needs for the fear of the unknown. Educators admit to feeling ill-prepared for students with specific needs, in fear of low achievement and inappropriate behavior (Milsom, 2006).

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Student peers have admitted similar emotions, primarily relating to special needs students being encouraged to mainstream as much as possible. Non-disabled students are also feeling uncomfortable, also due to the fear of the unknown about students with disabilities. Students and educators who are uncomfortable with students with special needs may avoid contact with these individuals, causing isolation and a feeling of disrespect. Fortunately, appropriate positive interventions are available to improve student and educator attitudes. There is a large number of training opportunities to help change the negative attitudes by providing positive interactions with students with special needs. When educators and non-disabled students are properly informed about student disabilities, the negative connotation will decrease. Researchers suggest each school staff identify one content area of disabilities of their interest, such as behavioral, to continue proper training in (Milsom, 2006). When every educator within a district is properly trained in students with special needs, the district will improve all around. This will help facilitate school personnel being trained to promote cooperative relationships between students with special needs and students without. Through positive interactions students without disabilities will begin to understand and have appropriate knowledge of students with disabilities, bringing a school district closer together (Milsom, 2006).

Problem

The main problem of my research is, over the last few decades' drug abuse among adults and teenagers has been on the rise (Jones, 2006). Within the last few decades, we as a nation are seeing more and more overdoses, and abuse is beginning to come to the surface. Much of the research on drug exposed children began with the exposure of crack cocaine use in the 1980's (Jones, 2006). In the past infants born to mothers who abused crack cocaine during pregnancy,

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delivered infants who researchers referred to as “crack babies,” and these children were the beginning of the alcohol and drug abuse exposure (Jones, 2006).

Researchers estimate over 100 deaths each day due to a drug overdose complication (Mycyck, 2012). The United States has had drug use laws in effect for many decades and according to research, the abuse among individuals has not decreased (Mayet, MacCormack, & Strang, 2008). Alcohol and drug abuse is commonly referred to as substance abuse or substance disorder.

The United States alone has spent over \$30 million each year trying to control the use of illegal drugs (Shepard & Blackley, 2004). Currently, the United States has over two million prisoners incarcerated for drug related offences. That is reported to be the largest number throughout the world (Shepard & Blackley, 2004). Many of those who are incarcerated are women. Approximately 40% of substance-using women, who are of childbearing age, are among the management population of substance misuse services (Mayet et al., 2008).

The number of children being born to mothers who have abused alcohol or drugs during their pregnancy is also on the rise. Studies show that prenatal exposure to alcohol and drugs lead to high risk factors that include “varied, complex, and long-lasting” effects on our bodies (Watson, Gable, & Tonelson, 2003, p. 490). The “factors include deficits in attention, memory, executive function, motor development, auditory information processing skills, language, and social-emotional-behavioral skills” (Watson et al., 2003, p. 490). Characteristics observed in children who have been prenatally exposed to alcohol and drugs can differ from child to child. While some prenatally exposed children will exhibit aggression and defiance, others can exhibit listlessness and over friendliness (Watson, Westby, & Gable, 2007). Researchers have recently acknowledged that deciphering which type of drug a pregnant mother may be abusing during

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pregnancy, can be difficult. It is nearly impossible to isolate the specific effects one single drug or alcohol and drugs combined, can have on a fetus (Jones, 2006). Researchers have indicated that, if a woman is abusing drugs or alcohol during pregnancy it is generally more than one kind. This type of abuser is referred to as poly-drug users. This makes it nearly impossible to know the adverse effects one specific drug can have (Jones, 2006).

Many children who have been exposed to alcohol or drugs will be entering our school systems. It is important that educators have the appropriate knowledge of the effects prenatal alcohol or drug exposure has on a student's learning (Watson et al., 2007). In a study conducted by Watson et al., (2003) researchers prepared a survey geared toward general and special education teachers, and speech-language pathologists. The educators completed the survey based on their knowledge and understanding of the education of children who were previously exposed to alcohol and drugs. The survey respondents, answered the survey with 88% of them indicating a need for more information on the topic (Watson et al., 2003). The educators who stated that they had little to no previous knowledge on alcohol or drug exposed children, also stated that they, as educators, had struggled with exposed children in their classroom. Children who have been exposed to alcohol or drugs are typically listed as "other health impaired" according to the list of the 13 disabilities categories. Unfortunately, there has been little data or research completed on children who have been prenatally exposed to alcohol or drugs. This puts a limit on the information and appropriate strategies educators have and can implement in their classrooms. (Watson et al., 2003). Therefore, educators have often not connected these learning and behavioral issues to drug and alcohol exposure. Educators stated that by having little to no correct or current information on alcohol or drug exposed children, the children's behavioral and learning issues went unnoticed or incorrectly identified. Often, rather than figuring out

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appropriate strategies, the teachers punished the children. Consequently, inappropriate interventions were chosen for these individuals (Watson et al., 2003). Educators working with children who have been prenatally diagnosed to drugs and alcohol, need to do research on how to best educate these children. Learning about how they learn and the best suited classroom environments is the best place to begin.

Purpose

The main purpose of my research is to investigate teachers' and parents' perceptions of characteristics of effective learning environments in a small rural county in Western New York for students in elementary school with disabilities or an individualized education plan (IEP), including children who have been prenatally exposed to drugs and alcohol. The second purpose is to investigate how these classroom environments contribute to students' social/emotional and sensory development. My main questions are:

- (1) What are elementary teachers' and parents' perceptions of the characteristics of an effective learning environment for young children with disabilities or an individualized education plan (IEP), specifically children prenatally exposed to drugs and alcohol?
- (2) How do these characteristics affect the social/ emotional and sensory development of those with a disability or an IEP specifically those who have been prenatally exposed?

Significance

The main significance of my research is, to improve the learning environment for students who have been prenatally exposed to drugs and alcohol. An increase of research in this field of education is imperative due to the rising drug use among pregnant women. Researchers do not have all the answers about why some children prenatally exposed are affected and some are not (Ross, Graham, Money, & Stanwood, 2015). This is believed to be due to the exposures

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timing, environment, and drug class. The rising cost of special education is also a major factor in the significance of drug exposure research. Due to additional research and better advancements in technology doctors can understand disabilities on a new level and are finding out that there are more children being diagnosed with many different varieties of disabilities. Many of these diagnosable disabilities in children are not preventable and occur for many different types of reasons. The significance with drug exposure is the high percentage of prevention. Children who are prenatally exposed to drugs and alcohol will have excessive costs in long-term medical management, which is not a necessary cost when the disability is considered avoidable (Ross et. al, 2015).

Due to the legal ramifications of prenatally exposing your child to drugs and alcohol, many children are removed from the environment and placed with alternative family members or within the foster care system. Appropriate research information is essential to these alternative family members to help best educate and raise children who have been in drug and alcohol exposed situations. Drug and alcohol abusing women rarely disclose the type of exposure. This makes it difficult for researchers to know the most about the effects the exposure could have. Being able to educate the families and teachers caring for these children will be the most beneficial to the advancement in this area of research (Ross et. al, 2015).

Much research has been completed on the effects of drugs and alcohol on an unborn child, but little has been completed on what doctors and educators can do after the effects have taken place. I feel this is one main significance to the purpose of my research. If educators and doctors realize that the effects of prenatal exposure exist, but do not know how to appropriately educate them, educators and doctors cannot implement the best suited interventions and strategies. More research has been completed on other disabilities and the least restrictive

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environment for those children, but not for prenatally exposed children. In researching more about what we can do for exposed children after the exposure, policy makers will be able to hopefully add another category to the list of diagnosable disabilities. When exposed children are properly identified educators will know more about how to best educate them.

More research also needs to be completed to understand the number of women abusing drugs while pregnant. This way researchers can understand how many drug and alcohol exposed students will be entering our nation's classrooms. Proper interventions and strategies need to be put in place to accommodate exposed children's specific needs. Schools need to acknowledge these children's differences and provide the least restrictive environment to help these children thrive. As alcohol and drug abuse rates rise, the number of prenatally exposed children will rise as well. Educators need at least a basic understanding of what prenatal drug exposure does to a child's brain to be prepared to educate them properly.

Literature Review

Students with Disabilities in the United States

The Individuals with Disabilities Education (Improvement) Act of 2004 (IDEA), is a law that requires the state to provide students with disabilities services. There are currently thirteen categories of disabilities throughout the United States. Each category has been established under this act and is enforced in every school district (National Dissemination Center for Children with Disabilities, 2012). The IDEA is a federal law, which requires each state to meet the special needs of qualified students with disabilities. It can be difficult to determine if a child is qualified for individual services without a professional in the field. To determine each child's individual needs, he or she must first go through a full individual evaluation. Each evaluation is broken down into categories as to best determine the child's weaknesses. The evaluation is paid for by the school district and can be scheduled at the convenience of the child and family. The IDEA has two purposes of the evaluation, "to see if the child has a disability, as defined by IDEA; and to learn in more detail what special education and related services he or she needs" (National Dissemination Center for Children with Disabilities, 2012, p. 1).

With IDEA, many of students and children with disabilities receive special services intended to help them meet their own individual needs. Early intervention services are provided to children with disabilities under three years of age, while school-aged children ages three through twenty- one, services for special education are provided through the child's current school system.

The services that IDEA provides can be extremely significant in serving children with disabilities. These services are intended to help them mature, learn, and flourish in their academic and social settings. The list of disabilities categories refers to children ages three

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through twenty-one, but it is important to note that not all children ages three through nine will receive special educational disability labels, but can still receive services. The list of disability categories under the IDEA is as follows: autism, deaf-blindness, deafness, emotional disturbance, hearing impairment, intellectual disability, multiple disabilities, orthopedic impairment, other health impairment, specific learning disability, speech or language impairment, traumatic brain injury or visual impairment including blindness (National Dissemination Center for Children with Disabilities, 2012).

Autism refers to a child with “a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three, that adversely affects a child’s educational performance” (Special Education Guide, 2013, p. 1). Deaf-blindness refers to a child who has a disability with both hearing and visual impairments. Deafness refers to a child who has a total hearing disability. Emotional disturbance refers to a child who has a failure to learn that cannot be explained by academic, sensory, or health influences including behavior and attitude. Hearing impairment refers to a child who may have total or fluctuating hearing loss, much like deafness. Intellectual disability previously referred to as mental retardation, refers to a child who has a “significantly sub average general intellectual functioning, existing concurrently [at the same time] with deficits in adaptive behavior and manifested during the developmental period, that adversely affects a child’s educational performance” (Special Education Guide, 2013, p. 6). Multiple disabilities refer to a child who suffers from more than one of the disabilities listed. Orthopedic impairment refers to a child who struggles from a condition caused by burns, amputations, birth defects, cerebral palsy, etc. Other health impairment refers to a child who struggles from a condition not found in any of the other areas of disability. Specific learning disability refers to child who does not understand spoken or

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written language, which then prevents the child from being able to read, write, and spell. Speech or language impairment refers to a child who suffers from a communication disorder that impairs their voice and language. Traumatic brain injury refers to a child who suffers from an external trauma that results in an educational delay. Lastly, Visual impairment including blindness refers to a child who has an impairment with their sight, including total vision loss, even with corrections, affects the student's ability to function in the typical educational setting (Special Education Guide, 2013). Under IDEA, states and local educational agencies identify children with developmental delays with children ages three through nine if they indicate a delay in one or more of the areas: physical development, cognitive development, communication development, social or emotional development, adaptive development (National Dissemination Center for Children with Disabilities, 2012).

Table 1 shows the number of children ages three through twenty-one in New York State who have been diagnosed with a disability in the year 2014 (Information Resource Services, 2014). It is important to note the number of children who are receiving services and in which category they are receiving them in. Educators should be as prepared as possible for each student who may be entering their classroom. It is also important to note that children who have been prenatally exposed to drugs and alcohol are totaled in as other health impaired, making it difficult to understand the factual number. Special programs, supports, and services are made available for eligible students who have been diagnosed with one of the previous disabilities.

Table 1

Number of New York State Children with Disabilities Receiving Special Education Programs and Services 2014

Disability category	Number or children
Autism	32,115
Deaf-blindness	20

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Deafness	1,280
Emotional disturbance	25,790
Hearing impairment	3,318
Intellectual disability	12,617
Multiple disabilities	16,714
Orthopedic impairment	1,975
Other health impairment,	72,069
Specific learning disability	163,087
Speech or language impairment	118,662
Traumatic brain injury	1,039
Visual impairment including blindness	1,362
Total	483,183

Programs, Supports, and Services

Fortunately for students with disabilities and their families getting an evaluation and diagnosis can be relatively easy. The unfortunate part is that not all children will receive the appropriate services or supports because of it. The child's school district is responsible for providing a student in need with the proper educational accommodations. Other services can be found within the community. Family support groups can be readily available to help families and children cope with the diagnosis. The supports offered through the school district that typically included in a child's IEP or 504 Plan are: physical therapy, occupational therapy, special education itinerant teacher and speech and language therapy. Other services that may also be included are: interpreting services, psychological services, recreation, including therapeutic recreation, early identification and assessment of disabilities in children, counseling services, including rehabilitation counseling, orientation and mobility services, medical services for diagnostic or evaluation purposes, school health services and school nurse services social work services in schools, and parent counseling and training (Center for Parent and Information Resources, 2013).

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Individualized Education Plan and 504 Plan. Many families do not necessarily know or understand their child's rights when it comes to being diagnosed with a disability. The child's school district can help with this confusion by breaking down the distinct types of interventions. An IEP including special education and related services, is intended to meet the child's individual needs, while a 504 Plan allows the school to provide the student with accommodations, modifications, and support services to guarantee equal opportunity for student education (Special Education Series, 2015).

Knowing and understanding the difference between the two intervention plans can still make the right decision difficult. An IEP is specialized for children struggling with learning and have a need for specialized instruction. While, a 504 Plan is specialized for children who have little to no difficulty learning and does not require specific learning instruction but, does need accommodations or modifications to programs, facilities, or testing.

Both an IEP and a 504 plan contain valuable information about each student to help everyone who works with the child know their strengths, weaknesses, and individual goals. An IEP also contains: the child's present level of educational performance, the results of the child's evaluations and tests, special education and related services to be provided, accommodations and modifications, annual educational goals, a description of how the child's progress will be measured and reported, an explanation of how much the child will participate in general education classes and extracurricular activities, the date the IEP will go into effect, a transition plan, and an extended school year services (Stanberry, 2017).

A 504 Plan contains: specific accommodations, supports or services, names of the school professional that will provide each service, and the name of the person responsible for ensuring the 504 plan is implemented (Stanberry, 2017).

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A 504 plan contains specific instruction in the general education classroom for the individual student. A 504 plan is less detailed than an IEP and gives the student a boost in their current academic environment, whereas an IEP the student generally has the students step out of the general education classroom to receive individual attention. Both plans are geared toward encouraging positive academic and social leaps for the child to gain the most success.

Challenges for Teachers and Students

A student with a disability can have many difficulties in and out of school. These difficulties can cause a student and teacher to struggle and become frustrated if not recognized. Students may have disabilities that are not considered physically visible. For instance, you may not know that a student has epilepsy unless they choose to reveal or an episode arises. Whereas, students on the autism spectrum disorder can be more outwardly recognizable. These non-noticeable disorders can be hard for students to disclose because many people assume they are healthy because they appear typically functioning (Picard, 2015).

Along with the initial diagnosis, there are many challenges within the classroom that educators face while making sure that all students are educated and treated respectfully. Of course, there are many teachers and special education educators that do not feel many challenges or difficulties within their field, but many others find the position difficult to manage. A few challenges teachers face are: the misconception that teaching is easy, dealing with multiple disabilities, lack of support from parents, and budget concerns. Teaching is an exceptionally tough career, and comes with a great deal of responsibilities. However, many fail to understand the teacher's role in student learning. The variety of disabilities that children could be diagnosed with can leave a teacher feeling overwhelmed. Some teachers feel that they are undereducated to deal with students with such high needs, and feel underappreciated and get a lack of support

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from the student's home life. All of these misunderstood teacher concerns can also be topped with the lack of an appropriate budget to encourage the most from each student. Educating can be an extremely expensive profession but, the materials and equipment add up quickly when educating students with special needs. Many school districts do not have a large budget for teachers to buy things such as appropriate sensory tools, furniture, or equipment that some student disabilities need to positively function. This can leave teachers feeling lost and confused about how to best educate their students (Special Education Degrees, 2013).

The IDEA allows teachers to learn and understand thirteen student disabilities in-depth. The area of concern that my research covers is about children prenatally exposed to drugs and alcohol. This topic is uncommonly researched and can leave students who fall into this category widely misunderstood or misrepresented.

Substance Abuse (Drug and Alcohol Abuse)

Substance abuse among young adults has been on the rise for many decades. Substance abuse refers to a person who is abusing a substance such as illegal drugs or alcohol (National Institute on Drug Abuse, 2012). Many people who do not suffer from a substance abuse addiction assume that substance abusers merely lack moral principles or willpower. Non-addicted people also mistakenly assume that the abuser can simply stop whenever he/she chooses. Both assumptions are false. In fact, a drug/alcohol addiction is a complex disease and having the desire to quit is not enough (NIDA, 2012). Drugs/alcohol can alter the way a brain typically functions. A drug/alcohol can foster compulsive drug use and make quitting beyond a person's control substance abuse is extremely costly to the United States. Over \$600 billion annually is spent between crime and health related costs (NIDA, 2012). Substance abuse is considered a serious addiction to humans.

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Addiction. An addiction is a long-lasting brain disease. Addiction often causes the affected individuals to relapse, despite its harmful consequences to that individual. The initial decision to consume drugs or alcohol is voluntary, but a human brain changes over time, making the action involuntary. The addiction hinders a person's ability to think clearly and rationally (NIDA, 2012). According to the NIDA (2012),

Drugs contain chemicals that tap into the brain's communication system and disrupt the way nerve cells normally send, receive, and process information. There are at least two ways that drugs cause this disruption: (1) by imitating the brain's natural chemical messengers and (2) by overstimulating the "reward circuit" of the brain. (p. 3)

Not all substances being abused will have the same side effects on humans. Some drugs will act as a reward system to the body, which essentially teaches the body to repeat the behavior to use the drug. Other drugs "have a similar structure to chemical messengers called neurotransmitters, which are naturally produced by the brain" (NIDA, 2012, p. 3). This essentially fools the brain and sends abnormal messages to the brain. Some drugs "can cause the nerve cells to release abnormally large amounts of natural neurotransmitters or to prevent the normal recycling of these brain chemicals, which is needed to shut off the signaling between neurons" (NIDA, 2012, p. 3). There is no one risk factor for alcohol or drug addiction. Addiction is influenced by many different combinations of reasons including, a person's social atmosphere, age, individuals' biology, or stage of development (NIDA, 2012).

One large question remains as to why do some people have an addiction? An addiction is a willingness to partake in a high-risk behavior. These behaviors have been associated with people living in lower socio-economic and cultural environments (Lambert & Bauer, 2012, p. 822). Environment and social influences play a large part in a person's ability to become addicted

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to drugs and alcohol. People in lower socioeconomic areas have a higher likelihood of becoming addicted to any sort of substance, due to more exposure. Although it is not always recognized, biology can play another large factor in a person's ability to become addicted. The genes a person is born with can make a person vulnerable to an addiction. Substance abuse and addiction can be hereditary and can be hard to overcome (NIDA, 2012).

Substance abuse among women of childbearing age. During the last ten years, the number of children born to mothers who had abused a substance during or directly before pregnancy has increased. The statistics that researchers have discovered are overwhelming, considering that the risk factors of substance abuse are negative (Watson et al., 2007). In recent studies within the United States, nearly 5.1% of pregnant women, ages 15 to 44, reported using illicit drugs (Lambert & Bauer, 2012). As stated above, drug and alcohol addiction is an entirely preventable disease, and can have many different signs and symptoms. Addiction can also differ from person to person, including gender to gender. Women, as opposed to men, have reported abusing drugs for reasons such as, weight control, coping with pain, and self-treatment of mental health problems (NIDA, 2015). Examples of risk factors women as compared to men face due to addiction are: more physical effects on the heart and blood vessels, more panic attacks, anxiety, and depression, more drug cravings and more likely to relapse after treatment, more of a risk for domestic violence, and more sensitive to drug symptoms.

The treatment for addiction can also be a different process in women than in men. Withdrawal, for addicted women can be more intense and may take a longer period of time to see progression. Pregnant women may also find it even more difficult to quit an addiction due to the fear of legal ramifications. Although consequently, pregnant women who attempt to suddenly withdraw from drugs or alcohol without medical assistance, can put the unborn baby at risk

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(NIDA, 2015). The outcome for the baby is best if the addicted mother seeks medical treatment during pregnancy. If a woman uses drugs during pregnancy, her unborn infant may go through drug withdrawal, after he/she is born. This is a condition called Neonatal Abstinence Syndrome (NAS).

Currently, in the US, cocaine remains one of the most commonly abused drugs. Although, with the lack of recent national data reports, the problem is still quite under reported. Out of a sample of 1,300 pregnant women who tested positive for cocaine, only 11% self-reported (Lambert & Bauer, 2012). The information regarding substance abuse during pregnancy is not a point of political and media concern. Many people are not made aware of the potential harm alcohol and drug abuse could bring to an unborn child (Blackburn & Whitehurst, 2010).

Bigsby et al., (2011) conducted a study of pregnant women, prenatal cocaine exposure and gross and fine motor performance. Mothers in a cocaine exposed group were reported to have a lower socioeconomic status, never married or divorced, be on Medicaid and to have not finished a high school education. They were also reported as less likely to receive prenatal care during their pregnancy. These mothers also reported having used tobacco, alcohol, and marijuana, as opposed to non-exposed mothers (Bigsby et al., 2011).

When a pregnant woman decides not to receive proper prenatal care, it is difficult to determine the health of the unborn child. Doctors are unable to detect risk factors, which could be preventable (Eiden et al., 2008). Pregnant women who are abusing substances, such as alcohol or drugs, may not be receiving prenatal care due to being fearful that their child will be taken away. Women abusing drugs are at a greater likelihood to deny or not report current drug use. This is due to the greater risk than people who do not abuse drugs. Doctors are able to detect past and current drug use in pregnant women. A substance, such as a drug, is absorbed into human

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hair, which can be removed and measured to determine drug use. Human hair, on average grows at a rate of one half inch per month, and can record a substance abuse pattern per month. For example, if a woman's hair sample contains two inches of contaminated hair, doctors can record approximately four months of drug abuse (Eiden et al., 2008). Human urine samples are also an effective way for doctors to record a woman's drug usage. Drug usage will remain in a human body for three to four days after initial use. Human urine samples are only effective for three to four days, while human hair samples are effective after three to four days, thus, making hair samples to detect drug usage more effective (Eiden et al., 2008).

As reported by Eiden et al., (2008) substance abusing mothers are more disengaged and uninvolved during social interactions with their infants. Thus, children of these women also become disengaged and have a higher risk for negative behavior (Eiden et al., 2008). Mothers who have reported continuous substance abuse even after birth have a higher likelihood of “compromised caregiving and dysfunctional environment” (Lambert & Bauer, 2012, p. 820).

Importance of Prenatal Care. The standard elements to a pregnant woman's prenatal appointment will include: a routine physical examination, maternal weight and blood pressure, and fetal heart rate recorded with a Doppler monitor. Pelvic exams are also necessary to detect any sexually transmitted diseases and abnormalities in a woman's reproductive tract. Breast exams are also recommended during prenatal visits to address any breastfeeding concerns and to detect any breast abnormalities (Zolotor & Carlough, 2014). Proper prenatal care provides pregnant women with an opportunity to discuss important topics with a trained professional. Discussing items such as substance abuse with a doctor is important.

The importance of prenatal care during pregnancy is crucial for the health of a pregnant mother and her unborn child. Environmental factors, such as low socioeconomic status, play a

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large role in the viewpoint of the importance of prenatal care for pregnant women. When a pregnant mother receives early prenatal care, doctors can provide her with necessary information that can prevent many birth complications. Behavioral risk factors that impact the mother and infant's health can be prevented when detected early in a woman's pregnancy. Inappropriate and insufficient prenatal care is the highest factor of infant mortality among African-American women. Approximately 11.2% of pregnant women do not seek appropriate prenatal care (Grekin & Ondersma, 2009). Almost a quarter of African-American women received no prenatal care during the first trimester of their pregnancy.

Children Prenatally Exposed to Alcohol and Drugs

Health effects related to alcohol and drug exposure. A pregnant woman and a fetus in utero share many bodily connections, including a bloodstream. Drugs, alcohol, and other toxins are carried through a human's bloodstream and will infect the entire body, including an unborn child (Watson et al., 2007). Children who have been exposed prenatally to drugs are unwillingly receiving any drug the pregnant mother is using. When a woman is pregnant and subjecting her body to any sort of toxin, for example an illegal drug or large amounts of alcohol, the fetus is also subject to the same toxins. During pregnancy, the infant's brain and body are forming and developing, and it is the mother's concern to keep the infant in utero as healthy as possible. Over the past decade, there was an overwhelming number of children born to mothers who abused drugs and alcohol while pregnant. The number continues to increase year after year (Watson et al., 2007). Risk factors for children who have been exposed in utero can include learning difficulties, behavioral disorders, and emotional impairments (Watson et al., 2007). Researchers have explored and documented that there are groups of characteristics in children who have exposed to alcohol and drugs that are similar. These types of characteristics can vary from mild

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to extreme and can also depend on the amount of use the mother used during pregnancy (Watson et al., 2007).

In the United States, it is estimated that nearly 1 out of 100 people is affected by Fetal Alcohol Syndrome (FAS) and conditions from FAS are common and preventable. (Jirikowic, Olson, & Astley, 2012). “Alcohol is a teratogenic compound (that is, a substance that interferes with the normal development of embryo or foetus) that readily crosses the placenta” (Blackburn & Whitehurst, 2010, p. 122). Evidence by researchers indicates that alcohol consumption during pregnancy, whether it be high-levels of consumption or steady low levels of consumption, is problematic to a fetus. There is a continuous debate on the level of a mother’s alcohol consumption that results in a disorder, considered on the FAS spectrum (Blackburn & Whitehurst, 2010).

Within a classroom, children with FAS have difficulties encoding information, being flexible in problem-solving, or knowing when certain rules apply to daily situations (Watson et al., 2007). Early studies have indicated that individuals diagnosed with FAS have a mean IQ score around 70. Speech and language delays have been documented due to the effects of fetal alcohol exposure (Coles, 2011). Children diagnosed with FAS may or may not always be identified correctly. Some FAS

children have similar characteristics as children with ADHD, autism spectrum disorder, learning disabilities, or emotional disturbances (Blackburn & Whitehurst, 2010). As stated earlier, one of the few ways to detect FAS is through observation of a child's physical features.

Though prenatal cocaine exposure (PCE) has been a concern for over a decade, still little is known about its effects on a fetus in utero. Many researchers are beginning to develop a hypothesis about cocaine's harmful effects, but more literature is beginning to surface (Biggs et

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al., 2011). Grewen et al., (2014) found that overall children who suffered from PCE had similar physical features to children who were not exposed to cocaine in utero. This makes detecting PCE even more difficult than detecting FAS. FAS children have distinct facial features, whereas PCE children typically do not. PCE children have a shorter gestational period due to the reduction in placental blood flow. However, similar characteristics can be found in typical premature infants (Grewen et al., 2014). A few physical features that can be found in PCE children are smaller head circumference and smaller birth weight. On average, infants with PCE are delivered 5.1 to 5.5 days earlier than infants born without PCE. Studies also indicate that infants with PCE are born .75 to .83 pounds less than infants without, which can contribute in differences to children's brain sizes. Based on current findings, infants born with PCE typically are able to 'catch up' in physical development by the age of 6 months, making it difficult to detect PCE children from non-exposed children by the age of 5 (Grewen et al., 2014). Thus, identifying PCE as more challenging for doctors and educators.

Medical research indicates that "cocaine readily crosses the placenta, thereby potentially directly affecting neuronal maturation and increasing the risk for central nervous system disruptions during fetal development" (Lambert & Bauer, 2012, p. 820).

A study by Grewen et al., (2014) conducted an MRI scan of infants around 5 weeks of age who were prenatally exposed to cocaine. From their finding, forty children were proven to have been exposed to cocaine. PCE was proven through the sample of urine and hair. The researchers found that children who were PCE had significantly lower birth weight and smaller head circumference, than the 46 children whose mothers did not use cocaine during pregnancy (Grewen et al., 2014). Out of the 40 mothers who abused cocaine during pregnancy, 31 of those mothers reported using additional drugs.

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Exposure to cocaine in utero can inhibit blood flow to a fetus' brain. Thus, consequently, restricting brain growth and development. As research, has shown, PCE directly affects an exposed child's intelligence level, there is little documented direct correlation yet between PCE and a child's academic performance (Grewen et al., 2014).

Behavioral effects related to prenatal alcohol and drug exposure. Poor impulse control, attentional problems, working memory difficulties, and poor adaptive functioning are just a few typical behaviors children with FAS demonstrate. These children are often also diagnosed with attention deficit/hyperactivity disorder (ADHD) (Blackburn & Whitehurst, 2010). They typically find it difficult to control their behaviors, especially in a social interaction. Evidence also displays that FAS children also have difficulties with social interactions. They appear to be excited to make friends, but the simplest of interactions can become challenging. Some of these types of behaviors can be compared to children with autism spectrum disorders (Blackburn & Whitehurst, 2010).

Executive functioning skills is another term used for self-regulation. An individual's "executive functioning involves higher order cognitive processes that include attentional regulation, working-memory skills, planning and organizational thinking, and problem solving" (Coles, 2011, p. 45). This area of development impairment affects a child's ability to plan, organize, and problem solve appropriately. A child's ability to self-regulate is taught at an extremely young age. Self-regulation is the ability to calm oneself without outside assistance. With FAS children lacking the ability to self-regulate, it is suggested that FAS children will have problems in behavioral regulation and self-control throughout childhood.

Drug exposed children can face many social challenges that they will carry through infancy and up to adolescents. Connections between children with PCE and behavior regulation

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issues have been detected as early as the first year of a child's life (Lambert & Bauer, 2012). Many behaviors will not be present during infancy and will begin to present themselves during childhood and into adolescence. Some of these behaviors are ones that would go undetected until a child reaches the school age (Watson et al., 2007). Behaviors that have been observed in young children with PCE include: deficits in self-regulation, increased attention problems, heightened excitability, lower task orientation, increased fussiness, and decreased adaptability (Lambert & Bauer, 2012).

As PCE children exit early childhood and enter adolescence, increased risk taking behaviors will continue to be a cause for concern. Adolescents with PCE typically engage in: substance abuse, risky sexual behaviors, bad road habits, and delinquent behaviors (such as, tardiness or absences from school) (Lambert & Bauer, 2012).

As stated above, children with PCE as well as children with FAS demonstrate difficulties in their ability to regulate themselves during stressful situations. Children exposed to cocaine prenatally display executive functioning deficits, which can include impaired decision making, visual-perception ability, and attention (Lambert & Bauer, 2012). Executive functioning deficits can also have extreme long term effects for children who have been exposed. The effects can be managed through interventions and strategies, but will continue to be lifelong challenges. When children suffer from substance abuse prenatally, a large concern is put on his/her classroom environment, consequently, affecting an educator within his/her classroom. Children that have been exposed rely a great deal on structure, routine, and consistent classroom furniture arrangement. A teacher needs to be able to consistently provide each of these things to an exposed child to help them better succeed.

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Classroom Interventions

Using a variety of teaching interventions and strategies is the most effective way to best address students who are diagnosed with prenatal cocaine exposure (PCE) and fetal alcohol syndrome (FAS) (Coles, 2011). Although children who have been exposed to cocaine and alcohol in utero have different physical features and a few different behavioral concerns, many of these children are in need of similar learning interventions and strategies. Students with PCE or FAS process information more slowly and need more time to encode information given to them. Researchers have identified learning problems with basic rote memorization and learning new information is difficult to retain (Coles, 2011). A student who is provided with appropriate early intervention services is more likely to have a future without learning and behavioral problems. Researchers have found that specific early intervention services such as, socioemotional development help a student improve his prosocial behavior (Lewis et al., 2016).

Although, more research still needs to be conducted to best educate exposed children, researchers agree that the earliest of early interventions are best (Blackburn & Whitehurst, 2010). Overall, the research conducted with children who have been prenatally exposed to alcohol or drugs is not enough. Many questions persist in this area of research to best accommodate children prenatally exposed to alcohol and drugs (Lambert & Bauer, 2012).

Due to the research that has already been conducted, it is obvious that researchers know more about the effects of alcohol exposure over drug exposure. Quite similar, researchers have reported findings that prove that FAS children have an actual decrease in IQ scores, as opposed to children exposed to other substances.

According to Streissguth, Barr, and Sampson (1994) as quoted by Blackburn and Whitehurst (2010),

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It is well reported that children prenatally exposed to alcohol have compromised level of intellectual function...this suggests that exposure to as little as ounce of alcohol per day has been associated with decrements of six to seven points in IQ score. (p. 124)

It is important that educators have realistic expectations of children with FAS and PCE.

Due to the lack of research in this field, little is known about the effects on initial brain development in children with PCE, although researchers can relate subtle cognitive differences in childhood and adolescent development (Grewen et al., 2014).

The United States special education department estimated nearly 26 million additional dollars per year to accommodate needs of students diagnosed with PCE (Lambert & Bauer, 2012). These children are 2.8 times more likely than non-exposed children to develop a learning disability by the age of seven, despite academic performance on standardized intelligence measures. Due to a high demand in special needs for children who have been exposed to alcohol and drugs, educators need to be well prepared for all students' challenges. The best way to ensure educators are teaching to reach each student full potential is for educators to review his/her classroom environments, instruction strategies, and behavioral management.

Special education teachers face many successes and challenges while effectively implementing interventions and strategies. A teacher can best reach their students by identifying and activating each special need student's strength. Each child holds strengths in one area or another, and a great teacher can find them by looking at future curriculum, student files, and communicating with previous teachers. Along with strength-based learning, teachers need to be able to provide positive role modeling and instill in each student that anything is achievable. A few other evidenced-based interventions maximize the power of social networking, helping student to envision future careers, and be able to create positive learning environment

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modifications. With evidence based practices, each intervention has been identified as successful in a special education classroom with students with disabilities or an IEP, including children prenatally exposed to drugs and alcohol (Armstrong, 2013).

Where there are teacher and student successes, there is bound to be challenges as well. The retention rate for a special education teacher is much higher than most other professions. Special education is a challenging field due to the lack of parental and public support. Educators also feel the challenges in the classroom by the large amounts of students' paperwork and data collection that needs to be completed. All students require data collection, but special education teachers find it a larger task with special education students due to the requirement of student growth. It is critical for special education teachers to be effective and help students reach their specific goals. Many teachers have made it a point to celebrate each student's smallest accomplishments in order to be effective. A few more challenges teachers face are training paraprofessionals, student and teacher scheduling, and each student's variability of student's needs. Many of these challenges for special education teachers can cause hurdles that get in the way of being able to successfully and positively implement appropriate student interventions (Ferry, 2012).

Environmental Settings. Researchers have been studying and identifying the effects of the physical proximity on student interaction and the development of their social skills. It has been discussed that appropriate child contact can promote some positive attitudes about one another. When children are continually exposed to one another, they can become more positive with their social interactions as time goes on. This is a prime example of how appropriate classroom arrangement can promote positive social and emotional student interactions among students with disabilities (Berg & Cillessen, 2015).

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When teachers place students near one another purposefully, they are in control of who the students are exposed to the most and who they interact with the most. In doing so, researchers claim that the juxtaposition to their peers and teachers in the classroom can be linked to the relationship to the students' well-being. Research on student proximity to others in the classroom has encouraged student academic performance and engagement, indicating that seating placement is linked to academic achievement, on-task behavior, and student-teacher interaction (Berg & Cillessen, 2015).

Berg and Cillessen, (2015), research proposes that integrating consideration for the physical layout of the classroom in teacher training opportunities may provide valued insight to educators for effective classroom organization and the raise of positive peer interactions. Classroom arrangement is commonly referred to as the classrooms "invisible hand," as the students to not realize the purposeful intentions of the teacher on the children's social and emotional interactions and relationships.

Children with disabilities or an IEP including those have been prenatally exposed to alcohol and drugs may need modified environmental settings compared to children without disabilities or who have not been exposed. Educators need to maintain a structured environment that includes: schedules, consistent routines, consequences, and classroom rules, which are repeated often and with appropriate follow through (Duquette, Stodel, Fullarton, & Hagglund, 2006). Alcohol and drug exposed children may find it beneficial to be able to chew gum or chewy candy to provide oral stimulation, during classroom instructional periods. Also, giving the child a fiddle toy, such as a squishy ball or bracelets can also reduce anxiety. These environmental modifications have been shown to help improve an exposed child's ability to focus and stay calm (Mitten, 2013). Educators should allow students to self-organize the

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classroom, which can help ensure less confusion and frustration throughout the day. Classroom materials should be able to be moved or removed throughout the classroom as well, in doing so, it can help reduce added stimuli. Classroom materials should be labeled with pictures and description to lessen cleaning up problems (Jackson, 1993). A few other suggestions for an effective classroom arrangements would be to consider having areas such as: student home base, group instruction area, teacher work area, transition area, student schedule area, work stations, technology area, arts and crafts area, eating and cooking area, personal hygiene area, sensory area, leisure activity area (Corwin, 2012). Along with the appropriate environmental settings, an educator's use of instructional strategies will help determine the exposed children's academic successfulness.

Students with disabilities to an IEP, especially children prenatally exposed will demonstrate many difficulties and challenges if appropriate environmental settings are not provided. Students can demonstrate more acting out type behaviors, creating challenges within the classroom.

Instructional strategies. Researchers have formulated a list of appropriate strategies to use in a classroom with FAS and PCE children: use clear, concrete, simple language backed up with visual clues. be consistent with language, rewards and routines, be prepared to repeat instructions and rules, implement and adhere to a routine, provide structure and constant supervision, employ adaptive teaching techniques that focus on the child's strengths, interests, and developmental stage (Blackburn & Whitehurst, 2010, p. 127).

Educators need to be patient when presenting new material to prenatally exposed children. Educator's need to give exposed children "brain breaks," which allows the children to get up from their seat and stretch before returning to seat work. Allowing children to use multi-modal

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learning is another form of teaching, which has been shown to reach many different types of learners. Multi-modal leaning involves many of the child's senses and allows the child to experiment with a variety of modes and media (Mitten, 2013). Prenatally exposed children are typically hands-on learners, which means they learn best by watching and learning. To engage hands-on learner's teachers must teach using demonstrations, field trips, concrete visuals, and artifacts. Other points educators should consider are as represented by Shirley Jackson (1993),

1. Think through the activity and break it down into steps.
2. Introduce the routine in small groups by using the daily schedule to clarify when the routine is done.
3. Develop procedure cards that contain pictures of each step of the activity.
4. Point to each pictured step while giving simple directions.
5. Demonstrate each step yourself, making sure you point out the space and materials used.
6. Use humor to add emphasis and avoid potential problems: "ham up" your act by demonstrating the wrong way to do a routine and discuss the consequences with the group. Then show the right way.
7. Select volunteers to go through the routine or use peer models to reinforce appropriate behavior.
8. After the routine is fully understood, post pictures in the area to serve as an immediate visual reminder while the routine is being done.

Continual recommendations for appropriate instructional strategies suggested by Kashinath, Woods, and Goldstein (2006), are arranging the environment, using natural reinforcement, using time delay, imitating contingently, modeling, and gesture/visual cueing.

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The best way an educator can help an exposed child succeed, is by helping with all areas of development, which includes behavior management (Jackson, 1993, p. 29).

Children who have been exposed to alcohol and drugs prenatally will have a more challenging time managing their behavior appropriately. A child's "memory depends on neural pathways in the brain... these complex neural networks are needed for development of memory and abstract thought" (Mitten, 2013, p. 65). Thoughts need to be held within the brain long enough to be able to connect to one another. Children who have been exposed may find it difficult to be able to appropriately organize their thoughts coherently. Teachers are able to support exposed children with this, with the use of picture lists. A picture list consists of pictures of what is expected of the child throughout the day. The pictures are placed in a sequence from the child's beginning to end of the day. Educators can help students, with PCE or FAS, by giving cues for classroom transitions from one activity to another with the use of visual clocks or schedules. This helps to ensure smooth transitions from one activity to another. Pictures can also help reduce stress and anxiety and student/ teacher power struggles (Mitten, 2013).

Deficits in attention is another area of concern for teachers educating exposed children. Teachers needs to prepare student expectations before beginning each lesson. Repetition is a common evidence-based practice for many educators. To begin a lesson, teachers need to demonstrate appropriate behaviors they expect from the students. One example of this is, if a student is blurting out during inappropriate times, the teacher could implement the use of a concrete device that can be passed around to the students that indicates a child's turn to speak (Mitten, 2013). To ensure a smooth operating classroom, it is imperative that educators are prepared to accommodate all students. For more interventions strategies, see Appendix I.

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Educator preparedness. The preparation of educators for students with any and all types of disabilities is imperative. Educators need to understand that learning problems and difficulties are not due to the lack of student motivation, but rather to the neurodevelopmental deficits over which a child has no control. Consequently, educators for many years have been underserving students who have been prenatally exposed to alcohol and drugs (Watson et al., 2007). Educators need to know how to reframe their classroom environments to largely target meaningful intervention methods. The actual room arrangement of a classroom is important. The colors on the walls should be stimulating, but not cluttered or overwhelming. There should be enough student chairs and tables to fit each child in the room and accommodate their own individual needs. Furniture should be child size, clean, and well maintained. The classroom should also be spaced out well to allow for children to each have their own individual space to work and socialize (Coles, 2011).

Watson et al., (2007) reported in a survey that 88% of a school's personnel needed more information on students exposed to alcohol and drugs. They fear that due to the rising alcohol and drug abuse that many more exposed children will be entering school systems soon (Watson et al., 2007).

Many children exposed to alcohol or drugs are receiving little to no diagnosis. These exposed children remain seated in classrooms with inappropriate interventions and strategies. Consequently, exposed children are unable to appropriately engage in the learning environment because of a lifelong damage to their neurological system (Blackburn & Whitehurst, 2010).

One program Blackburn and Whitehurst (2010) suggested to be helpful for educators was the Inclusion Development Programme (IDP). This program aims to improve teacher's classroom skills by helping them gain effective teaching strategies for children with special

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needs. The program will lead each teacher with guidance on dealing with difficult classroom challenges (Blackburn & Whitehurst, 2010). Educators are not the only people in need of intervention services. Intervention services are needed the most at home, where the exposed child resides.

Home life interventions. Families, especially mothers who are caring and raising children born exposed to a substance, also find themselves in need of specific interventions. Parental involvement can be defined, as parent or guardian who is aware of schoolwork, the interactions between students and teachers, and a commitment to regular communication between home and school (An & Hodge, 2013). Over the last 30 years' statistics have proven that appropriate and consistent parental involvement has a positive impact on student achievement. Early intervention services can offer families who are struggling with addiction find strategies to help a child who has been exposed. Early intervention services can offer classes that focus on educating families on ways to give care and ways to redirect negative unwanted childhood behaviors (Lewis et al., 2016). In education, "...it is apparent that early childhood intervention services can no longer focus solely upon children with traditionally recognized disabilities, but must also offer support to families of children with special educational needs..." (Blackburn & Whitehurst, 2010, p. 127). When a student enters a special education classroom, they generally have an individualized education plan (IEP). This plan helps children with specific goals and interventions. One key component to a child's IEP is family participation. Parental involvement is crucial during this time to help provide important information about their child outside of school, and the best interventions to proceed with (An & Hodge, 2013). A child's development can be influenced by the relationships they form with their families and teachers. The connection between home and school is essential to help build the bridge between

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the two. Parents should consider their child's school as a continuum of home, and work as an advocate for their child, along with having unending communication, and network with other families of children with disabilities (An & Hodge, 2013).

Home life interventions can be a difficult area for parents and families to address. Many families feel lost or confused on intervention or strategy ideas they can use at home and how they can effectively make the home/school connection seamless. FAS and PCE is widely under recognized and needs a great deal of attention and research still to be completed to be able to effectively make the appropriate home/school connection. As stated in educator preparedness, FAS and PCE continues to be misrepresented in school districts today.

In conclusion, due to the increasing number of prenatally exposed children within the United States, educators need to be prepared. Children exposed to alcohol and drugs are continuing to be misdiagnosed. There has been a great deal of research completed for many other types of childhood disabilities, why not for prenatally exposed children? These children deserve to be correctly diagnosed, simply just for the fact of being understood. When exposed children are properly understood, educators, doctors, and researchers will begin to find best suited interventions and strategies for these children.

The more the issue gets ignored, the larger the problem will become. The war against drugs is aimed towards adults. Researchers need to focus time and effort into addressing the needs of the children who are being exposed to negative substances even before birth.

Methodology

Research Design

For my research, I used a mixed methods approach. By implementing both styles of research, my research overcame the limitations that would arise in just a single design approach. A mixed methods approach consists of a combination of both qualitative and quantitative research methods. Qualitative research is defined as “research in which the investigator attempts to study naturally occurring phenomena in all their complexity” (Fraenkel, Wallen, & Hyun 2015, p. 265). Quantitative research is defined as “research in which the investigator attempts to clarify phenomena through carefully designed and controlled data collection and analysis” (Fraenkel et al., 2015, p. 426). The qualitative research I conducted included interviews with my participant’s teachers and families. The quantitative research I conducted, included an observation scale of participant behavior and classroom environment. This research method design benefited my study by giving it the most amount of validity. I was able to make connections between each interview, classroom arrangement, and student behavior. My proposition for this research is that an effective classroom environment can shape a student with disabilities or individualized education plans (IEP), especially those prenatally exposed to drugs and alcohol, sensory and social/emotional development.

Setting

The town and community I chose for my research was a small town in Western New York. The school districts community is 100% urban. The average income of families living within the school district is \$46,000, with an 8.5% unemployment rate. Twelve percent of the community is considered below poverty level. The community population is around 3,000 persons and the entire school population is around 1,100 students. The population of this area has

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been on the rise since 1860, but has since begin to drop beginning in 2014. The school district is in the top 50% of schools within New York State and has a graduation rate of 80%. The school is considered one large unit that houses all elementary, middle, and high school grade levels. The school levels are sectioned off by school wings (United States Census Bureau, 2010).

The school district's student race and ethnicity is made up of 77% Caucasian, 2% Black American, and 12 % Native American, and 8% other. Ninety-six teachers are currently employed at the school. The elementary school has two school psychologists and one Special Education Director. Out of the district's 1,100 students, 163 currently hold an IEP, and 12 students are considered English Language Learners. Most the students with an IEP are considered to have a type of learning disability. The school provides these children services which include psychological services, social work, speech sessions, occupational therapy, physical therapy, and vision and hearing screenings (United States Census Bureau, 2010).

The students who participated in my research are currently receiving their education in a special education classroom within the school.

Participants

For my sample collection, I used a homogeneous sample, within purposive sampling. Purposive sampling is selective sampling based on the researcher's previous knowledge about the group of participants. Homogeneous sampling is defined as one in which all the participants possess a certain characteristic (Fraenkel et al., 2015). This research study consisted of students in kindergarten and first grade, placed in a Special Education classroom. I recruited eight students within this classroom setting, and were between the ages of five and six years old. After sending home participation permission slips I received four back, along with only two out of the four parent/guardian interview signatures. The students in this classroom remain in the same

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class for two years and with the same teacher. The participants were mainly from a middle-class income household and had various cultural backgrounds. I chose my participants based on their previous and current characteristics of having a disability or IEP, especially being prenatally exposed to drugs and alcohol. The four student participants showed a variety of disabilities which included autism spectrum disorder, prenatal drug and alcohol exposure, attention deficit hyperactivity disorder, and learning delays. Typically, students as young as kindergarten or first grade do not have specific disability diagnoses. Two out of the four students were diagnosed with a disability with an IEP, while the other two students only had an IEP. All of the four student's participants currently had an IEP in hopes that students reach their academic and social goals.

The participants I interviewed were the classroom teacher and the students' parents or guardians. As stated above I recruited eight parent/guardian participants and only received two parent/guardian signatures in return. I recruited one teacher participant and did receive an approval signature for her participation. I recruited each of these participants with the use of convenience sampling. I chose convenience sampling for these participants, because they were the individuals educating and caring the student participants I had already purposefully chosen. The classroom had one teacher along with two classroom aids. The aids in the classroom do not have an educational degree in education, so I do not interview them. The main teacher was a Caucasian middle class female and had taught in this classroom for two years. I interviewed two out of the four parents/guardians, the other two parent/guardian turned down the interview portion of the observation, but allowed me to observe the child in their classroom environment. All the family participants are Caucasian and had a middle to lower socioeconomic status.

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I chose each participant for this study purposefully. My research was set up in a classroom with students diagnosed with various types of disabilities. Due to my previous knowledge about the students in the classroom, I was aware of one student being medically diagnosed as being prenatally exposed to drugs and alcohol.

Data Collection and Procedure

The first part of my study consisted of data collected from interview protocols from the participant's parent or guardian and special education teacher. The interview questions had been compiled from previous studies conducted. I chose each question to adapt to the research question I planned to answer (Ripp, P., 2013, Westside Health Authority, 2007, Jackson, 1933). I chose each interview question from each source to be able to best fit my research. Not all the questions within each original interview were appropriate or relevant for the study. I adapted them to best fit this study because some of the questions also were about the child's home life and I felt these were not relevant to complete the research I was trying to conduct. The interview was a semi-structured interview to allow for un-prompted discussion. This way the students' parents or guardians felt more comfortable and less formal. I conducted each interview myself, as the researcher while in the setting that was most comfortable for each parent/guardian. I conducted Parent/Guardian 1's interview while at the child's daycare center and Parent/Guardian 2 felt more comfortable completing her interview at her home. She chose not to meet face to face and completed each question on the paper form I provided. The parent/guardian interviews consisted of twenty questions and Parent/Guardian 1 interview lasted thirty minutes. The teacher interview I also completed face to face in the teacher's classroom and the interview lasted twenty minutes. The interviews for the teacher and parents/guardian were not the same, but coded the same way. This data included the type of interventions that are believed to be most effective for students

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with disabilities or an IEP including those who have been prenatally exposed, within their care.

The interviews allowed me to gather information about the classroom environment and how the student's social /emotional and sensory development matures while they are in the classroom environment. See Table 2 and 3 for a breakdown of the interview question factors.

Table 2

Teacher Interview Question Factors

Factors	Questions
Effective classroom environment	2, 2a, 3, 4, 5a, 5b, 9, 10, 10a
Student development	1, 1a, 5, 6, 7, 8, 8a, 9a

Table 3

Parent/ Guardian Interview Question Factors

Factors	Questions
Effective classroom environment	18, 19, 19a, 20
Student development	11, 11a, 12, 12a, 13, 13a, 14, 15, 15a
Student prenatal background	1, 2, 3, 4, 5, 6, 7, 8, 9, 10

I have included an example of the parent/guardian interview:

During pregnancy, did you drink alcohol?

- a. Never
- b. Occasionally
- c. Frequently

During pregnancy, did you use illegal drugs?

- a. Never

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- b. Occasionally
- c. Frequently

During pregnancy, did you use prescription drugs?

- a. Never
- b. Occasionally
- c. Frequently

(Westside Health Authority, 2007).

Currently, has your child been diagnosed as having a disability?

- a. If yes, please explain how you and your family discovered your child had a disability?

What are the challenges you face as a parent or guardian of a child with a disability? If N/A move to question 11.

- a. What challenges do you feel your child faces?

What are your child's strengths in and out of school?

- a. What do they enjoy doing in and out of school?

What progress have you observed in your child since initially beginning school? (Ripp, 2013).

I have also included an example of the teacher interview questions:

What kinds of routines do you have set up for the students?

- a. How do you think having these routines helps the students?

Do you have the classroom rules visible for the students to see within the room?

- b. How many classroom rules do you have and how did you create these?

Are the classroom materials and equipment easily added or removed to help increase or decrease student stimuli? If yes, please explain.

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Are the students work spaces clearly defined and functional? If yes, please explain.

What techniques do you have set in place to help cue the students of classroom transitions?

(Jackson, 1993).

The second section of my research study included an observation of the approved participants. The observation checklist I used had been adapted from previous studies to help answer my research question (Baby Center, 2016 & Illinois Learning Standards, 2016). I adapted each sensory and social/emotional observation to best fit the environment I was observing. A few of the checklist observations were based on the child's home life and I knew I was only observing the child in the classroom, so I removed the non- applicable sections. I have included an example of each checklist:

Sensory observation checklist

_____ Fidgets or squirms during circle or story time

_____ Talks a great deal while engaged in other activities (such as an art project)

_____ Interrupts frequently when the teacher is reading to the group

_____ Has difficulty completing simple projects that most other children complete

_____ Can't follow directions unless the teacher is supervising her or walking her through the task step by step (washing hands, putting toys away, getting item from cubby)

_____ Blurts out answers to questions before the teacher has finished asking the question

_____ Has difficulty waiting for a turn in group situations (Baby Center, 2016).

Social/emotional observation checklist

_____ Describe how taking or destroying another's property makes them feel.

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- _____ Explain why hitting or yelling at somebody is hurtful and unfair.
- _____ Identify reliable sources of adult help.
- _____ Recognize situations that are safe or dangerous.
- _____ Recognize that one has choices in how to respond to situations.
- _____ Develop and use calming strategies.
- _____ Identify and use alternative solutions to problems.
- _____ Describe ways to help out at home.
- _____ Volunteer for classroom tasks (e.g., helping others, helping set up, cleaning up and passing out materials (Illinois Learning Center, 2016).

My observation was non-invasive and had no direct interaction with student participants. I began my interview process and observed the students six times throughout a week and one day long process. I went into the classroom every day for one week, Monday through Friday, and stayed two hours each time. I observed the same time frame of the day each time. After the week was over the students had a week-long break from school and I returned for my last observation day that following Monday. It was not in my original plan to have a break throughout the observation process, but it worked out for the best because it allowed me to see student interactions after being out of their typical school routine for a whole week. The parent/guardian interviews were difficult to complete on time due to varying schedules. I was able to get each interview completed at different points during the student observation week.

I collected information about how each participant interacted with their classroom environment, per my observation checklist. The checklists were about sensory processing disorders, as well as social and emotional developments. The checklists were quantitative, as the checklist was a general yes or no answer. I used one checklist per student participant. I worked

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quickly to be able to observe each participant, along with only using one observation scale at a time. I observed student social/emotional development on day one and sensory development on day two, then continued to alternate each observation scale as my research time continued. The data collected was then placed, by individual participant and area of development, in a behavior table chart. This allowed me to make connections between each individual participant and among the group. This data allowed me to connect the observation to the interviews.

Data Analysis

The instrumentation I used was a mixture of observation scales and interview protocols. To analyze the research data appropriately, I analyzed my data with a deductive approach. This allowed me to collect raw data and condense it into a summarized format for easy coding (Fraenkel et al., 2015). In my observation scale collection, I developed behavior table charts for each participant and developmental area to compare to one another. The student observation scale benefited my research by assisting in comparisons with each student's sensory and social/emotional development. The next area I used with the observation scale was, the student's classroom environment and arrangement. I utilized the information found in my literature review about effective classroom environments to compare to the classroom environment of my research classroom. The literature I have found about effective classroom environments was intentional and beneficial to students with disabilities or an IEP, including students prenatally exposed to drugs and alcohol.

In my interview protocol collection, I analyzed each interview and question and compared to one another using the thematic coding method. Each interview and question was then analyzed alongside the suggested classroom environment. The interview I had set up for the teacher and the families are not the same, but I compared them together. I used the coding

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technique to find common themes and phrases throughout each interview. The coding technique tags, labels and gives detailed meaning to qualitative data. The coding technique supported the breakdown of each phrase or common theme into focused coding. The data helped to benefit other prenatally exposed student's classroom arrangements/environments. The information can help indicate a possible specific need for intervention among children with disabilities or IEP, especially children who have been prenatally exposed to drugs and alcohol.

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Results

While analyzing the interviews and observations I conducted, I anticipated being able to answer my proposed research questions. The questions for this research I strived to answer were:

(1) What are elementary teachers' and parents' perception of the characteristics of an effective learning environment for young children with disabilities or an individualized education plan (IEP), specifically children prenatally exposed to drugs and alcohol?

(2) How do these characteristics affect the social/ emotional and sensory development of those with a disability or an IEP specifically those who have been prenatally exposed?

Parents' Prenatal Background

Many of my observations helped suggest an appropriate classroom environment for students with disabilities or an IEP, especially children who have been prenatally exposed to drugs and alcohol. Some of the information I gained through the interview process I feel does not help answer either of my research questions, but merely helps get an insight to of the students observed. The beginning few questions I asked of the parents/guardians were to get a quick background on the mother's pregnancy with the observed child. I feel that this was important to my research to help show if indeed any of the observed students was prenatally exposed to drugs and alcohol. I feel that even with the appropriate strategies by the teacher, classroom set up and preparedness for students with special needs, the parents/guardian input is just as imperative. To make the most of a home/school connection, there needs to be clear, appropriate communication, and an understanding of each child's family structure and home life. Sections of my literature review placed a focus on the prenatal care and pregnancy the mothers had. To find out more about the students and their families I asked a few questions about the mother's pregnancy. The data in Table 4 is the information I found from each of their prenatal background.

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Table 4

Parents' Prenatal Background

Interview question	Parent/Guardian 1	Parent/Guardian 2
Parent age when child was born	24 years old	28 years old
Gestational weeks	35 weeks	38 weeks
Child birth weight	5lb 6oz	6lb 9oz
NICU after delivery	No	No
Eat cold lunch meat or seafood	Frequently	Occasionally
Drink caffeine	Frequently	Never
Smoke cigarettes	Occasionally	Never
Drink alcohol	Occasionally	Never
Use illegal drugs	Occasionally	Never
Use prescription drugs	Occasionally	Never

Both Parent/Guardian 1 and Parent/Guardian 2 reported through the interview that their child was diagnosed as having a disability and they found this out through the child's lack of reaching age appropriate milestones. Both Parent/Guardian 1 and Parent/Guardian 2 had children who have been diagnosed as having a disability, but Parent/Guardian 1 reported drug and alcohol consumption during pregnancy. Parent/Guardian 1 understood the child had been prenatally exposed to drugs and alcohol. I continued my interview by asking how each parent/guardian discovered that their child had a disability. Parent/Guardian 1 stated that "he was behind one or two years and he didn't talk or walk as other children his age." Parent/Guardian 2 stated that her child "wasn't reaching his milestones within normal limits." Having a child with a disability can be challenging, when asked what challenges each family faced with their child Parent/Guardian 1 responded with "teaching him patience, and helping not want instant gratification." Parent/Guardian 2 felt that "it's hard to communicate with him at times because of his speech delay." Families of children with disabilities need the most support to help their child succeed, and having the appropriate learning environment is the first place to start.

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Characteristics of an Effective Learning Environment

Upon entering the classroom, I noticed a calm and quiet environment. During each observation, the students were finishing up lunch and completing “make-up” work from earlier in the day or previous days. This allowed the teacher to have more one on one time with each of the students. After this activity, the students had a quick large group meeting and transitioned into math centers, followed by a school special or free time. During the time I observed, I did not see any huge issues or concerns coming from any of the students.

For the first question, I was able to pull out the common theme characteristics within each interview and classroom observation. The following data was transcribed and set into table charts for simple organization. I used the information found in my literature review to compare to what the teacher and parents/guardians responded to the interview questions and classroom observation.

Classroom’s Physical Layout and Environmental Print

The classroom layout was spacious and laid out for effective learning. Each student had a coat and book bag cubby, along with a work and homework cubby side by side against the wall. This was set up to create little confusion. Next to the cubby unit the students had a large meeting rug with individual animals that marked where each student could sit. The animal seat markers were set about a foot apart for large physical space in between students. The student work tables were spaced out close by the large meeting rug. The work tables only allowed for four students to sit at one time. The extra seating room at the tables allowed the students to have plenty of work space without bumping their peers.

The four corners of the classroom were designated for the teacher’s desk, student’s bathroom and hand washing station, small quiet reading corner, and another small area for free

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play. The teacher's desk was not a focal point of the classroom and allowed the teacher to sit and interact with students often. Students could use the bathroom as often as needed and wash their hands within the comfort of the classroom. By having the bathroom in the classroom permits fewer student distractions and promotes more classroom flow and routine.

The classroom walls were partially labeled appropriately with what each area was designed for and markings for furniture. One out of the four walls displayed student artwork, but did not appear to be overwhelming. The florescent lights had light blue curtain covers to block out extra light and sound. The teacher turned off the florescent lights as often as possible to let the nature light in from the large outside windows.

While interviewing the classroom teacher, the main classroom characteristics the teacher stated were the most effective were, routine, schedule, and classroom set up.

Routine

Children with disabilities respond in a positive manner when a routine is set in place. When children know what to expect and the behavior they should be demonstrating, the day goes much more smoothly. They understand where to go and when to go there which, can eliminate the element of confusion and surprise. These two things can throw a child out of control and allow negative behaviors to arise. The classroom teacher demonstrated this by having the children have the same routine every day, with as insignificant variation as possible. The teacher explained the routine she has set in place for the students was: "morning arrival/morning meeting, having all teaching of academic skills at small group centers, working on transitions in hallway walking, and having appropriate student's services set up." A specific example teacher stated about her classroom routine was to have "students each have their own seat at the tables and an animal to sit at while working on the rug. The table seats are switched out on an as

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needed basis.” She explained that this helps the student take responsibility for their own space and gives them control over where their body needs to go. She continued to say “all students need a consistent routine. When known routine is off, it throws students focus.” If students are focused on where they need to go or what needs to be completed, they are not focused on their work and doing their best. When asked how the students know about the classroom rules she explained that “I have five classroom rules, created by basic school rules, ones that young children can understand and comply with.” Once again this can help the students with outburst and negative behaviors.

Schedule

Many people confuse the difference between a routine and a schedule. A routine is something you do on a regular basis. It is a static program for example brushing teeth, or eating breakfast are regular activities that can be completed at school. A schedule or timetable is a list of planned activities or things to be done showing times or dates. The classroom teacher could set up a good routine and schedule for the students to help maintain controllable behaviors. The teacher stated that the students have “ten to fifteen total transitions throughout the day and are in and out of the room about three to five times a day.” Overall, I felt that this a great deal of change throughout the day, but the teacher gives plenty of “verbal cues and gestures” to help the students transition the best they can. When students are aware of the changes to come, they can better control their behavior. The schedule the teacher had set up for the children also varied as little as possible, but unfortunately was not visible for the children to see. The daily schedule was printed on a dry erase board by the teacher’s desk to ensure that the children stay on task with little confusion, but only for the teachers. The students appeared to be able to know and understand the daily schedule, but according to research it would be more beneficial for students

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to be able to see and manipulate the daily schedule. To keep behaviors under control the teacher stated that she allows the students to “earn tickets as positive reinforcement, gives out stickers for completing homework and if they have a good day, along with always using verbal positive reinforcement.” I asked the parents/guardians a similar question about how to best motivate their child and Parent/Guardian 1 responded with “bribe him with physical things, such as going to the library.” Parent/Guardian 2 responded with “positivity and praise.” I feel this connected with how the teacher in the classroom hoped to reach her students.

Classroom Set-up

Classroom set up can be extremely tricky for any classroom teacher, but a special education teacher needs to plan for a calm and structured work environment to ensure positive behaviors. The students who were observed for this research had a variation of disabilities and specific needs. The teacher explained in detail what the parents/guardian of her students expect and how she is able to achieve it. She stated that upon arrival parents/guardians expect to see a “self-contained classroom with minimal students, safe and arranged to meet needs for example quiet/sensory area, tables rug, and play areas. They would like their children to have a structured routine as well as collaboration with aides, services, other parents, and administration.” When asked how she decided what materials she orders each school year she responded with “I order based on what grade level I will be teaching and what I feel will benefit students the most. Also, I try to incorporate sensory items since most have sensory needs in this room.” I felt that the room was set up for free movement and not crowded. The students had art work and labels displayed on the walls but the room did not appear to be over or under stimulating.

The students’ parents/guardians had similar responses about their child specifically, how they were doing in school, the child’s strengths and weaknesses, along with what kind of

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home/school connection they currently had. I was able to interview two parents/guardians about their children, and I felt they were extremely satisfied with their child's school progress as well as the effectiveness the classroom environment has on their child. For example, when asked what challenges Parent/Guardian 1 child faces, she responded with: "Not holding back his/her emotions and not making good choices." Parent/Guardian 1 also responded with the child's strengths as: "Having a great memory and being very caring." When Parent/Guardian 2 was asked what challenges her child faces, she responded with: "Speech, communication skills, and sensory issues." Parent/Guardian 2 also responded that her child's strengths were: "He is smart, good at reading, a great problem solver, and he/she is great at math and counting." While I do not feel that each Parent/Guardian 1 or Parent/Guardian 2 responded the same way to the interview question I do feel that they each felt that their child was doing well while in school. Parent/Guardian 1 and Parent/Guardian 2 also stated that they both saw improvements in their child. Parent/Guardian 1 stated that she felt that her child "tries his best to follow directions" while Parent/Guardian 2 felt that her child has "improved already." The interview question the parents responded to the most positively, was the question about the most ideal classroom environment for their child. Parent/Guardian 1 responded to the ideal classroom question as feeling that her child was: "Doing very well in his/her current classroom and that it was working out pretty well. He loves school." Parent/Guardian 2 described her ideal classroom setting as: "Depending on the number of children would depend on the number of aides. One teacher, one aide, maybe two aides, and six to eight kids. Very structured routine. He does love school and everything about his classroom." Both Parent/Guardian 1 and Parent/Guardian 2 also stated they were very involved in their child's schooling. They both stay in constant connection with the classroom teacher and stay informed about the child's quarterly meetings.

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The left side of Table 5 the table chart is the evidenced based research for affective classroom environments, while the right side is common themes from the teacher interview protocol.

Table 5

Teacher interview and observation

Evidence based research	Teacher interview response
Use clear, concrete, simple language backed up with visual clues.	Verbal cues
Be consistent with language, rewards and routines.	Consistent routine, positive reinforcement, checks and tickets reward system, sticker chart
Be prepared to repeat instructions and rules.	Rules, some visible, basic rules, easy to understand, posted at beginning of the year, then reviewed orally, "body check" rules
Implement and adhere to a routine.	Arrival- morning meeting, teaching done in centers at same time each day student service schedule, transitions
Provide structure and constant supervision.	One main teacher, two teacher aides
Employ adaptive teaching techniques that focus on the child's strengths, interests, and developmental stage.	Differentiate student instruction for individual needs.
Think through the activity and break it down into steps.	Yes
Introduce the routine in small groups by using the daily schedule to clarify when the routine is done.	Yes
Develop procedure cards that contain pictures of each step of the activity.	N/A
Point to each pictured step while giving simple directions.	N/A
Demonstrate each step yourself, making sure you point out the space and materials used.	Constant teacher modeling
Use humor to add emphasis and avoid potential problems: "ham up" your act by demonstrating the wrong way to do a routine and discuss the consequences with the group. Then show the right way.	N/A
Select volunteers to go through the routine	Student jobs

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or use peer models to reinforce appropriate behavior.

Verbal positive reinforcement

In Table 5, I found that the teacher could effectively manage and maintain a calm and quiet classroom for student with disabilities or IEPs, especially students who have been exposed to drugs and alcohol well. Per the evidence based research, there were a few areas of classroom effectiveness the teacher and classroom were lacking in: develop procedure cards that contain pictures of each step of the activity, point to each pictured step while giving simple directions, use humor to add emphasis and avoid potential problems: "ham up" your act by demonstrating the wrong way to do a routine and discuss the consequences with the group. Then show the right way.

These were three areas I did not observe the teacher demonstrating or responded with in her interview. I feel that each of these sections would amplify student engagement even more, but were not necessary for an already appropriately functioning classroom. Through the rest of the teacher interview I feel that the teacher had a clear understanding of an effective classroom environment. She was able to articulate that students with specific needs should have the most structured routine and same room arrangement throughout the year, stating, "I change the room if needed to benefit them student's behaviors and learning. I try not to change too much because change can really throw them off." She also stated that "students benefit the most form modeling, visual manipulatives, and lots of practice."

The next two table charts are data collected from the classroom observation. The left side of Table 6 is the information from the classroom observation scale, while the right side is answering a yes or no to whether the classroom had each of those areas

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Table 6

Classroom environment observation scale

Evidence based research for appropriate classroom environment	Yes or No
Work spaces within the class should be clearly defined	No
Area signs are decorative and functional	Yes
Material labels are objects, small pictures, and names	Yes
Child signs are cards on which you put each child's name and picture	No
Use cuing techniques to help children learn to use the environment	No

See Appendix D for entire observation scale

Table 7

Classroom Arrangement scale

Classroom environment	Evidence Observed
Student home base	Student sized tables.
Group instruction area	Large meeting area for group meetings, each student has their own consistent spot.
Teacher work area	Teacher desk in back corner of classroom.
Transition area	No teacher transitional cues, no student movement unless students were having a transition.
Student schedule area	Same daily schedule every day schedules change for specials and free play times, visual daily schedule was not very visible and included no pictures, "body check" list visible, same daily schedule every day, schedules change for specials and free play times, objects labels also include pictures.
Work stations	Work centers last about 10 to 15 with four intervals, continue same math and literacy skills for many weeks, work areas labeled with animals to guide children.
Technology area	Gross motor activity once a day for 15 minutes, students use iPads during center time.
Arts and crafts area	Student art work displayed
Eating and cooking area	Students eat lunch in public lunch room

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Personal hygiene area	Sink in classroom, students brush teeth after breakfast
Sensory area	No sensory/fidget tools, no alternative student seating for active students.
Leisure activity area	Displayed seasonal appropriate books, small free play area, small, non-used cozy corner, room is quiet and calm
Other Observations	Displayed student sticker chart, check and ticket reward system, check if student made a poor choice and ticket in individual student jar if good choice was made, individual work boxes with supplies labeled with student number and not names, florescent light curtains to block noise and brightness, lights were off most of the time, many plants throughout classroom, classroom had lots of storage space, student free play once a week, student may not engage in school specials if classroom work is not finished, student sits out of free play for a few minutes if they received a check during the day.

I feel that the data collected for the previous two tables indicated that the teacher demonstrated a clear understanding of appropriate classroom arrangement. In Table 6, the classroom arrangement had two out of the five suggested areas observed. The areas that were lacking included: work spaces within the class should be clearly defined, child signs are cards on which you put each child's name and picture, use cuing techniques to help children learn to use the environment. When asked about the lack of evidence based room arrangements the teacher responded that she had taken away those room arrangement suggestions half way through the school year, because the students had already achieved an understanding in them. I do feel based on evidence the students would benefit from the appropriate room arrangements being evident all year long. In Table 7, the classroom environment had many of the suggested qualities already

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being demonstrated. The data provided my research with exact details about how the classroom was arranged. I felt the classroom was appropriate for the students and their specific needs. The room was equipped with the essential materials to promote the achievement of each individual student. The room was well organized with student materials without being overly stimulating. The students could identify their own individual spaces and group spaces. Two suggested areas that I felt the classroom could have benefited from were a larger leisure space and sensory area. I feel that these two specific areas would have helped each student even more with behavior control, by giving each student more alone time to be able to better maintain a positive behavior.

Characteristics Affecting the Social/ Emotional and Sensory Development

Classroom arrangement can play an extensive role in student behavior. When a student enters the classroom, and perceives that there is a big mess or misplaced materials within their classroom, the student can get the impression that the teacher does not pay attention to maintenance of their classroom environment. If the student has this mindset, the student may begin to think about the other characteristics of the room, and think that the teacher does not show that they care about the maintenance of the room. The student could then likely develop that attitude as well. Due to the current classroom arrangement, Parent/Guardian 1 felt that her child interacted with peers “better now. But maybe trusts people too much.” Parent/Guardian 2 felt that her child interacts with peers “more than her did before, and his communication skills have definitely improved.”

If classroom arrangement is not done appropriately, the classroom can stifle a student’s creativity or promote a negative learning environment. There are many things that can affect this academic setting. The essential physical ideas such as wall art, arrangement of desks, or resources are crucial to positive student engagement. The intangible pieces to a student’s

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environment can also play a role in student development, like energy and attitude. Each of these elements can influence a student's concentration and success in the class. The way in which a teacher arranges their classroom, or how they manage it, will produce positive or negative values for their students. It is imperative for an educator, especially those educating students with special needs, to understand the cause and effect to best understand how to arrange their classroom to create a better learning atmosphere.

Deciding if a child indicates a suggested need for intervention with sensory or social/emotional development can be difficult. A few sensory and social/emotional indicators that are a reason for concern are: which indicators the child demonstrates, which category they are struggling with, how it interferes with their or other's lives and what kind of effect it is having on their level of functioning. The students may have a lot of indicators in one category and none in another or some in all categories (Sensory processing disorder, n.d.). When observing each child, I kept these questions in my head to help me be able to decide if there was a possible need for intervention. Since each of the observed students had already been placed in a self-contained classroom, I knew that a need for intervention was already suggested. The main question that helped me decide if the observed students were struggling in either sensory or social/emotional development was, the kind of effect it is having on their level of learning. My second proposed question strived to answer how the characteristics effect students within this classroom.

The classroom teacher gave examples of how she felt this question was best answered, the children need a "smaller environment with low levels of notice, which is a trigger for negative behavior. Fewer students to socialize with and more opportunity to practice socialization, and more 1:1 instruction which help with distractions and attention." Through

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observation and interviews I felt that the classroom was able to help the students control negative outburst and promote positive social/emotional integration through the use of an appropriate educational environment. The teacher stated that within her classroom the student's disabilities varied from autism spectrum disorder, prenatal exposure, ADHD, to speech and language impairment. These types of impairments have a large potential of having behavioral outbursts. Due to the room arrangement and environment the teacher is able to help the students maintain a control behavior. During my student observations, I did not observe any of the students having a behavioral outburst, but I did observe many sensory and social/emotional indicators.

The following table chart organizes the data I collected about the student's sensory development while in the regular classroom setting. The "X" defines whether the student demonstrated that sensory indicator.

Table 8

Student sensory observation scale

Observed behavior	Student 1	Student 2	Student 3	Student 4	Total
Fidgets or squirms	X	X	X		3
Talks during activities	X	X			2
Interrupts frequently	X	X			2
Difficulty completing tasks		X			1
Can't follow directions unless supervised		X		X	2
Blurts out	X				1
Difficulty waiting	X				1
Engages in dangerous activities	X				1
Uses physical actions					0
Easily distracted	X	X	X		3
Looks up from activities		X		X	2
Trouble following sequence	X	X		X	3
Wanders around	X				1
Hits, pushes, etc.					0
Percentage of sensory indicator	64%	57%	3%	14%	
Occurrences	(9/14)	(8/14)	(2/14)	(3/14)	

See Appendix D for entire observation scale

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The high frequency in each sensory indicator may suggest a possible need for intervention for these students within these areas. Typically functioning students within the same age range have less frequent occurrences within these areas (Sensory processing disorder, n.d.). For example, out of the fourteen sensory development indicators Student 1 had a 64% and Student 2 had 57% occurrence rate for sensory development. This may indicate a high need for sensory integration services within the child's school day. For Student 3 and Student 4, each having a low occurrence rate of 14% and 3% may respectfully indicate that these students do not require sensory integration services.

The following table chart organizes the data I collected about the student's social/emotional development while in the regular classroom setting. The "X" defines whether the student demonstrated that social/emotional indicator.

Table 9

Student social and emotional observation scale

Observed behavior	Student 1	Student 2	Student 3	Student 4	Total
Name emotions	X				1
Discuss classroom rules					0
Shares feelings					0
Expresses likes and dislikes	X				1
Identifies peers who help others					0
Identifies reliable adults					0
Recognize methods to gain assistance	X				1
Excitement about new classroom things					0
Exhibits persistence			X		1
Recognize own abilities	X	X			2
Recognize others feel differently					0
Describe how others feel					0
Explain how sharing makes others feel					0
Laugh appropriately		X			1
Recognize people have similar needs					0
Recognize other cultures					0

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Demonstrate how students help each other				X	1
Interact nonverbally	X	X	X	X	4
Use please and thank you	X		X		2
Pay attention when others speak		X			1
Follow directions					0
Offer encouraging comments				X	1
Practice saying no					0
Identify ways to solve conflict					0
Develop skills to resolve conflicts					0
Practice self-calming techniques					0
Develop skills to handle bullies					0
Identify safety rules					0
Recognize appropriate touches	X				1
Describe about destroying property					0
Explain why hitting is hurtful					0
Identify sources					0
Recognize safe or dangerous situations					0
Recognize that one has choices					0
Develop and use calming strategies					0
Identify alternative solutions					0
Describe ways to help at home					0
Volunteer for classroom tasks					0
Percentage of social/emotional indicator occurrences	18%	10%	7%	7%	
	(7/38)	(4/38)	(3/38)	(3/38)	

See Appendix D for entire observation scale

When assessing social and emotional behavior, there are other evidence based questions the educator must ask themselves. The first sign is length of a difficult behavior. Does the behavior seem to last a long period, with no end? Next, the intensity of a behavior. Even though temper tantrums are normal in children some tantrums could be so hazardous. The more intense and alarming tantrums may suggest some interventions may be necessary. Teachers and families should be aware of students lacking interest in family, friends, school or other things that the child once found enjoyable. Teachers and families should also be aware of behaviors that are dangerous to the child or to others. Lastly, the age of the child. Some behaviors could be typical

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for a two-year-old, but may lead to the conclusion that the behavior in question is not appropriate for a five or six-year-old. Teachers need to be aware of what is age appropriate (Pacer Center, 2017). The low frequency of each social and emotional indicator may suggest a need for intervention within those areas. Students within the typically functioning realm are having more frequent occurrence within these areas (Sensory processing disorder, n.d.). For example, out of the thirty-eight social and emotional development indicators Student 1 had 18%, Student 2 with 10% indicators, and both Student 3 and Student 4 had a 7% occurrence rate. This may respectfully indicate a high need for all four students for social/emotional integration services within the child's school day.

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Discussion

Per the results section I feel I have answered each of the proposed research questions to the fullest. The table charts for the teacher, parent/guardian interviews, and student observations indicate a need for special education for children with disabilities or an IEP, especially children who have been exposed to drugs and alcohol. It is also accurate to suggest that there still needs to be a great deal of research completed within this field. In my opinion the teacher and teacher aids in the classroom could effectively educate each one of the students through differentiated instruction, while maintaining structure and routine. The disabilities among the students varied, but the teacher was still able to remain calm and educate each of them appropriately. It was clear to see that the students responded well to the controlled environment, including the observed students indicating a need for sensory and social/emotional needs. The students who indicated a need for sensory interventions knew what was expected of them and were able to control themselves appropriately because the classroom followed a detailed schedule and routine. I feel that the teacher understood the importance of setting up a relationship with each of the students and analyzing how each one learned.

During the participant observations, the students showed indications of needing extra assistance with sensory development as well as social and emotional development. The table charts above showed that the observed students had a higher occurrence rate for sensory indicators as well as having low occurrence rates for social and emotional indicators. Students within the same age range who are in general education classroom, typically can reach each of the sensory indicator with a lower occurrence rate while having a higher occurrence rate for social and emotional (Pacer Center, 2017). My observations may indicate a need for the observed students to have sensory and social and emotional development interventions.

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The second part of the research explored that classroom environment influenced students sensory and social/emotional development. Due to the positive characteristics that the classroom possessed and compared accurately to the literature review section, it is accurate to imply the classroom environment had a positive effect on the observed students. The classroom reflected positively to many of the suggested classroom environmental settings, per the current research I found. The teacher also responded to the interview questions in the same positive manner showing that the classroom is functioning at an efficient level. I believe that if the classroom environment had been non-efficient, the observed student behavior would be different. Even though some of the observed students indicated a need for sensory and social/ emotional developmental intervention, the appropriate calming classroom environment helped the students control negative behavior in a positive way.

Characteristics of an Effective Learning Environment

Instructional strategies. The instructional methods a teacher chose to incorporate into their classroom had a large effect on the student's academics and behaviors. Blackburn & Whitehurst (2010) suggest classroom strategies involve a use of clear, concrete, simple language backed up with visual clues, consistent language, rewards and routines, preparedness to repeat instructions and rules, implement and adhere to a routine, provide structure and constant supervision, employ adaptive teaching techniques that focus on the child's strengths, interests, and developmental stage. Through the teacher interview and classroom observation I feel that the teacher used each of these strategies throughout the day. She had an effective rules and rewards system, by using checks and tickets for positive and negative behavior to help keep the student's behavior in line which is indicated by Kashinath, Woods, and Goldstein (2006). The teacher explained each work assignment in detail and in a multitude of ways to ensure each student was

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able to understand, and she was able to focus on student's strengths by differentiating her instruction for each student and their academic level.

Routine, schedule, and classroom set up. According to Duquette, Stodel, Fullarton & Hagglund, (2006), educators need to maintain a structured environment that includes: schedules, consistent routines, consequences, and classroom rules, which are repeated often and with appropriate follow through. Through teacher observations and classroom observations I was able to find each one of these researcher's suggestions within this classroom. The teacher stated that each of the same suggestions were equally imperative to her and her classroom to maintain calmness and structure. Another effective classroom environment according to Jackson (1993) was the teacher's ability to allow students to self-organize the classroom, which can help ensure less confusion and frustration throughout the day. The classroom had a great deal of storage space to be able to properly add and subtract stimuli from the students when needed.

The literature discussed ways that the classroom could be set up for full student potential and according to Table 6 and 7, I felt the teacher had a clear understanding of where furniture and students should be placed for optimal learning. Per the data, I found in Table 7, the areas within the classroom that were lacking were transition, arts/crafts, sensory, and leisure. These classroom areas either did not exist or did not have enough materials within them. Due to the fact that two out of the four observed students indicated a possible need for sensory and social/emotional interventions, I feel that these areas are essential. According to the literature students with sensory needs need an appropriate strategy to control their behavior (Mitten (2013). If the classroom does not have the appropriate suggested areas for these needs, the students could act out in a negative way because they have no appropriate outlet to encourage positive behavior. Although, also according to Mitten (2013) the teacher should be motivating

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her students with positivity and tangible things, which the teacher and the parent/guardians agreed were taking place with each of the students.

One area I felt could use improvement was in sensory classroom areas, suggested from Mitten (2013). Mitten (2013) suggests strategies such as being able to chew gum or chewy candy, oral stimulation during classroom instructional periods, or giving the child a fiddle toy, such as a squishy ball or bracelets can also reduce anxiety. Unfortunately, these materials were not a part of this classroom. I felt that this area really could have helped benefit the students farther, because of the suggested high intervention needs for the students observed.

The teacher also stressed a great deal of importance in the classroom routine, scheduling, and set up. These were also three main ideas that were significantly stressed in the literature. I found that the teacher was correct in her discussion in the classroom routines, and set up but lacked a little in the student scheduling. According to Jackson (1993), students daily schedule should be posted with visuals to help encourage students to know what subject came next. The teacher had a daily schedule posted in the room, but I felt it was only for the teachers to prepare for the next event. I feel the classroom could benefit from a visual, moving schedule that students could manipulate themselves, so they are able to see what would come next and when to expect the day to be over.

The areas I did observe did have a great deal of appropriate materials and objects. The days and times I observed the classroom were the same time every day. The students were focused the same learning targets and typically working on math. The students were aware of when lunch time was, when they needed to go sit on the large group area rug, and when it was time for them to relax and have fun. The students had a set routine that they followed through with every day.

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Characteristics Affecting the Social/ Emotional and Sensory Development

Sensory development. According to Lambert and Bauer (2012), students with disabilities including children prenatally exposed can demonstrate behavioral problems such as deficits in self-regulation, increased attention problems, heightened excitability, lower task orientation, increased fussiness, and decreased adaptability. It is difficult for a child with these types of behavioral concerns to be able to control the negative behavior on their own. Interventions need to be set in place by the school district and teachers to give the student various types of strategies. Due to the calm, positive, and productive nature of the classroom I observed, I feel that room arrangement could certainly affect children with these needs. Based on the data table charts above two out of the four students I observed, showed a need for sensory and social/emotional interventions. The teacher held the children accountable for their actions towards themselves and others, while guiding them in a positive direction. The teacher explained how the students do positive social role playing and read stories with appropriate social interactions and morals. Duquette, Stodel, Fullarton & Hagglund, (2006) indicate a need for this in classrooms with children with disabilities to be able to understand social interactions better. They continue to relate this to the benefits of the classrooms structure and proper maintenance for an affective environment. To state once again that one lacking area of the classroom was sensory integration. According to Mitten (2013), alcohol and drug exposed children may find it beneficial to be able to chew gum or chewy candy to provide oral stimulation, during classroom instructional periods. Also, giving the child a fiddle toy, such as a squishy ball or bracelets can also reduce anxiety. These environmental modifications have been shown to help improve an exposed child's ability to focus and stay calm.

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Social/emotional development. Students with disabilities or an IEP, including children who have been prenatally exposed to drugs and alcohol, according to Blackburn and Whitehurst (2010), can find it extremely difficult to have appropriate social interactions among peers. The observed classroom incorporates student lessons to demonstrate proper social and emotional interactions among the students. This can help improve the students social and emotional skills by demonstrating how to enter a conversation properly or play properly and respectfully. Also stated by Blackburn and Whitehurst (2010), by demonstrating this type of life skill the children are also gaining emotional strengths which they are then hopefully be able to recreate on their own. To begin a lesson, teachers need to demonstrate appropriate behaviors they expect from the students. Mitten (2013) shows that another example on how to effectively promote students social/emotional development, is give the students concrete rules. If a student is blurting out during inappropriate times, the teacher could implement the use of a concrete device that can be passed around to the students that indicates a child's turn to speak.

Implications

The research that I explored can begin to bring awareness to children exposed prenatally to drugs and alcohol. Research through the literature review heavily indicates that drug and alcohol abuse and prenatally exposure are on the rise. My hopes for future educators and policy makers is to include awareness for exposed students. Making educators aware that exposed students will be entering their classrooms in the most important. It is imperative for policy makers to understand that exposed children should not be lumped into inappropriate disability categories or labels. Even though current classroom strategies and interventions may be appropriate for exposed children, policy makers and educators need to be aware of student differences. When policy makers and educators understand the differences among the disability

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categories, education as whole, will begin to transform. An exposed student's IEP or 504 plan can be laid out more significantly when student disability is correctly diagnosed.

Suggestions for future research

Overall, I feel it is appropriate to suggest a specific need for certain classroom environments for students with disabilities or an IEP, especially students who have been exposed to drugs and alcohol. For years researchers have been able to indicate a specific need for children with many different types of special needs to be educated within a special education classroom. More research needs to be done to be able to make a stronger case for children who have been prenatally exposed to drugs and alcohol. Per the parent/guardian interview it was apparent that Student 1 was exposed prenatally to drugs and alcohol, and indicated a specific need for sensory and social/emotional development assistance. This can also be stated about Student 2 who did not have drug or alcohol exposure prenatally, but also indicated a need for sensory and social/emotional interventions. With only one student out of the four-observed indicating prenatal exposure, more research would need to be completed including more students who have similar indicators. It is difficult to prove larger specific needs if only one participant had previously been exposed. It is also difficult to prove a specific need for students parentally exposed to drugs and alcohol, due to the indications that Student 1 and Student 2 both responded positively to similar classroom environments and strategies. In the future, I would like to continue to research more appropriate environmental settings for students who have strictly been parentally exposed to drugs and alcohol.

Limitations

There were a few limitations that posed a concern for my research. The first validity limitation was the issue of sensitivity among exposed children. Due to the legal fears,

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embarrassment, and controllable factors, those involved in these children's lives do not always want to discuss it. Due to these reasons interviewees may not respond to the questions with full honesty. I feel this is the reason that two of the four observed students' parents/guardians turned down the interview portion of the research. With the parents/guardians I did interview, I addressed the concern by creating a positive rapport with each family. The parent/guardians I did interview were very welcoming and had a positive attitude about the observation and interview process. The other two parents declined the interview process and did not give reason. I feel that they did not want to be bothered by the interview process (Fraenkel et al., 2015).

The second limitation to this research was the unpredictability of young children. Although the students did not have knowledge to my observation, my presence interfered with their normal behaviors and social interactions. I addressed this concern with gaining an appropriate and friendly rapport with each student. I recognized student questions affectively by having them be aware that I would be in their classroom to meet with their teacher about the enjoyable activities they are working on (Fraenkel et al., 2015).

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Conclusion

In conclusion, I feel that the students with disabilities or an IEP, especially those who have been prenatally exposed to drugs and alcohol are being educated in an appropriate classroom setting. Through observations and parent interviews it was clear to see that all of the observed students were facing a variety of disabilities. Even though the student's background is different the classroom set up is fitting for each of the students. I do feel that the classroom lacked in a few suggested research areas that would have helped benefit the students more, but feel that the class was being run to best fit each of the students. The teacher could differentiate the students' instruction to fit each student's needs especially with Student 1 and Student 2 indicating a possible need for sensory and social/emotional intervention. Due to the fact that the two students had varying special educational needs and the same interventions appeared to work appropriately for them, concluding that a specific need for certain interventions for prenatally exposed students may not be necessary. The teacher and classroom strategies and interventions appeared to be appropriate and well thought out for a variety of different types of disabilities.

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Appendix A

Parental Permission for a Minor to Participate in Effective Classroom Environments for Students with Disabilities

Hello, parent/guardian:

My name is Dawn Manzella. I am a graduate student at the State University of New York at Fredonia (SUNY Fredonia), earning my M.S. Ed. in Curriculum and Instruction in Inclusive Education, and I am conducting a research study about the effective environments for students with disabilities. The purpose of this research is to find out the most effective classroom environments for students with disabilities and how these environments effective the students sensory and social/emotional development. If you agree to participate in this research study, the following will occur:

Part 1:

Your child will be part of a **non-invasive** behavior observation. I plan to conduct a frequency graph based on student interactions and behaviors, while partaking in a typical school day. I do not plan to speak to or directly interact with any of the students during my observation. This will take place in the school during normal school hours. I will also be recording teacher student interactions, as well as taking notes on the direct student classroom environment.

Part 2:

Parents/guardians and classroom teacher will take part in an interview portion of this research study that will last about 15-20 minutes. The interview will consist of 20 questions. You will not be required to answer all 20 questions if you feel the question is unnecessary or invasive to your personal privacy. There are no direct specific benefits to your child's participation in this research, but the information will be useful to people who are trying to promote effective

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classroom environments for students with disabilities efforts. There are no risks in this study. You may answer only those questions you feel comfortable answering, and you may stop the entire process at any time, without penalty. If your child experiences any discomfort, he or she may contact the school counselor. Confidentiality will be protected throughout this research study. All surveys and transcriptions of the observation and interview will be shredded after the study is complete. Recordings of the interviews will be erased. You have been given a copy of this consent form to keep. Please sign and return one form if you wish to have your child participate.

PARTICIPATION IN THIS RESEARCH STUDY IS VOLUNTARY. You are free to decline to have your child participate in this research study. You may withdraw your child's participation at any point without consequence. You are also free to choose to decline Part 1 or Part 2 of the research without question. Your decision whether or not to participate in this research study will have no influence on your or your child's present or future status at school.

Sincerely,

Dawn Manzella

Dawn Manzella, Curriculum and Instruction in Inclusive Education.

Phone number: 716-796-7359 or rine6185@fredonia.edu

Part 1:

Child's Name _____

Signature _____ Date _____

Part 2:

Child's Name _____

Signature _____ Date _____

Appendix B

Consent form for Educators as Participants

Dear Educator:

My name is Dawn Manzella, and I am a graduate student at SUNY Fredonia working on my Masters of Science in Education in the Curriculum and Instruction in Inclusive Education program. You are requested to participate in a research study for my Master's Thesis. The purpose of this study is to investigate teachers' and parents' perceptions of characteristics of effective learning environments in a small rural county in Western New York for students in elementary school with disabilities or an individualized education plan (IEP), including children who have been prenatally exposed to drugs and alcohol. The second purpose is to investigate how these classroom environments contribute to students' social/emotional and sensory development.

Prior to contacting you, I emailed your principal and gained approval to invite you participate in this research. With your approval, I would like to interview you to get to know more about you as an educator, your perceptions of characteristics of effective learning environments for students in elementary school with disabilities or an individualized education plan (IEP), including children who have been prenatally exposed to drugs and alcohol.

The interview would last about 20 minutes and would be at a time and place that is convenient for you. The interview would require an auto tape recording to ensure all information given is coded accurately.

There are no risks to participants involved in this study. The information collected during this study will not be discussed to anyone else. All information in this study will remain confidential, along with no disclosure of any teacher, student, or school names.

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Thank you for your time and consideration. If you have any further questions or concerns, please feel free to contact me at the information below.

Sincerely,

Dawn Manzella

Dawn Manzella, Curriculum and Instruction in Inclusive Education.

Phone number: 716-796-7359 or rine6185@fredonia.edu

Name: _____

Signature: _____

Date: _____

Appendix C

Consent form for Student Participants

Dear Student,

My name is Dawn Manzella and I go to college at SUNY Fredonia. While I am at school I need to write a research paper about students like you. I would love to know more about you and how you interact while you are at school. I will not need to ask you any questions, I will just watch you and your peers work. If you would like to help me learn more about you please sign this paper. If you do not want to share information about you with me, you do not have to sign this paper. You will not be punished if you decide you do not want to help me, but you will also not get anything special if you decide you would like to.

Would you like to help me learn more about you?



Yes

or

No



Name: _____

Signature: _____

Date: _____

Appendix D

Observation Scale (classroom environment)

____ 1. Work spaces within the class should be clearly defined; for example, the way furniture is used (four chairs and a table) or two places at an easel can indicate work areas for children. Masking tape or contact paper over construction paper can be used to section off tables, placemats, or carpet to define working spaces. Hula hoops can become movable boundaries for a child's individual activity.

____ 2. Area signs are decorative and functional. These symbols help children associate specific behaviors, activities, and materials with a particular space. Area signs are realistic drawings of materials or activities that can represent an area (e.g., a crayon for the art area). Pictures can be hung as mobiles from the ceiling, or mounted on folders to stand up on a table.

____ 3. Material labels are objects, small pictures, and names of classroom items that can be used to key the items to areas where they are kept or used. Labeling shelves and places for use solves many classroom clean-up problems.

____ 4. "Child signs" are cards on which you put each child's name and picture (or symbol). They are used to designate personal spaces and belongings within the classroom.

____ 5. Use cuing techniques to help children learn to use the environment in an orderly manner, such as procedure cards, footprints to designate numbers of children at a center or how to line-up, direct arrows for traffic patterns, traffic lights to represent open and closed areas of the classroom (Jackson, 1993).

Observation Scale (sensory)

_____ Fidgets or squirms during circle or story time

EFFECTIVE CLASSROOM ENVIRONMENTS

- _____ Talks a great deal while engaged in other activities (such as an art project)
- _____ Interrupts frequently when the teacher is reading to the group
- _____ Has difficulty completing simple projects that most other children complete
- _____ Can't follow directions unless the teacher is supervising her or walking her through the task step by step (washing hands, putting toys away, getting item from cubby)
- _____ Blurts out answers to questions before the teacher has finished asking the question
- _____ Has difficulty waiting for a turn in group situations
- _____ Engages in dangerous activities without considering the consequences (running into street, jumping off a high slide)
- _____ Uses physical actions (grabbing, hitting) rather than words
- _____ Easily distracted when listening to a story
- _____ Looks up from activity when other children walk by
- _____ Has trouble following a sequence of more than one direction (such as "Take this book to the table, then come back here and sit down")
- _____ Wanders around classroom unless told what to do
- _____ Hits, pushes, or shoves other children without apparent cause (Baby Center, 2016).

Observation Scale (social and emotional)

- _____ Name emotions (e.g., happy, surprised, sad, angry, proud and afraid).
- _____ Develop and discuss classroom rules.

EFFECTIVE CLASSROOM ENVIRONMENTS

- _____ Share feelings in a range of contexts (e.g., through speaking, writing and drawing).
- _____ Express likes and dislikes.
- _____ Identify peers who help others.
- _____ Identify reliable adults who can help in an emergency.
- _____ Recognize acceptable methods to gain assistance.
- _____ Show excitement and curiosity about new things in the classroom (e.g., a new book, new science materials and new math counters).
- _____ Exhibit persistence and creativity in seeking solutions to problems.
- _____ Recognize one's own abilities and accomplishments.
- _____ Recognize that others may feel differently about the same situation.
- _____ Describe how others are feeling based on their facial expressions, gestures and what they say.
- _____ Explain how sharing with and supporting others may make them feel.
- _____ Laugh and show pleasure appropriately.
- _____ Recognize that all people have similar needs.
- _____ Recognize and accept the differences of other cultures/ethnicities.
- _____ Demonstrate how students help each other (e.g., sharing and not interrupting).
- _____ Interact nonverbally with other children (e.g., smile, wave, nod or other appropriate gestures).
- _____ Use "please" and "thank you" appropriately.
- _____ Pay attention when someone else is speaking.
- _____ Follow directions given at school.
- _____ Offer encouraging comments to others.

EFFECTIVE CLASSROOM ENVIRONMENTS

- _____ Practice saying “no” to protect one’s self from unsafe situations.
 - _____ Identify constructive ways to resolve conflict.
 - _____ Develop skills to resolve conflict situations.
 - _____ Practice self-calming techniques for anger management.
 - _____ Develop skills to handle bullies.
 - _____ Identify and follow bus, classroom and school safety rules.
 - _____ Recognize appropriate touch and avoid inappropriate touch.
 - _____ Describe how taking or destroying another’s property makes them feel.
 - _____ Explain why hitting or yelling at somebody is hurtful and unfair.
 - _____ Identify reliable sources of adult help.
 - _____ Recognize situations that are safe or dangerous.
 - _____ Recognize that one has choices in how to respond to situations.
 - _____ Develop and use calming strategies.
 - _____ Identify and use alternative solutions to problems.
 - _____ Describe ways to help out at home.
 - _____ Volunteer for classroom tasks (e.g., helping others, helping set up, cleaning up and passing out materials (Illinois Learning Center, 2016).
-

Appendix E

Parent Interview Questions

1. How old were you when your child, included in this study, was born?
2. How many gestational weeks was your child born at?
3. How much did your child weigh at birth?
4. Did your child need to be seen in the NICU after delivery?
5. During pregnancy, did you eat cold lunch meat or seafood?
 - a. Never
 - b. Occasionally
 - c. Frequently
6. During pregnancy, did you drink caffeinated beverages?
 - a. Never
 - b. Occasionally
 - c. Frequently
7. During pregnancy, did you smoke cigarettes?
 - a. Never
 - b. Occasionally
 - c. Frequently
8. During pregnancy, did you drink alcohol?
 - d. Never
 - e. Occasionally
 - f. Frequently
9. During pregnancy, did you use illegal drugs?

EFFECTIVE CLASSROOM ENVIRONMENTS

- d. Never
- e. Occasionally
- f. Frequently

10. During pregnancy, did you use prescription drugs?

- d. Never
- e. Occasionally
- f. Frequently

(Westside Health Authority, 2007).

11. Currently, has your child been diagnosed as having a disability?

- b. If yes, please explain how you and your family discovered your child had a disability?

12. What are the challenges you face as a parent or guardian of a child with a disability?

If N/A move to question 11.

- b. What challenges do you feel your child faces?

13. What are your child's strengths in and out of school?

- b. What do they enjoy doing in and out of school?

14. What progress have you observed in your child since initially beginning school?

15. Is there an area (in school) that you feel your child could improve in?

- a. If so, what do you think it is?

16. How do you feel your child interacts with others?

17. If you could choose, what would be your ideal classroom for your child? Please

explain in detail.

18. How does your child feel about school and their classroom?

EFFECTIVE CLASSROOM ENVIRONMENTS

19. Are you, as a family, involved in your child's education?
 - a. If yes, please explain how?
20. What do you feel the best way to motivate you child is? (Ripp, 2013).

Appendix F

Teacher Interview Questions

1. What kinds of routines do you have set up for the students?
 - c. How do you think having these routines helps the students?
2. Do you have the classroom rules visible for the students to see within the room?
 - d. How many classroom rules do you have and how did you create these?
3. Are the classroom materials and equipment easily added or removed to help increase or decrease student stimuli? If yes, please explain.
4. Are the students work spaces clearly defined and functional? If yes, please explain.
5. What techniques do you have set in place to help cue the students of classroom transitions?
 - a. How many daily transitions do the students go through throughout a regular school day?
 - b. Do you have a specific signal you give the students to let them know a transition is approaching? If yes, please explain.
6. Have you ever practiced transitions with your students? For example, give your students a “dry run” of the next activity?
7. Do you have or follow a specific behavior management plan? If so, please explain.
8. Do you give your students positive reinforcements?
 - a. How do you incorporate this into your behavior management plan?
9. Do you use technology within your classroom?
 - a. If yes, how do you feel it benefits or does not benefit the student’s classroom engagement?

EFFECTIVE CLASSROOM ENVIRONMENTS

10. When beginning a lesson how do you prepare the students?
 - a. How do you demonstrate each step, to ensure proper understanding? (Jackson, 1993)

Appendix G

CITI Training

**COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)
COMPLETION REPORT - PART 1 OF 2
COURSEWORK REQUIREMENTS***

* NOTE: Scores on this Requirements Report reflect quiz completions at the time all requirements for the course were met. See list below for details. See separate Transcript Report for more recent quiz scores, including those on optional (supplemental) course elements.

- **Name:** Dawn Manzella (ID: 5395366)
- **Institution Affiliation:** SUNY - College at Fredonia (ID: 273)
- **Institution Email:** rine6185@fredonia.edu
- **Institution Unit:** Education
- **Phone:** 716-796-7359

- **Curriculum Group:** Human Research
- **Course Learner Group:** Group 1.
- **Stage:** Stage 1 - Basic Course

- **Record ID:** 18712067
- **Completion Date:** 15-Feb-2016
- **Expiration Date:** 14-Feb-2018
- **Minimum Passing:** 80
- **Reported Score*:** 84

REQUIRED AND ELECTIVE MODULES ONLY	DATE COMPLETED	SCORE
Belmont Report and CITI Course Introduction (ID: 1127)	15-Feb-2016	3/3 (100%)
History and Ethical Principles - SBE (ID: 490)	15-Feb-2016	4/5 (80%)
Defining Research with Human Subjects - SBE (ID: 491)	15-Feb-2016	5/5 (100%)
The Federal Regulations - SBE (ID: 502)	15-Feb-2016	4/5 (80%)
Assessing Risk - SBE (ID: 503)	15-Feb-2016	4/5 (80%)
Informed Consent - SBE (ID: 504)	15-Feb-2016	5/5 (100%)
Privacy and Confidentiality - SBE (ID: 505)	15-Feb-2016	3/5 (60%)
Research with Prisoners - SBE (ID: 506)	15-Feb-2016	4/5 (80%)
Research with Children - SBE (ID: 507)	15-Feb-2016	4/5 (80%)
Research in Public Elementary and Secondary Schools - SBE (ID: 508)	15-Feb-2016	4/5 (80%)
International Research - SBE (ID: 509)	15-Feb-2016	5/5 (100%)
Internet-Based Research - SBE (ID: 510)	15-Feb-2016	4/5 (80%)
Avoiding Group Harms - U.S. Research Perspectives (ID: 14080)	15-Feb-2016	3/3 (100%)
Vulnerable Subjects - Research Involving Workers/Employees (ID: 483)	15-Feb-2016	3/4 (75%)
Conflicts of Interest in Research Involving Human Subjects (ID: 488)	15-Feb-2016	4/5 (80%)
SUNY Fredonia State College (ID: 587)	15-Feb-2016	No Quiz

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

Verify at: www.citiprogram.org/verify/?k5395061b-9158-47fb-aa2a-914450927888-18712067

Collaborative Institutional Training Initiative (CITI Program)
 Email: support@citiprogram.org
 Phone: 888-529-5929
 Web: <https://www.citiprogram.org>

Appendix H

HRS Approval Letter



13 February 2017

Dawn Manzella
c/o Sovicheth Boun, Ph.D..
Language, Learning and Leadership
College of Education
The State University of New York at Fredonia

Re: Dawn Manzella—Effective Classroom Environments for Students Who Have
Been Prenatally Exposed to Drugs and Alcohol

Your research project using human subjects has been determined Category 1, Exempt, under the United States Department of Health and Human Services Code of Federal Regulations Title 45 Public Welfare, Part 46 Protection of Human Subjects, 46.101, Subpart A (b) (1) and/or (2). This document is your approval and your study titled “Effective Classroom Environments for Students Who Have Been Prenatally Exposed to Drugs and Alcohol” may proceed as described. **Your approval is valid from February 13, 2017 through March 31, 2017.**

Thank you for keeping the high standards relating to research and the protection of human subjects under the auspices of the State University of New York at Fredonia.

Sincerely,

A handwritten signature in blue ink that reads "Judith M. Horowitz".

Judith M. Horowitz, Ph.D.
Associate Provost, Graduate Studies, Sponsored Programs
and Faculty Development
Human Subjects Administrator

Appendix I

Intervention Strategies

Interventions for students prenatally exposed to alcohol and other drugs, by executive function

(Reproduced from Watson, Westby, & Gable, 2007, p. 29).

EFFECTIVE CLASSROOM ENVIRONMENTS

Executive Functioning	Characteristics of Deficit	Examples of Observable Behavior	Target of Intervention	Intervention Options
Nonverbal working memory	<ul style="list-style-type: none"> • Difficulty remembering events or information • Difficulty imitating complex sequence of behaviors • Diminished sense of time • Limited self-awareness • Defective hindsight and foresight 	<ul style="list-style-type: none"> • Impulsivity • Hyperactivity • Inattention • Inability to remember materials, deadlines, for assignments • Inability to complete tasks previously learned • Inability to reach school and events on time • Inability to judge the time needed to complete tasks • Inability to select the right behavior for the social situation because of failure to learn from previous experience 	<p>Internal: Develop nonverbal mental representations of actions and events</p> <p>External: Provide a structured environment with visual cues to support behavior</p>	<ul style="list-style-type: none"> • Visualization training • Self-awareness training: videotaping corrective feedback • Consistent and structured environment • Structured daily routines • Visual cues • Visual schedules • Use of checklists to check off assignments completed
Internalization of self-directed speech or verbal working memory	<ul style="list-style-type: none"> • Reduced description and reflection • Difficulty self-questioning and problem solving • Deficient rule-governed behavior • Ineffective generation of 	<ul style="list-style-type: none"> • Impulsivity • Hyperactivity • Inattention • Follow rules only when adults are present • Deny wrong doing • Lie about behavior • Difficulty with reading comprehension • Do not have or use previous learned strategy to repair 	<p>Internal: Develop receptive language to comprehend instructions</p> <p>Develop expressive language skills to describe sequence of actions and events</p> <p>Increase the range of</p>	<ul style="list-style-type: none"> • Language interventions to develop semantic, syntactic, and pragmatic skills • Cognitive-behavioral interventions: Cognitive modeling • Verbal mediation • Link visual cues to verbal prompts

EFFECTIVE CLASSROOM ENVIRONMENTS

	<p>rules or metarules</p> <ul style="list-style-type: none"> • Delayed moral reasoning 	<p>mistake</p> <ul style="list-style-type: none"> • Difficulty distinguishing right from wrong 	<p>language functions</p>	
<p>Self-regulation of mood, motivation, and level of arousal</p>	<ul style="list-style-type: none"> • Difficulty regulating own feelings • Difficulty with self-motivation • Poor self-regulation or arousal and goal-directed action • Low frustration and tolerance 	<ul style="list-style-type: none"> • Impulsivity • Hyperactivity • Inattention • Dependent on external sources to motivate or regulate behaviors and emotions • Easily frustrated and angered • Give up easily • Insensitive to thoughts and feelings of others • Say whatever comes to mind, regardless of consequences 	<p>Internal: Develop language for self-reflection</p>	<ul style="list-style-type: none"> • Vocabulary of emotions • Social-skills instructions • Repeated opportunities to role play social skills • External reinforcement of desired behaviors to foster motivation
<p>Reconstitution or problem solving</p>	<ul style="list-style-type: none"> • Difficulty analyzing and synthesizing behaviors • Difficulty problem solving 	<ul style="list-style-type: none"> • Impulsivity • Hyperactivity • Inattention • Difficulty reflecting on own behavior • Difficulty generalizing behaviors or information learned from one situation to a new context • Do not have long-term goals 	<p>Internal: Develop self-determinism</p>	<ul style="list-style-type: none"> • Self-determination curricula • Cognitive modeling • Coaching: Scaffolding and questioning students during interactions