The effect of professional development regarding special education inclusive practices on secondary general education teachers

by

Mary L. Middleton

B.S., Avila University, 1995
M.A., University of Nebraska, 2022

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF EDUCATION

Department of Education
College of Curriculum & Development

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2026

Abstract

This study entitled “The Effect of Professional Development Regarding Special Education Inclusive Practices on Secondary General Education Teachers” is a qualitative study that attempts to answer the question, what effects, if any, will secondary, school-wide professional development focusing on special education inclusive strategies have on teachers’ attitudes and practices toward inclusive education? Five secondary general education teachers participated in 12 staff-wide professional development sessions, 5-6 semi-structured interviews, and an anonymous survey. Using the theories of Andragogy, Concept Based Attainment Method, and Change Theory, the researcher gathered data regarding the impact of on-going professional development sessions on secondary teachers in a rural fringe school district. The author framed the findings using Change Theory, Andragogy, and Concepts Based Attainment MEthod. The Discussion also discussed the implications for education and for future research. The author found that the ongoing professional development had a positive impact on teachers’ inclusive classroom practices and attitudes towards inclusion, but the professional development did not impact teachers’ pedagogy

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Dr. Suzanne Porath PhD

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Dedication

To my daughter Madeline F. Mulder, you have always seen the positive in everyone! You make a difference every day and you are a damn good artist!

To my husband, Gregory L. Middleton. You are my biggest cheerleader. I would have never had the courage to embark on my teaching career or educational endeavors without your belief in me.

Chapter 1 - Background

Sometimes education happens when you least expect it. My education regarding inclusion began long after receiving my bachelor's degree and master's degree. It happened as I was beginning my doctorate. In fact, the education I received was part of the impetus for my dissertation. It happened during a family reunion when I listened to a conversation between my cousin and my sister. My cousin talked about her daughter Beth, and the struggles they had with the education system.

Beth was born in 1987 and was diagnosed with a developmental disability. Special Education was an established part of public education but the movement to educate students in the general education classroom was still developing. In fact, the special education law was still referred to as P.L.94-142 and only ensured the education of children with disabilities from age three to twenty-one. IDEA did not exist. Individuals with disabilities had access to neighborhood schools, or at least schools nearer to home. Before this time, many parents' only educational option for their child with a disability was a state-run institution or educating a child at home.

Unprompted by me, my cousin began talking about the struggles she and her husband had with the public schools and inclusion. Throughout their endeavors, both parents had developed strong advocacy skills. While Beth was in high school, Ralph and Stephanie insisted that Beth be part of general education classes with her same-age peers. Ralph and Stephanie experienced a lot of push back. "She will not learn the material" was the common argument. In reply, Beth's parents stated: "We can provide Beth with the education. We cannot provide her with the socialization she needs for life." This statement made me a fiercer advocate of true inclusion in all classes – not just the student being in the room at the same time. In other words, all students need the opportunity to fully participate in all aspects of the school experience.

Not long after the family reunion, school began and conversations with co-workers were happening as well. During a spontaneous hallway conversation before school, a science teacher said: "I can ask kids what they like and what they are interested in. What I want to know is how to teach [students with IEPs]." She was talking about the special education department's student-at-a-glance sheet that is sent to teachers at the beginning of the semester and after IEP meetings. It is a sheet that tells teachers a student has an IEP, what the IEP goals are, the

student's accommodations, and interesting tidbits about the student. I realized then that many teachers crave information and sincerely desire to reach students with IEPs..

Between the conversation with my cousin about the need for inclusion and talking with a teacher who clearly wanted more information about teaching inclusively, I realized an opportunity was at my proverbial doorstep. First, there are many reasons for inclusion – both academic and social. Two, many secondary teachers need and want more information about teaching inclusively. At that moment, I decided that my dissertation would center around professional development regarding inclusive teaching practices in the secondary setting.

1.1 Historical Background

1.1.1 Before Special Education Legislation

There was a time when many individuals with disabilities were confined to state run institutions. "Until 1954, no State health department offered any special services for mentally retarded children or their families. The welfare services were directed largely to long-term institutional care." (Mental Retardation | JFK Library, n.d.) It was simply the "way things were done". In her memoir Being Heumann, Judith Heuumann states: "In many ways institutionalization was the status quo in 1949. Parents weren't necessarily even encouraged to visit their institutionalized children. Kids with disabilities were considered a hardship, economically and socially." (Heumann & Joiner, 2020/2020, p. xi) Suffice to say, having a child with a disability left few options for parents and care givers.

Some institutions were questionable at best. Willowbrook School, a state-run institution in New York City, was the subject of multiple reports. Bobby Kennedy visited and his observations were largely ignored. In 1972 Geraldo Rivera gained access to the school without the knowledge of administration. He starred in a documentary spotlighting the abuses-physical, mental and sexual- occurring in the facility. "The biggest abuse was the concept you could mass produce care of the disabled like you could mass produce motor cars." (*MetroFocus | The Story That Revealed Willowbrook's Horrors*, n.d.). Willowbrook housed over 6,000 individuals in a facility designed for 4,000. Rivera stated the facility was dirty, residents were mistreated, and the stench was unbearable. The individuals were not receiving basic care much less an education.

Willowbrook was not alone in its neglect and abuse. John F. Kennedy created The Panel on Mental Retardation in 1960. In a 1961 report to the president, the writer reports: "In public institutions, there are less than 500 full-time physicians for 160,00 patients."(Sallinger, 1961) This demonstrates how understaffed these "care" centers were. Education was the least of the issues. The document stated that less than 25% of residents had access to education.

Having a child with a disability – visible or invisible – was, and still can be, heartbreaking. Families were faced with the reality their child was not wanted in society. Despite paying the same property tax as the neighbor with normally developing children, the parents did not have a school for their children. Clearly, changes were needed!

1.1.2 The Perfect Storm

John F. Kennedy was elected President of the United States in November 1960. (John F. Kennedy and People with Intellectual Disabilities | JFK Library, n.d.) Kennedy was all too familiar with intellectual disabilities. His sister Rosemary achieved developmental milestones at much later ages than her siblings and had marked learning issues.(Kennedy's Other Moon Shot, 2023) When elected to office, JFK's mother Rose Kennedy implored him to help individuals with intellectual disabilities. Kennedy convened The Panel on Mental Retardation.(John F. Kennedy and People with Intellectual Disabilities | JFK Library, n.d.) The group's purpose was to find reasons for intellectual disabilities, cures, and resources. The panel's report clearly stated the need to educate persons with disabilities: "Our goal should be to prevent mental retardation. Failing this, we must provide for the retarded the same opportunity for full social development that is the birthright of every American child." (Mental Retardation | JFK Library, n.d.) They clearly saw the need for education and inclusion in American society.

Kennedy's panel also addressed the lack of education these students were receiving. Only 25% of individuals with disabilities were receiving an education. The report estimated a need for 75,000 special education teachers. At the time, there were less than 20,000. (Sallinger, 1961) The panel also noted that incidents of intellectual disabilities were increasing dramatically.

While Kennedy was investigating issues associated with disabilities, advocacy groups were filing lawsuits regarding such people's rights. Pennsylvania Association for Retarded Children brought suit against the state so children with developmental disabilities could attend school with

their same age peers. (*The Pennsylvania Association for Retarded Children v. Commonwealth of Pennsylvania*, 1971) In Washington D.C. Mills v. Board of Education a fourth-grade boy was denied access to his school due to behavior problems. The judge ruled in the child's favor stating that he has a right to an education and was denied due process. (*Mills v. Board of Education District of Columbia*, 1972) This case also set a precedent for a federal law entitled P.L. 94-142. P.L. 94-142 was re-ratified and became the Individuals with Disability Education Act or IDEA.

P.L. 94-142 gave ensured that a child with a disability will have "a free appropriate public education designed to their unique needs." The statute went on to say that children with disabilities will be educated in the least restrictive environment appropriate.

> …to the maximum extent appropriate, handicapped children , including children in public or private institutions or other care facilities are educated with children who are not handicapped, and that special classes, separate schooling or other removal of handicapped children from the regular educational environment occurs only when the nature or severity of the handicap is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily."(Education of Individuals with Disabilities, n.d.)

At this time, advocates and parents had battled long and hard. They celebrated access to public schools.

In the 1990's education reform was shifting. Lawmakers were pressing for accountability and reform. Special education followed suit. "In 1995 the general education community argued it was time to open up the special education law and transform it from an access law to a quality and an outcomes statute." (Itkonen, 2007). The reauthorization of PL 94-142 called for students with IEPs to participate in high stake testing. "Major changes were made to the Act for the first time in its history in the 1997 reauthorization. These included student participation in statewide exams and a general education teacher presence at IEP meetings." (Itkonen, 2007, p.11) This shifted educating students with IEPs from self-contained classrooms to general education classrooms. The delivery of services to students with IEPs from being solely a special education staff responsibility to being the responsibility of all building educators.

1.2 Contextual History

Like many public schools, the school that is the subject of this study adopted inclusive measures to meet the requirements of IDEA 2004 and the needs of the students. Inclusion was a loosely held term. Students with IEPs attended general education classes, however, they were not given access to the material. In other words, students were physically in classes, but the coursework and material may or may not have accounted for their disabilities. According to one of the participants, interactions between the special education teacher and the general education teachers occurred mostly when the general educator was testing. At that time, the general educator would provide the special educator with a test key and a test.

In 2018 a new special education director was hired. According to an interview with her, the above situation was the case. Along with a new special education teacher, the inclusion model changed. Paraprofessionals attended classes with the students. They supplemented students' notes and were able to help with homework. The special education director and special education teacher also implemented the co-teaching model for core area classes – science, math, and English.

These changes were welcomed. Unfortunately, not every class was co-taught nor were paraprofessionals available for all classes. Even if all these pieces were in place, the general education teachers were lacking information to make classes inclusive. In the interview, the special education director stated that there were no on-going professional development programs available for general education teachers. This meant that students with disabilities are in classrooms with peers but may be unintentionally denied access to the materials.

1.3 **Problem Statement**

In the secondary educational setting, the success or failure of full inclusion rests, in large part, on the skills of the general educators. Unfortunately, most secondary general education teachers possess minimal special education background. Further, the teachers may not be provided with appropriate information or professional development on inclusionary practices. As a result, students' educational needs are not met.

That said, most teachers want to create an inclusive classroom, but many factors prevent them. "The most common reasons for lack of confidence in supporting pupils with [special education needs] included: lack of specific training; lack of time; lack of resources; and lack of [special education] support." (Ferriday & Cantali, 2020, p 155) Many times, districts' special education professional development is confined to the special education department. Further, many districts lack resources for effective follow-up. This leaves teachers with questions and no answers.

In 2004, the writers of IDEA stated: "High quality, comprehensive professional development programs are essential to ensure that the person responsible for the education or transition of children with disabilities possess the skills and knowledge necessary to address the educational and related needs of those children" (Individuals with Disabilities Education Improvement Act of 2004, 2004, p. 1). While many school districts provide special education professional development for its Special Services staff, the information may or may not be formally communicated to general educators. Ironically, secondary SWD can spend up to 100% of the school day with general educators.

It seems reasonable then to research means to deliver information received about best special education practices to general educators in a methodical, frequent, and engaging manner.

1.4 **Research Question**

This study's question is as follows: what effects, if any, will secondary, school-wide professional development focusing on special education inclusive strategies have on teachers' attitudes and practices toward inclusive education?

1.5 Purpose of the Study

The researcher's goal was to determine if professional development focusing on special education inclusive and differentiated teaching strategies would have an effect on secondary teachers' pedagogy and/or their attitudes toward inclusion.

Over a two-year time frame, the researcher provided professional development sessions for the staff of one high school. The professional development model used the Andragogy model. Five individuals from different content area classes participated in semi-structured interviews and one

anonymous survey. The results were reviewed and coded using dimensions and stages of the Concerns Based Adoption Model.

1.6 **Possible Delimitations, Limitations, and Challenges**

1.6.3 ***Delimitations***

The researcher was limited by administration regarding the number of professional development sessions. Further, the time allotted for the sessions was fifteen minutes during Monday morning mandatory Staff Meeting time.

1.6.4 ***Limitations***

This study is limited to the staff at one high school. This means the results are limited to the racial, age, and gender make-up of the staff and students at this facility. Due to the limited number of students with "moderate" or "severe" developmental disabilities and more involved behavioral issues, the study's results are relevant for only for inclusion of students who have verifications that are considered "mild".

1.6.5 Study Challenges

The challenges with this study include the following:

1. Due to the researcher's personal involvement with the staff and the relationships thereof, it may be difficult for the staff to state if they do not feel the Professional Development was worthwhile. In other words, they may state the professional development was effective and that they are implementing accommodations even if they were not to encourage the researcher.
2. This study requires general educators' participation and is part of an on-going professional development. Because of the scope of the study, the researcher will need to navigate administrative channels. This meant gaining approval from the District Superintendent, the Director of Curriculum, the Special Education Director, and building principal.
3. The professional development sessions were limited to 15 minutes. This restricted the amount of information and activities the researcher could present.

1.7 Statement of Significance

The significance of studying the effect of ongoing professional development regarding inclusionary practices is developing a system that bridges the gap between general education and special education teachers' roles. Doing so will make the delivery of special education services a seamless process. The existing research has gaps regarding secondary special education inclusionary practices. As stated by Pozas, et. al. (2020): "Research regarding inclusionary special education practices in the secondary schools is sparse as is general educators' attitudes about the same." The researcher's contention is that teachers' attitudes toward inclusive practices is indicative of implementation of methods. Therefore, determining a sustainable support model for general educators and inclusionary practices is vital to the delivery of services.

As stated, there are research gaps regarding inclusive practices. These gaps exist in the following areas: general educators' roles in the delivery of services for special education students; effective general education classroom strategies when working with an array of disabilities; and secondary general educators' role in delivering special education services.

First, several inclusion studies focus on the role of effective special educators but few focus on the role of the general educator. This is troublesome when sixty-seven percent of students with disabilities spend eighty percent of more of their time in a general education classroom. (*Digest of Education Statistics, 2022*, n.d.) Additionally, students' needs are met using a collaborative effort between general education and special education. Therefore, researching the general educator's role in inclusionary practices appears warranted.

Second, the existing studies have a narrow focus regarding general educators' roles in the delivery of special education services. Most of these studies focus on general educators and one type of disability– autism spectrum disorder or Attention Deficit with Hyperactivity Disorder, for example. Yet, there are few overviews of general educators working with an array of disabilities in a single general education classroom. There are even fewer secondary education studies with this focus. Yet, the several American public high school classrooms are highly diversified. Student characteristics encompass a range of ages, genders, and abilities sitting side by side. A student with receptive and expressive language disability as well as those on the autism spectrum disorder sit shoulder to shoulder with peers who may be learning the English

language as well as a typically achieving peer. It is rare - and counterintuitive - that general education teachers deal with a single type of disability. This leaves a research gap regarding effective service models for working with multiple types of disabilities simultaneously. Teachers and administrators need information that addresses the educational challenges a general educator encounters when a spectrum of student abilities is present.

Secondary classrooms may be overlooked by researchers who are studying best practices for students with IEP's. Early childhood education or elementary-age research fills pages of journals. At the same time, the secondary classroom seems passed over by research professionals. When looking for studies in the United States, the pool shrinks more. While early childhood interventions are important, so are developing and maintaining learning strategies at the secondary level. As such, educators require information about using and teaching these strategies. It is critical, then, that a study be conducted about effective ways to reach secondary general education teachers.

Delivering accommodations and differentiating learning are critical to students' educational success. The proper implementation of inclusive methods is largely dependent upon the general education teacher and that person's attitude towards the same. Even with a positive attitude toward inclusion, successfully implementing diversified instruction is another issue. Of teachers who stated that they support the idea of inclusive education, only two-thirds reported implementing inclusive measures (Lindner, et al., 2023).

Guillemot, Lacroix, and Nocus's 2022 study followed preservice teachers as they became in-service teachers. The researchers wanted to know how teachers' attitudes about inclusive practices morphed throughout their career. Generally, early childhood teachers are open to facilitating inclusive strategies in their classroom. Teachers in upper elementary grades have a less favorable view of inclusive practices. The attitudes towards inclusion and differentiated educational practices become worse at the secondary level. As for pre-service teachers, once on the job, their attitudes change at differentiated instruction's expense. The reasons are many including: "…the difficult working conditions once on the job … especially the number of working hours, the size of the classrooms, the lack of support by special education teachers and the lack of knowledge". (Guillemot et al., 2025, p 2) As expected, special education teachers' views toward inclusion is relatively positive at all grade levels. This is attributed to their

knowledge and experience in working with students with disabilities. (Guillemot et al., 2025, p 2)

For these reasons, this study is necessary. It fills a gap in education research regarding inclusionary practices in secondary schools. Professional development gives general educators, who are teaching students with IEPs knowledge, resources, and support to implement inclusionary practices. Finally, a sustainable support system gives educators information about students with IEPs that results in self-efficacy.

1.8 Researcher Positionality

I am a co-worker and community member of the school in question. Additionally, as a special education teacher, my perspectives may influence the interpretation of the results.

1.9 Organization of the Study

The remainder of this study is divided into four chapters. Chapter two will cover the historical background and theoretical basis of this study. Chapter three outlines the methodology and reasons for such methods. Chapter four is a synopsis of the study's results. Chapter five discusses the implications of the study's results.

1.10 Definition of Terms

Accommodation – changes to the curriculum, presentation, or assignments, "that are necessary to measure the academic achievement and functional performance of the child on State and districtwide assessments consistent with section 1412(a)(16)(A) of this title. (Education of Individuals with Disabilities, 2004)

Collaboration – "members of an inclusive learning community work together as equals to assist students to succeed in the classroom. This may be in the form of lesson planning with the special needs child in mind, or co-teaching a group or class. (Friend & Cook (1992, p. 6 - 28))

Delivery of Services – This refers to providing an education for a student with an IEP. This includes providing accommodation to maximize learning.

Differentiated Instruction - The providing of different avenues to acquire content, to processing or making sense of ideas, and to developing products so that each student can learn effectively. (Tomlinson, 2017, p 1)

Educational Impact - for research purposes, educational impact means the manner in which and the extent of which a disability impairs the acquisition of a student's knowledge in a school setting.

Free Appropriate Public Education – "A free appropriate public education must be available to all children residing in the State between the ages of 3 and 21, inclusive, including children with disabilities who have been suspended or expelled from school, as provided for in §300.530(d)." (Education of Individuals with Disabilities, 2004)

Full Inclusion - An interpretation of the least restrictive environment principle in which all students with disabilities should receive instruction within a general education classroom in their home school on a permanent, full-time basis. (*IRIS | Glossary*, n.d.)

General Educator -teachers who plan, coordinate, schedule, and evaluate curriculum and instructional outcomes within a secure and positive classroom environment for all students, including those with disabilities. (*Specific roles of general educators in serving students with disabilities and their parents*)

Inclusion - The practice of supporting students with disabilities in the general education classroom through individual learning goals, accommodations, and modifications so they can

access the general education curriculum and be held to the same high expectations as their peers.(“Glossary,” n.d.)

IDEA – Individuals with Disability Education Act – The re-authorization of PL 94-142 - A law enacted by Gerald R. Ford that required local school districts to provide students from birth through age 21 with a free and appropriate public education in the least restrictive manner possible.

IEP – Individual Education Plan – “The term “individualized education program” or “IEP” means a written statement for each child with a disability that is developed, reviewed, and revised in accordance with section 1414(d) of this title.” (https://sites.ed.gov/idea/statute-chapter-33/subchapter-i/1401)

Modification – A modification changes *what* students are taught or expected to learn. (*IRIS | Glossary*, n.d.)

Nebraska Rule 51 – The publication that sets forth the regulations and standards for special education programs within the state of Nebraska.

On-going – this refers to providing support on multiple occasions over a sustained time frame individual or as a group.

Professional Development – A program developed for educators to impart new information or to expound upon the skills already possessed.

Special Education – “The term “special education” means specially designed instruction, at no cost to parents, to meet the unique needs of a child with a disability, including—

(A) instruction conducted in the classroom, in the home, in hospitals and institutions, and in other settings; and

(B) instruction in physical education.” (https://sites.ed.gov/idea/statute-chapter-33/subchapter-i/1401)

Special Education Teacher - Beyond instruction, special educators typically have primary responsibility to manage IEP development and meetings and to assure all aspects of students’ program are consistent with legal requirements of IDEA (2004).

Specific Learning Disability – “The term “specific learning disability” means a disorder in 1 or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations.” (IDEA, 2004)

Student-At-A-Glance - a form produced by special education teachers and given to general educators that outlines the special education students' verification, strengths, goals, accommodations, and other pertinent information.

UDL(Universal Design of Learning) - a framework to improve and optimize teaching and learning for all people based on scientific insights into how humans learn (*About universal design for learning* 2022)

Verification – the determination, made by an IEP team, that states the disability that is causing the student to learn at a different rate or through a different method than his or her same age peer.

Chapter 2 – Literature Review

The purpose of this study is to answer the question, what effects, if any, will secondary, school-wide professional development focusing on special education inclusive strategies have on teachers' attitudes and practices toward inclusive education? Over a two-year time frame, the researcher conducted staff wide professional development sessions regarding inclusive teaching issues and methods. Five participants who took part in the sessions also participated in 5-6 semi-structured interviews throughout the two-year period. The researcher measured if or how participants' attitudes and practices changed by comparing the responses to the continuum of concerns-based adoption model.

This chapter will cover issues related to the research question as well as the theories on which this study is predicated. The issues will cover inclusive methods, teachers' attitudes towards inclusion, professional development, and the impact of inclusion on schools. The three theories addressed are Andragogy, Concerns Based Adoption Model (CBAM), and Change Theory.

2.1 Inclusion

According to the National Center for Educational Statistics, 67% of students identified with a disability spend 80% or more of their day in a general class. (Digest of Education Statistics, 2022, n.d.) These students' service models are often referred to as full inclusion. Vanderbilt University's IRIS Center defines full inclusion as, "An interpretation of the least restrictive environment principle in which all students with disabilities should receive instruction within a general education classroom in their home school on a permanent, full-time basis." (IRIS | Glossary, n.d.)

Under the auspice of IDEA's Least Restrictive Environment, inclusion is one of many placement options along a continuum for students identified with special education needs. The intent is that students with disabilities receive services while in classes with non-disabled peers. "Few dispute that the primary goal of inclusion is that students with disabilities are to be educated alongside their peers without disabilities to the maximum extent appropriate." (Lemons et al., 2024, p. 336) The question, then, is how are schools making this happen using a method that is meaningful to students with and without IEPs?

Moira Kirby asserts that schools view special education under one of two lenses: a medical model or a social constructivist model. When educators subscribe the medical view, special

education becomes a place. The disability is an inherent issue with the student, a fault per se, rather than an inaccessible learning environment. In her opinion, special education should be approached form a social constructivist lens. Services should be viewed as a support method. "Furthermore, a fully inclusive classroom questions the basic assumption that special education is a place where children must go to be educated. Special education should be fluid support." (Kirby, 2017 p 188) This implies that schools should be making changes in support systems and lesson presentations within classrooms are means to serve students with IEPs.

2.1.6 **Is Inclusion Successful?**

It is important to look at the effects of inclusion. Whehmeyer, et. al. conducted a study regarding students served under the eligibility of Intellectual or Developmental Disability (I/DD) in elementary schools. They concluded that inclusion is beneficial for students with I/DD. "In summary, the research seems clear that educating students with I/DD in the general education classroom has multiple and myriad benefits and that what occurs in segregated, separated classrooms is less educationally and socially beneficial." (Wehmeyer et al., 2021, p.40) This comment was supported by the facts that students in isolated classes were engaged in content area standards in 50% of observed intervals. Students were passively engaged versus actively participating and teachers spent more time on noninstructional tasks than instruction. They also found evidence that students in inclusionary settings performed higher on certain academic tasks. "Students in the 'inclusion' group scored significantly higher on both reading and mathematics standardized tests than students educated in separate settings."(Wehmeyer et al., 2021, p.39) According to this study inclusion is a positive educational measure. This study has an elementary focus and does not include secondary students.

A study from Indiana indicates that students who are included in the general education setting 80% of the time have positive academic outcomes. (Cole et al., 2023, p. 18) The study analyzed 23,940 students with IEPs' math scores and 23,796 students with IEPs' ELA scores on Indiana's ISTEP state assessment. The scores were taken from 8th grade students. "Using propensity score matching to control for selection bias on individual and school level matching variables, this study found strong evidence in support of greater inclusion in general education setting." (Cole et al., 2023, p. 18) This study was limited to one state, yet, the evidence indicates that inclusion may be an effective special education model.

While there are many reasons IEP teams choose full inclusion for students with IEPs, full inclusion should, ideally, influence how a general educator develops and executes lessons. Rowe et. al asserts that successful inclusion requires an underlying premise. "For schools and classrooms to be inclusive, school teams (administrators, teachers, paraeducators) must adopt a philosophy and culture of acknowledging, supporting, and valuing individuals with disabilities alongside other students in the classroom." (Rowe et al., 2023, p. 153) Based on this argument, schools whose students are served using a full inclusion model should establish full inclusion as an embedded ideology within the school's core values and not as a suggestion.

Research also supports the concept that general education teachers' attitudes and perceptions towards full inclusion is an indicator of whether this model will be successful. Tiwari asserts that teachers' attitudes towards inclusion are a key factor for successful inclusion. "Teachers' attitudes is one of the most critical determinants of inclusive education classrooms. The teachers' attitudes correlate the most with the success of the students with disabilities in inclusive classrooms." (Tiwari, 2023, p. 326) Additionally, other research suggests that understanding teachers' perceptions of inclusion may predict the use of inclusive measures. "… understanding teachers' beliefs about inclusive practices gives insight into an important precursor of whether teachers implement inclusive practices or not."(Dignath et al., 2022, p. 2612) Given these assertions, it seems prudent to study how teachers view inclusion and implement inclusive practices.

2.1.7 Factors Affecting Full Inclusion Attitudes

Several factors influence teachers' attitudes towards special education inclusion. A recurring theme in the following research shows that when teachers feel they are not adequately prepared, they are less likely to implement inclusive measures and may even hold less favorable views about inclusion. This section will include two studies and two meta-analysis discussing general educators' attitudes towards special education inclusion.

Dignath, et all., conducted a metanalysis that included studies from 40 countries in hopes of finding themes related to teachers' beliefs. The included studies indicated that teachers have a positive attitude regarding inclusion. The following reason was given, "In sum, teachers' cognitive appraisals, emotional appraisals, and self-efficacy contribute to the extent to which teachers are likely to implement inclusive education reform in their classroom."(Dignath et al.,

2022, p. 2614) What this group found was that teachers were not strongly in favor or opposed to full inclusion. The researchers indicated this is troublesome.

> Given international trends toward inclusive education, what does it mean that teachers, on average, hold views that are toward the middle of the scale? Most likely it means that many teachers have beliefs that may be interfering with their ability to use inclusive practices.(Dignath et al., 2022, p. 2638)

This opinion is a reason for researchers to further investigate teachers' attitudes through qualitative means. By talking with teachers in small groups or one-on-one, it is possible that researchers will discover the reasons for such attitudes.

Dignath discovered other findings regarding inclusion. They also noticed, from the teachers they studied, a sense of inadequacy to effectively implement inclusive teaching techniques. "However, less than one-third of the general educators thought they had adequate resources, training and time required to successfully implement inclusive practices." (Dignath et al., 2022, p. 2614) This means that over two-thirds of the teachers studied did not feel prepared. This is a distressing statistic. The question remains that if the teachers have the lacking resources, will the attitudes and confidence result in implementing inclusive practice?

A meta-analysis by Chow, Bruin, & Sharma, indicated that inclusion is more unlikely to succeed if appropriate supports are not in place. "Although teachers' perceived support needs and perceived requirements to implement inclusion remain unclear, the research on what support they do need is largely limited. Unless teachers feel that they are well-prepared and supported for inclusion, the reform is unlikely to succeed." (Chow et al., 2024, p. 3323) This information indicates that the perception of being prepared and supported teachers is an important step toward successful inclusion. Yet, the exact definition of specific supports and preparation were unclear and lacked specificity. This may mean that more qualitative studies regarding teachers' attitudes and practices, in particular what supports they need, be initiated. This can be a way to determine what the exact needs are versus using a simple swath method such as an inventory.

Despite having knowledge of inclusive measures and knowing the need, Chow et. al. found that teachers' ability to make curriculum adjustments for students with IEPs is critical.

> Teachers' skills in adjusting the general curriculum to meet the support requirements of students with disabilities are perceived as important in implementing inclusive education. The finding is derived from the selected

> studies using various research designs across five continents. However, the findings from this review highlights that appropriate curriculum adaptation and adjustments is not widely implemented by teachers.(Chow et al., 2024, p. 3335)

While Chow acknowledges the importance of tweaking the curriculum to meeting students' needs, the article does not provide reasons as to why teachers are not doing this. This alludes to the need for additional information from teachers describing why they do not make adjustments to their teaching.

Another study, by Tiwari, discussed contextual factors shaping general educators' views on inclusive education. This study took place in South Texas. The teachers in this study had less favorable views on inclusion. "Several teachers in the study expressed uncertainty working with special education students in their classrooms, stating that the special education process is a complex process that has legal implications. Several teachers stated they do not know enough about the process and procedures of special education." (Tiwari, 2023, p. 325) This signifies that teachers need additional information regarding the special education process. This also leaves the question that if the teachers received the information, would they have more favorable attitudes and implement inclusive measures?

Ann DeVault investigated Iowa's World Language teachers' attitudes towards the inclusion of students with disabilities as well as the relationship between attitude and other factors regarding inclusion. The study included 41 middle and high school teachers. Using a mixed method design, the research found that teachers' attitudes towards inclusion were related to their skills in working with students with disabilities increased, "The findings from this study suggested that for [world language] teachers, like teachers in other subject areas, perceptions of knowledge about how to teach students with disabilities were correlated to teachers' attitudes toward inclusion." (DeVault, 2021, p. 685) Admittedly, this a small, localized study. All the same, the results give rise to further investigation of increasing teachers' skills regarding inclusionary techniques to observe how or if attitudes change.

From the included studies, it appears that general educators' gaining valid information regarding implementation of inclusive practices, making adjustments to lessons, and the legal processes special education practices may be an important factor for effective inclusion. Based on the above research, more research about preparing teachers for inclusion is important for the special education field.

2.1.8 Professional Development as a Possible Solution

Mohammed Al Jaffel conducted a qualitative study identifying issues that keep a general education teacher from creating an inclusive environment for students with ASD. This study was conducted in a private school that employed 20 teachers and had 120 students enrolled. According to the researcher, the teachers were positive about having students with ASD in their classroom so long as they had adequate supports. The research also indicates that teachers need training when working with students with ASD. "Teachers in this study emphasized that training on how to teach students with ASD is important for providing an appropriate education for these students. In addition, they agreed [general education] teachers are unprepared to teach students with ASD." (Al Jaffal, 2022, p. 5) This indicates a need for additional in-service teacher training in autism-this study's focus. This study focuses on one type of neurodiversity, autism, and is relatively small. It is also taking place in a private school. All the same, this might be the case for other teachers– in public or private schools. It may be that other teachers struggle with their personal abilities in teaching students with disabilities.

In contrast to the previously mentioned studies, one study outlined successful inclusion models. A 2004 study by Burnstein et. al, included two Southern California School districts at implementing full inclusion. The study included 90 educators from elementary and middle schools and took place over a two-year time frame. The schools indicated that professional development was a key to inclusion. "Staff development continued throughout the project but changed in focus, moving from the 'why' of inclusion to knowledge on 'how' to implement inclusive practices."(Burstein et al., 2004, p. 107-108) This study concluded that professional development played one of many important roles in the inclusion process. Despite its strong evidence in favor of professional development, this article was written twenty-two years ago, and it does not include high schools. A more recent study and one concentrated on high school inclusionary professional development may prove beneficial.

A study about the use of AI practices in grades 3-12 included 242 teachers in the Southeast portion of the United States. 38.4% of the teachers reported being high school teachers. The study gave insight regarding the importance of professional development. "Teachers were asked about the types of support or resources that would help increase their confidence in using AI. The most frequently selected support was 'Professional Development workshops'…"(Traga

Philippakos & Rocconi, 2025, p. 19) This points to positive indications that teachers understand professional development's benefits to their teaching practices. If teachers regard professional development as a useful tool for learning about AI, it might be prudent to investigate if professional development regarding inclusive procedures is equally useful.

A 2019 study in Israel pointed to teachers having improved attitudes toward special education after participating in a college level program to retrain teachers in special education. This qualitative study included 10 teachers. Although it was a small study, the results are interesting. "The interviewees conveyed a didactic shift in the sense of adopting teaching special needs students in classrooms." (Crispel & Kasperski, 2021, p. 6) This shows that these participants found the information in the professional development useful in the classroom. The study also indicated that teachers had more compassion for students with disabilities. One statement was, "The professional knowledge she has acquired enabled her to comprehend the emotional impact of the disability and as a result she became more sensitive and empathetic of the students' special needs."(Crispel & Kasperski, 2021, p. 7) Despite this being a small study and taking place in Israel, these results show that special education training impacted how teachers viewed special education students' struggles. It is plausible that a similar professional development model with secondary teachers in the United States might produce similar results.

2.1.9 The Effects of Professional Development

In a 2010 article, Denise Meister outlined ideas for creating effective professional development. The researcher conducted a series of interviews with secondary teachers. Among other things, Meister found that secondary teachers are relatively protective of their content area. "It is not unusual for subject area teachers to view their class as more important or relevant than others. Understanding and respecting these content specific biases are critical to allowing teachers to create their own professional growth." (Meister, 2010, p.894) Colson, et al echoed a similar sentiment among high school teachers. "First of all, secondary education emphasizes specific subject matters…Secondly, general education teacher preparation emphasizes content mastery more than special education preparation." (Colson et al., n.d., p. 21) This research acknowledges that secondary teachers concentrate efforts on content area more than some teaching methods.

Colson conducted a survey of 256 rural high school teachers asking about their self-efficacy in student engagement, instructional practices, and classroom management after professional development in co-teaching. The research design was a causal comparative quantitative design. They found, "There was not significant difference found between the groups in the areas of student engagement and classroom management. However, there was a significant difference between the groups when looking at their efficacy in instructional practices." (Colson et al., n.d., p. 25) This research also showed significant gains were made when teachers experienced 13 or more hours of professional development in co-teaching. These results are promising for professional development that expands beyond a one- or two -day workshop. It also gives credence for providing professional development for inclusive practices.

Some academicians assert that effective professional development is more successful when the information focuses on procedure than focusing on inquiry-oriented instruction techniques. Desimone states that successful professional development hinges on two theories. "…the effectiveness of PD rests on two kinds of theories about teaching and learning. The first is a theory of change, or how well the PD elicits desired changes in teacher knowledge and instruction. The second is the theory of instruction which relates to the extent to which the change in instruction improves student learning." (Desimone & Garet, 2015, p.3) The article went on to state, "Teachers find it easier to alter specific behaviors or routines that do not require new knowledge." (Desimone & Garet, 2015, p. 3) This may intimate that teachers are open to "tips and tricks", but they are not as willing to make pedagogical changes based on professional development alone.

In another meta-analysis that concentrated on digital instructional integration and teaching practices, the authors reviewed 23 studies. The analysis's purpose was to identify effective professional development programs and to determine how teachers' attitudes and changed with professional development. The reviewers found that the professional development had positive outcomes. The findings also revealed a need for on-going professional development. "The literature pointed to the need for continued support and resources after the initial training, the importance of addressing barriers such as the access to technology and the role of teacher attitudes in determining the success of [teacher professional development] programs." (Amemasor et al., 2025, p. 8) By highlighting the need for more support and education after an initial training, there is evidence that one professional development session is inadequate for

sustained change. If research points to a need for continued supports regarding digital teaching issues, one might ask if the same continued supports are important for implementing inclusive teaching methods.

In a 2025 study conducted Jang, et al. researchers sought to increase teachers' self-efficacy regarding multicultural practices. There were several interventions that positively impacted educators' self-efficacy. This included initial preparation, ongoing professional development, multicultural school climate and sociodemographic characteristics. (Jang et al., 2026) The findings showed that professional development in multicultural and multilingual teaching was ranked sixth as an activity that impacted teachers' self-efficacy. (Jang et al., 2026, p.7) The other factors included: initial training, identification as a minority, school diversity practices, gender (female), and training in EAL. "Teachers' on-going engagement in PD was positively associated with their MTSE…More importantly, our results emphasize that it is the nature of PD, not merely participation, that is critical." (Jang et al., 2026, p. 7) While many factors were at play in this study, this finding shows that professional development can have a positive impact on teachers' confidence and use of inclusive teaching strategies.

2.2 Inclusive Teaching Methods

This section will include three inclusive teaching methods. There are multiple inclusive teaching methods. The methods include co-teaching, differentiated instruction, and universal design for learning. These three methods are included because the school in this study uses these methods along with multitiered system of support. Because the district has a structured system for discussing MTSS, this method is not part of this study.

2.2.10 Co-Teaching

Co-teaching is one inclusionary teaching model. "Co-teaching is a collaborative approach to instruction in which two teachers, typically a general education teacher and a special education teacher, work together to plan and then implement instruction for a class that includes students with disabilities" (Co-Teaching, n.d.). In a webinar facilitated through the Council of Exceptional Children, Marilyn Friend and Tammy Barron described how to conduct a co-taught class. The pair stated that both teachers bring expertise to the classroom and should have an equal teaching role and partnership. The content area teacher is an expert on classroom content

Meanwhile, the special education teacher learns not only the content band seeks methods that promotes in-depth and meaningful learning. (Friend & Barron, 2022) One of six methods are routinely used: one teach/one assist; small group instruction; dividing the class in two with both teachers teaching the same material; alternative teaching - one teacher is responsible for general content and the other teacher works individually with students; and one teach – one observes method. (Willard, 2019, p 88)

In a 2023 article, the researcher studied students' perceptions of coteaching and analyzed multiple articles. In the researcher's words: "Students' perceptions of co-teaching were overwhelmingly positive. Students indicated they enjoyed the diverse instructional strategies, varying perspectives, and ease afforded by having two teachers and that these benefits helped them succeed academically" (Wagner, M., Cosand, K., Zagona, A., & Malone, B., 2023, p 322). Another positive finding in this study revealed students' positive response to presenting material from a variety of perspectives (Wagner, M., Cosand, K., Zagona, A., & Malone, B., 2023, p. 323).

Keeley also noted positive feedback from students. This study asked students to complete a rubric/Lickert scale to determine satisfaction and effectiveness of coteaching. Results indicated students preferred small group instruction to other teaching methods. "Another pivotal finding was that students responded that their confidence about their learning was significantly higher when Station, Alternative, Parallel, or team teaching was implemented compared to one teach/one assist" (Keeley, R., 2015, p 12). This study points to positive outcomes regarding co-teaching.

In 2017 Scruggs and Matroiperi conducted a study to determine effective coteaching methods. The duo noted that coteaching is the most utilized inclusion method. However, there is often a disconnect between the general education teacher and the special education teacher. As a result, the researchers identified components that make coteaching effective. These include effective communication, plan time, and content mastery. (Scruggs, T., Matropieri, M., 2017, p 290) They also noted that when any of the following had not occurred, coteaching was not optimal and, at times, infeasible. This demonstrates that co-teaching, while very popular, requires multiple components to be effective.

2.2.11 **Differentiated Instruction**

According to Carol Ann Tomlinson, Differentiated Instruction is described as, "At its most basic level, differentiating instruction means 'shaking up' what goes on, in the classroom so that students have multiple options for taking in information, making sense of ideas, and expressing what they learn." (Tomlinson, 1995/2017, p. 1) Tomlinson reasons that students learn in different ways. As a result, the classroom should adapt for those learning differences. The "ultimate" differentiated classroom should provide supports and scaffolds for students at a more basic level and challenges for those at a higher level. (Tomlinson, 1995/2017, p. 13) This section will provide additional information about the benefits of Differentiated Instruction in an inclusive classroom as well as provide study results regarding the same.

Tomlinson goes on to state that, "In a differentiated classroom the teacher proactively plans and carries out varied approaches to content, process, and product in anticipation of and response to student differences in readiness, interest, and learning needs." (Tomlinson, 1995/2017, p.10) This means that learning scaffolds are embedded in lessons as are enrichment activities. Tomlinson states repeatedly that personal relationships with students and informal assessments drive how content is taught. Due to the individualized nature of differentiated instruction, some researchers view DI as a natural fit in the inclusive classroom. "Differentiated instruction, in contrast, represents a relatively recent response to the growing trend of including students with disabilities in general education, which demands individualizing within increasingly heterogenous classrooms." (Landrum & McDuffie, 2010, p. 8) They further state that the goal of differentiated instruction is to maximize learning for all students.

Bondie conducted a metanalysis regarding differentiated instruction. The group used 28 studies published between 2001 and 2015. All articles were peer reviewed and determined that differentiated instruction had an impact on teaching practice. All studies took place in United States, general education classrooms. Teachers reported an increase in decision making. This was met with mixed emotions.

> All studies reported an increase in teacher decision making as a necessary step to the implementation of DI. Based on the framework used and the context, the type of decision making differed and teachers' feelings about making decisions to adjust instruction ranged from being empowered to overwhelmed. (Bondie et al., 2019, p. 349)

A possible goal for professional development is to give teachers skills to differentiate instruction without feeling overwhelmed.

Another metanalysis reviewed 14 articles on differentiated instruction. The authors of this study concluded that there are very few high-quality differentiated instruction studies conducted at the secondary level. However, for the ones that have been conducted, direct instruction holds promise as an inclusive instruction model. "Although we cannot give a conclusive answer about the effectiveness of differentiated instruction in secondary education, most of the included studies do illustrate the possibility of improving student achievement by means of differentiated instruction."(Smale-Jacobse et al., 2019, p. 17) This gives reason to include differentiated instruction as a teaching model when discussing inclusion.

2.2.12 **Universal Design for Learning**

Universal Design for Learning is an inclusive teaching technique whose roots come from the architectural community. Architects, complying with tenets of American with Disabilities Act, realized that adding accommodations (wheelchair ramps, automatic doors, etc.) to buildings was more expensive than simply making the accommodations part of the building aesthetic. The building accommodation became aesthetically pleasing and a tool for all to use versus solely for a person with a disability. (Hitchcock et al., 2002, p.9) The education community adopted the ideology and wanted to make content material accessible for all students and minimize the need for special accommodations. The result is Universal Design for learning.

> Universal Design for Learning (UDL), originally designed by the organization CAST, is a framework that guides proactive design of classroom instruction and learning opportunities to make them effective for a broad range of learners. UDL offers guidelines on how we can make our instruction and classroom environments welcoming, responsive, supportive, and flexible, so that the fewest students possible require additional support or adaptations." (Jung, 2021, p. 39)

UDL is one inclusive teaching model that appears promising for many students and educators.

Keeping with social constructivism theory, "UDL is based on the view that when a student does not make progress in their learning, educators look for potential barriers in the curriculum and their pedagogy, rather than barriers caused by the student." (Capp, 2020, p. 708) This aligns with social constructivism because it takes the focus off the person with a disability

and on changing the person's surroundings to remove inherent structures that impede learning. This requires having clear learning goals and a solid understanding of your students.

A lesson or unit that uses UDL begins its design with the goal of the lesson. Then it accounts for students' interests and abilities. "Once you understand the true purpose for learning, you can use various means, media, scaffolds and supports to help students reach the goal without undermining the challenge and the learning." (Hitchcock et al., 2002, p. 11) As noted in Hitchcock's quote, a lesson constructed using UDL methods will include multiple means of engagement, multiple means of representation, and multiple means of expression. (Capp, 2020, p. 710; Hitchcock et al., pp. 11-14, 2002; Jung, 2021, p. 39)

UDL is appropriate in many learning environments, but it can be especially useful in an inclusive environment. "Teachers can identify how the student's disability impacts them in their particular content area, identify potential barriers, and use UDL to proactively design their curriculum and instruction to meet the individual student needs."(Cook & Rao, 2018, p. 183) In other words, the supports a student with a disability may require is embedded in the curriculum itself. As a result, all learners benefit from the design. "Flexible materials fulfill the promise of UDL in that they open doors and circumvent barriers for students with disabilities and also improve learning opportunities for all students in the same way that universally designed buildings and technologies benefit 'mainstream' users." (Hitchcock et al., 2002, p. 12)

While UDL is considered a worthwhile method, studies show that teachers sometimes lack confidence when using the model. A study from 2020 examined how confident Australian teachers were regarding the use of UDL. The practice was adopted by the country in 2012 as an inclusive practice. (Capp, 2020, pp. 709-710) The researcher sent a questionnaire to the teachers. The teachers answered using a Lickert scale of 1 being very unconfident to 5 being very confident. Teachers felt comfortable providing multiple means of expression and methods. "Providing students with multiple ways of demonstrating their knowledge and understanding was identified as being more challenging for primary and secondary teachers than representing knowledge to student in multiple ways."(Capp, 2020, pp. 714-715) This demonstrates gaps in teachers' knowledge regarding UDL. However, that does not take away from the effectiveness of this method. The challenge is plugging the metaphorical holes in teachers' knowledge, so they feel confident using this teaching method.

Another study echoes Capp's findings. In a metanalysis published in 2025, the authors state possible barriers to implementing UDL effectively, "Limited Professional development, insufficient institutional backing, and inflexible curricula continue to constrain widespread integration." (Catama, 2025, p. 7) Other cited challenges included inaccessible materials, limited proactive course design, lack of planning time, etc. In six of the eight articles, lack of professional development and limited training were cited as challenges to implementing UDL. (Catama, 2025, pp. 9-10) In fact, Catama stated clearly, "For classroom teachers and instructional designers, ongoing practice-based training is critical." (Catama, 2025, p. 11) This article purports that UDL is a sound inclusive teaching method. However, it also points to the fact that teachers need on-going training to improve and maintain the implementation of said technique.

In summary, UDL is one method for classroom inclusion. The two cited studies show that teachers are open to using UDL. However, cited problems included lack of training and on-going professional development as two challenges of using UDL.

2.3 Theoretical Background – The Fusion of Andragogy, Concept Based Attainment Model, and Change Theory

2.3.13 Andragogy

Andragogy is an adult learning model acknowledging that adults have different learning needs than children. Andragogy means: "…the art and science of helping adults learn and was ostensibly the antithesis of the pedagogical model." (Knowles et al., 2005, p. 61). This theory pulls from Jesus, Aristotole, and Socrates' philosophies. "These notable teachers perceived learning to be a process of mental inquiry, not passive reception of transmitted content. Accordingly, they invented techniques for engaging learners in inquiry." (Knowles et al., 2005, p. 35) In other words, according to this theory, adults learn by engaging with material differently than by having direct instruction.

In the early 1960s, Malcolm Knowles, an American, created the Andragogy structure familiar in the United States and Brittain. Knowles' process involves the following elements: preparing the learner; establishing a climate conducive to learning; creating a mechanism for mutual

planning; diagnosing the need for learning; formulating the program objectives; designing a pattern of learning experiences; conducting these learning experiences with suitable techniques and materials; and evaluating the learning outcomes and re-diagnosing the learning needs. (Knowles et al., 2005, p. 115).

The learning climate considers the physical comforts such as comfortable chairs, room temperature, and room layout. Andragogy places an emphasis on learning materials. "Another aspect of the environment that all theorists agree is crucial to effective learning is the richness and accessibility of resources – both material and human" (Knowles et al., 2005, p.119). It is important, then, that the learning material and instructors are available and add to student learning. The learning climate includes approaching students with respect. While the learner should understand the expectations, that person should also feel appreciated and trusted (Knowles et al., 2005, p.121). Climate is a critical piece in an Andragogical structure. "If the climate is not really conducive to learning, if it doesn't convey that an organization values human beings as its most valuable asset and their development its most productive investment, then all the other elements in the process are jeopardized" (Knowles et al., 2005, p.122).

In the book *The Adult Learner* the authors point out that adults learning is rooted in the idea that the learner is committed to learning (step 3). In keeping with a commitment to learning, Step 4 is the point an individual recognizes that other options exist. They desire a change. "The human resources development has some responsibility for exposing the learner to role models he or she can observe, or providing information from external sources so that the learner can begin to develop a realistic model for himself or herself." (Knowles et al., 2005, p. 124) In other words, if a person has never known a different ideal exists, one cannot determine if the current self-trajectory is satisfactory. By exposing adults to multiple options and models either in the workplace or in life, individuals can decide if or how they want to change. This leads to the adult formulating objectives for learning.

The role of the teacher, then, is to facilitate learning.

> "The andragogical model involves choosing problem areas that have been identified by the learners through self-diagnostic procedures and selecting appropriate formats (individual, group, and mass activities) for learning, designing units of experiential learning utilizing indicted methods and materials,

> and arranging them in sequence according to the learners' readiness and aesthetic principles" (Knowles et al., 2005, p. 131).

Learning materials and methods are based on the learner's self-identified needs. The role of the instructor is to provide learning supports for the student's needs. This is known as Operating the Program. Evaluating the program involves four steps: The participants' experiences; the participants' knowledge acquisition; the participants' behavioral changes; and the results evaluation – how has the learning impacted the organization (Knowles et al., 2005, p. 132-133).

Andragogy has proven effective. In a study entitled Education changes a person: Exploring student development in a college-in-prison program through critical andragogy, Conway used an andragogical approach for educating incarcerated students. The phenomenon study determined how the educational experiences were beneficial to incarcerated individual and made connections between their learning and social issues (Conway, 2024, p 2010). Twenty-one students in Boston University's College Prison Education Program participated in semi-structured interviews. One of many cited benefits from the andragogical approach is that students learned from each other. "Peer-educational activities - including small group work, classroom discussions, and peer-directed exercises- allow students to share and take in knowledge from each other." (Conway, 2024, pp 2019-2020) Some may interpret this as using collaboration as a learning method. As one can see, Conway's work used unconventional methods to work with unconventional students. developed an increase in confidence and self-esteem while obtaining a college education.

George Demetrion favors andragogy. Demetrion authored a journal article that discussed the different learning theories related to adult education. An interesting take away reads:

> "While a nearer-term skill-based knowledge acquisition focus may necessitate well laid-out learning sequences, longer-term development requires subtler internalization of a range of tasks and objectives, in which one's identity as a competent knowledge user becomes positively reconstructed as part of the ongoing process of applied learning in real-world contexts." (Demetrion, 2021, p 30)

This quote reflects the idea that a student relates their personal learning to what they know and experience.

Andragogy, as a methodology, has been used by multiple disciplines. Students in a cardiothoracic surgery program prepared for classroom lessons using a simulator prior to attending classes on surgical methods. The article's author found students who used the simulation prior to class were more likely to understand and retain the information presented in lectures. "…retention of knowledge and skill, tested 1 month post instruction, was significantly better in the [simulation than instruction] group" ("OMG! Andragogy for Millennials," 2020, p 1250). The authors theorize that because students have a frame of reference for discussion, they are more likely to retain the new information long-term. ("OMG! Andragogy for Millennials," 2020 p 1250). This is a very limited study. It is one class with limited parameters. All the same, it potentially reinforces the idea that having background information and experiences gives students/learners a point of reference for learning material.

2.3.14 **Change Theory**

Change Theory is an action theory contending the effectiveness of a program is based on the stage of change. Tony Wagner, in the article entitled Leadership for learning: An action theory of school change, states: "I call this an 'action theory' of change because it is a synthesis of ideas informed by theory but developed primarily from practice-trial and error and disciplined reflection" (Wagner, 2001). Change Theory acknowledges that participants have experiences, desire change, and reflect on personal, professional practices. This same article states that four conditions need to be present for change to occur: "[1]shared vision of learning, good teaching, and assessment; [2]understanding of the urgent need for change; [3]relationships based on mutual respect and trust; and [4] engagement strategies that create commitment rather than compliance" (Wagner, 2001, p 379).

Change theory also gives credence to adaptive challenges. "An 'adaptive challenge' …is one for which the necessary knowledge to solve the problem does not yet exist. It requires creating the knowledge and the tools to solve the problem in the act of working on it" (Wagner et al., 2005). According to this theory an adaptive challenge identifies an issue. The means solving the challenge requires working in the moment versus having a clear outline.

This theory also acknowledges that educators need clarity for various learning components. Regarding school reform, Wagner stated:

> "First, we need clarity about what are the few most important things students should know and be able to do – a short list of expectations for all students, which grows out of a new awareness of how the world has changed and of the essential skills needed for work and citizenship today. And then we need a deeper shared understanding of the good teaching practices that can achieve those goals and of the performance-based assessments that best measure student progress." (Wagner, 2001, p 381)

Using this theory, it is important to define expectations. The expectations should take into consideration societal changes. Then, educators can determine the best teaching practices. Finally, student performance should measure student progress.

Before stating what successful change should look like, an entity must concede that change is needed. Wagner feels that using qualitative data creates an urgency for change. "Very often, we find that gathering and sharing qualitative data can create more urgency than numbers alone…The stories, the faces, and the voices remain with us with an insistency that numbers can rarely inspire." (Wagner et al., 2005, p 72) This suggests that when trying to implement a change, giving "a face" to the problem may personalize the problem for decision makers.

Building an atmosphere of mutual trust and respect is also important. "During the preparing phase, leaders must begin to forge relationships that afford new ways of working and talking with one another" (Wagner et al., 2005, p 213). In other words, participants need to engage with one another in different ways than they may be accustomed to. Wagner states the goal is create a sense of community. This community may produce positive learning discussions. "…a shared sense of community nurtures active engagement in learning and collaborative problem solving." (Wagner, 2001, p 382) Again, Wagner contends this collaborative method will produce solutions.

Finally, change needs to seek commitment rather than compliance. "Both students and teachers learn more and do more when they feel part of something important that is larger than themselves and that they have helped to create." (Wagner, 2001, p 383) A commitment should be: genuine, related to improved instruction, open for improvement and growth, prepared to implicate the change agent, and important to the change agent. (Wagner et al., 2005, p

104) Being committed also means a person reflects on the obstacles that individual creates for him or herself.

Researchers use Change Theory as a framework. In a commentary by Reinholz and Andrews, the authors write: "An important subset of change research is *change theory*, which we define as a framework of ideas, supported by evidence, that explains some aspect of change beyond a single project." (D. L. Reinholz & Andrews, 2020, p 5) This quote was taken from an article regarding changes in STEM education. The authors noted how each theory of change followed the tenets of Change Theory.

In a 2021 literature review in the International Journal of STEM Education, Reinholz, et al. study how change theory is used for systemic change. (D. Reinholz et al., 2021, p 2) The authors differentiate between theories of change and change theory by saying: "A theory of change is tailored to a single change initiative by the project team and may be revised throughout a project's lifecycle; in many ways." (D. Reinholz et al., 2021, p 3) They contrast this by stating: "the scope of the change theory goes well beyond a single change initiative and is designed to contribute to collective knowledge about how change occurs." (D. L. Reinholz & Andrews, 2020, p 6) The authors conclude that:

> Drawing on change theory involves more than briefly summarizing a theory in the introduction of a paper. Using a theory to frame scholarly work involves using the theory as a lens or guide that directly informs specific components of the work, including inventions, focus, research questions, measurement, and evaluation. (D. Reinholz et al., 2021, p 18)

This reiterates the need for a clear goal prior to adopting a change.

2.3.15 **Concerns-Based Adoption Model**

According to the book *Implementing Change: Patterns, Principles, and Potholes* by Hall & Hord, The Concerns Based Adoption Model (CBAM) is based on 12 principles. The first principle is that change is learning. Second, change is a process not an event. Third, implementing change is a systemic effort. Fourth, organizations adopt change while individuals implement change. Fifth, schools are the primary organizational change unit. Sixth, District and school-based leadership is essential to long-term change and success. Seventh, facilitating change is a team effort. Eighth, interventions are key to the success of the change

process. Ninth, appropriate interventions can reduce resistance to change. Tenth, all-way communication is needed all the time. Eleventh, mandates can work. Finally, sustaining change requires additional time, interventions, and leadership.

In a study regarding vocational education, Rebecca Saunders provides an excellent summary of CBAM. "…the Concerns Based Adoption Model comprises three dimensions that act as lenses through which to understand the change process and gain insight into how change is experienced by individuals and groups…". Saunders goes on to refer to stages of concerns; levels of use; and innovation configurations. These three dimensions create a theory with which to measure progress not just on the group level but also on individual level.

Before understanding use or concerns, researchers identify a change. This change is an innovation. The entity introducing the change needs to have a succinct vision of the change. (Hall & Hord, 2020, p 69)

> The Practice Profile calls on leaders of an innovation to formally define how it should look when it's used in the classroom or building. The profile first includes a precise description of the resources and conditions necessary to implement the program. Then perhaps six to eight critical components of a program are identified, along with sets of descriptive examples of what each component looks like when used appropriately. (Horsley & Loucks-Horsley, 1998, p 3)

Before presenting a change, the proposing entity needs to have a clear understanding of each aspect of the change. Change requires a prototype to show the participants.

Stages of Concern (SoC) are marked by the participant's personal feelings throughout the change. "These describe the affective dimension of change; how people feel about doing something new or different, and their concerns as they engage with a new program or practice." (Horsley & Loucks-Horsley, 1998, p 2). There are four levels of concern – unrelated, self, task, and impact. Regarding Unrelated Level, Horsley and Loucks refer to this as a time when a person isn't aware of the change or does not seek more information. In other words, the participant has no interest in the issue regarding change. (Horsley & Loucks-Horsley, 1998, p 2) Self-concerns is characterized by individuals formulating questions about something new. (Horsley & Loucks-Horsley, 1998, 2) A person begins to wonder how this might work in his or her classroom or how to implement the change. Self-concerns are followed by task concerns. "Task concerns emerge as we engage with new skills, time demands, materials, etc."

(Horsley & Loucks-Horsley, 1998, p 2) The pinnacle concern is Impact Concerns. (Hall & Hord, 2020, p 108; Horsley & Loucks-Horsley, 1998, p 2) At this stage, the participant is invested in the benefits of the change and strives to make the change work for others.

Levels of Concern are broken into smaller segments called Stages of Concern (SOC). Unrelated Level of Concern contains the First SOC. The first stage is 0 or unrelated or unconcerned. This means the participant has very little interest in the innovation. Under the Self Level of Concern are Stage 1 and Stage 2. Stage 1 is informational – the participant wants more information but is not invested in making a personal change. Stage 2 is the personal stage. At this stage, the participant wants to know how the innovation will affect him or her. (Horsley & Loucks-Horsley, 1998, p 5) For example, a teacher may be wondering about time commitments and materials related to the change but still not implementing change.

Task Level of Concern is marked by Stage 3 or management. (Hall & Hord, 2020, p 107; Horsley & Loucks-Horsley, 1998, p 2) As the name implies, the innovation is being implemented, and the participant has questions about his or her ability to oversee the innovation effectively. Stage 4 is titled consequence. At this stage, the participant wants to know how the innovation affects students in the classroom.

The final Level of Concern is Impact Concerns. "Impact concerns are the ultimate goals for student teachers, teachers, and professors. At this level the concerns focus on what is happening with students and what the teacher can do to be more effective at improving student learning." (Hall & Hord, 2020, p 107) This Level is clearly marked by teachers wanting to know how this innovation can be broadened or work for other situations. Accordingly this Level contains Stage 5 and Stage 6 of SoC. (Hall & Hord, 2020,, p 107 Horsley & Loucks-Horsley, 1998, p 5) Stage 5 is collaboration. At this stage the participant is talking with co-workers about the innovation. This process is meant to improve on the work being done. Stage 6 is refocusing. This stage is achieved when the participant is comfortable with the change and is implementing it with authenticity. Additionally, the participant is seeking additional ways and contexts in which the innovation can help others. (Hall & Hord, 2020, p 109)

Levels of Use (LoU) refer to the observable actions of the participants. The researcher can actively measure the way the participant uses the innovation. There are seven levels and two categories of LoU. The two categories are Users and Nonusers. (Hall & Hord, 2020, pp 135-136). The names are self-explanatory.

The first three LoU are in the Nonuser category. Level 0 is Nonuse. The individual has little if any knowledge of the innovation and has no interest in learning (Hall & Hord, 2020, pp136-137). Level I is Orientation. At this level, the participant is aware of the innovation and is seeking additional information about its demands and value. Level II is Preparation. At this time, the participant is preparing to use the innovation for the first time (Hall & Hord, 2020 p 137).

Users, a different category, are categorized as Levels three to six. Level III is Mechanical Use. "It's the point in our use of something new at which we often feel inadequate and awkward. We feel as though we are preparing a new recipe for the first time, constantly referring to the cookbook for guidance and reassurance." (Horsley & Loucks-Horsley, 1998 p 2) Level IVa is categorized as Routine. The participant has a stabilized pattern of use. However, little thought is given to use or results. (Hall & Hord, 2020, p 139; Horsley & Loucks-Horsley, 1998, p 3) Level IVb is distinguished by participants not only using the innovation but also adjusting it to meet their personal needs. (Hall & Hord, 2020, p 139; Horsley & Loucks-Horsley, 1998, p 3) Level V is Integration. This is the time participants share their experiences with colleagues . (Hall & Hord, 2020, p 139; Horsley & Loucks-Horsley, 1998, p 3) Finally, in Level VI the participant looks for improvements or modifications to facilitate the innovation's continued success. (Hall & Hord, 2020, p 140; Horsley & Loucks-Horsley, 1998, p 3)

According to Khobodi and O'Toole, CBAM is an effective research theory. The researchers wanted to know if CBAM would provide an effective framework to help Lesotho educators move from a teacher centered classroom to a student-centered classroom. Lesotho, an African country, adopted a student-centered science curriculum. After adopting the teaching approach, administrators discovered teachers were not implementing the curriculum. Researchers used the CBAM as a framework for change. They conducted a series of professional development sessions that provided teachers with tools and techniques to move from a teacher-centered curriculum to a student-centered one. Educators attended summer training sessions on how to use the curriculum. The researchers engaged them in lecture and hands-on sessions.

The results of this study proved that CBAM is a favorable research theory.

> This investigation provides support for the following contentions: firstly, the CBAM provides an effective framework for understanding teacher response to change; the professional development project documented here appears to have

> been successful because participants passed through the CBAM stages thoroughly enough to have adjusted their own practice significantly enough to produce adaptations of policy innovations that did not excessively warp the intent of those innovations. (Khoboli & O'toole, 2012, p 146)

As one can see, CBAM served two purposes in this study. One, it gave a proverbial road map for researchers. Second, it served as a marker for estimating teachers' changes in practice and attitudes.

Africa was not the only continent to use CBAM to implement change. Australian educators wanted to know how vocational education teachers responded to professional development and if CBAM is useful in other professional development ventures. In this study the 27 volunteer participants attended small group sessions twice a year. "At each session, the program consultant modelled a selected range of instructional innovations, and participants considered the theory and research that supported the use of these innovations." (Saunders, 2012, p 188) CBAM was a useful tool for measuring individual's ideas towards the change. "The stages of concern dimension captures individuals' feelings, preoccupations and perceptions towards implementing change in their context" (Saunders, 2012, p 190). Saunders went on to state that CBAM was a useful tool for deciphering participants' responses to change.

2.3.16 The inter-relatedness of the theories and their impact on this study

A conglomeration of Change Theory, CBAM, and Andragogy is appropriate for this study. Because this study is focusing on how teachers' practices and attitudes change, it is critical for the researcher to understand the unique needs of adult learners. Therefore, Andragogy is appropriate. Additionally, the research requires measurement. CBAM offers two forms of measurement. One portion of this theory recognizes attitudinal change while a second measures action changes. Change Theory understand that unless the participants feel an ownership of the change, change will not take place. These three theories are the basis of this study's intervention – Professional Development.

The three theories also provide essential road maps for realistic change. Change theory reminds the researcher that building relationships is more important to lasting change than expediency. As a result, it is critical to take time to listen and interact with participants versus demanding immediate change.

The attached graphic shows how this study is at the focus. However, the it is surrounded with the methods and ideals outlined by Andragogy, Change Theory, and Concerns Based Adoption Model.

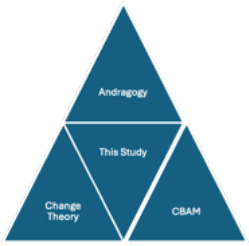


Figure 2.1 The interconnectedness of the theories and this study the theories and this study

2.4 Conclusion

The research outlined in this study point to a need for understanding what teachers need to successfully include students with IEPs in the general education classrooms. Three inclusion models were identified: co-teaching, differentiated instruction, and universal design for learning. Finally, the three theories from which this study is based – Andragogy, Change Theory, and Concerns-Based Adoption Model- were also outlined.

Chapter 3 – Method

The current study attempts to answer the question: what effects, if any, will secondary, school-wide professional development focusing on special education inclusive strategies have on teachers' attitudes and practices toward inclusive education? In this qualitative study, five secondary general education teachers from different content areas participated in professional development sessions for all certified staff members over a two-school year time frame. Data was collected using semi-structured interviews. Results were coded and are recorded in Chapter Four. The study is based on the theories of Andragogy, Concept-Based Attainment Model, and Change Theory.

This chapter will outline the procedure the researcher used in this study. This includes the reasoning for a qualitative study using semi-structured interviews. Further, information will include the sample, the context, and data collection. Finally, information regarding data coding is included.

3.1 Measuring Change

3.1.17 Qualitative Study

According to Bhattacharyla: "The goal [of the qualitative researcher] is to simply understand and explore in an in-depth manner and not to generalize" (Bhattacharya, 2017, p. 19). Qualitative studies analyze issues and seek a deep understanding of experiences through the participants' perspectives. In this study the general educators' experiences and reactions to said experiences are studied. The goal is to understand what each participant gleaned from the sessions and how that impacted or changed teaching practices and attitudes towards inclusion. Each participant brought different mindsets, values, and experiences into the professional development sessions.

Listening to the various voices and shared experiences gives a deeper understanding to attitudes. The participants were selected specifically to cover multiple content areas. Each content area has a different need and experience. These experiences contribute to their understanding and use of materials presented. Qualitative research seeks multiple perspectives, because every perspective has something to contribute to the matter (Taylor, 2015). American high schools provide an array of elective and core content course choices. Therefore, seeking

and understanding the experiences of a variety of content area classroom teachers' is a prudent measure for effectiveness.

This study seeks to understand the participants' attitudes towards inclusion; if after attending the PD session, there was an attitude change; was the attitude change positive or negative; and was there a change in practice regarding inclusivity. Because the individual experiences are valued and needed, a qualitative design can determine if change – and the extent thereof – has occurred.

3.1.18 Case Study

Hammond and Wellington refer to case studies as follows:

> …a case is literally something -a unit of analysis- in which the something could be a school, a person, a political system, an event, a type of leadership and so on depending on the particular interest of the researcher and the field in which he or she works."(Hammond & Wellington, 2020).

Bhattacarya states that: "This type of research involves in-depth contextual study of a person, people, issue, and place within a predetermined scope of the study." (Bhattacharya, 2017. p. 26) In other words, case studies are contained to a focused group and issue. It is not intended to be a generalized study.

A case study does not simply state that an event occurred. Rather, a case study wants to know why that event occurred and how that event impacted other similar events. It seeks to understand the impact or lack thereof on individuals. Going further, it wants to know the individuals' reactions to the event and if the event caused a change in attitude and/or action.

This study focuses on one group – teachers from one rural fringe high school. Likewise, the study seeks to understand how an on-going intervention (professional development sessions) impacts said teachers' attitudes and practices regarding a population of students – special education. The research seeks a complete, im-depth understanding of the difference, if any, professional development has on beliefs and practices. As Bhattachrya states: "Case studies are also targeted at information-rich sources for in-depth understanding and can and can also be used to inform policies or to uncover contributing reasons for cause-and-effect relationships" (Bhattacharya, 2017, p. 109) Therefore, it is appropriate to use a case study.

3.1.19 Semi-Structured Interviews

As stated multiple times, the participants' change of attitudes, pedagogy, and instruction because of professional development is the subject of this study. Simply stated, the researcher needs to listen to the participants' story seeking understanding and asking for clarification. Semi-structure interviews are a tool for researchers to listen to participants' stories within a bounded issue. "Semi-structured interviews are used to facilitate more focused exploration of a specific topic, using an interview guide." (Bloomberg & Volpe, 2019 p. 193) Because the interview is a guide versus a map, the interviewer can stop and probe for more in-depth answers or to gain clarity. Interviews are a method where a person's body language and tone of voice can add to the researcher's understanding. For these reasons, the researcher used semi-structured interviews to gather data. "Semi-structured interviews are the preferred data collection method when the researcher's goal is to better understand the participant's unique perspective rather than a generalized understanding of a phenomenon" (Adeoye-Olatunde & Olenik, 2021). Each participant provides a plethora of information. Therefore, it is important the researcher guide the conversation. This was done by preparing questions that lead to deeper inquiry and seeking clarity when needed.

This method also falls under the case study umbrella. "Case study research is commonly used in research to answer focused questions with in-depth inquiries" (Bhattacharya, 2017, p. 109).

Seeking in-depth answers is critical to the study's usefulness. In particular, the researcher is determining if the information presented in professional development sessions stirred a change in educators that ultimately changed their practice and/or pedagogy. This study consists of five participants from the same school, who participated in the same professional development sessions, and took part in six semi-structured interviews over the same two school years. The teachers' various content areas add different perspectives as does their educational and personal backgrounds.

3.2 Method

3.2.20 Context

This study took place in a rural fringe district. According to the NCES, a Rural-Fringe school is: "Territory outside an urban area that is less than or equal to 5 miles from an urban area with a

population of 50,000 or more, as well as territory outside an urban area that is less than or equal to 2.5 miles from an urban area with population less than 50,000" (Geverdt & Maselli, n.d.). During the 2024-2025 the school had 387 students. Caucasian students made up 89.41% of the student body. 4% of students were Hispanic, 1% Asian, 1% African American, and 1% Native American (District Snapshot, n.d.). Further the free and reduced lunch rate hovered at 12%. In 2025, the graduation rate was 97%. 81% of graduating students went on to college or trade schools. The district spent $21,255/student. The student to teacher ratio is 17:1 (Platteview High School – Home of the Trojans, n.d.). Approximately 11 percent of the student population had an Individual Education Plan (District Snapshot, n.d.).

During the 2024-2025 school year (the year this study began), 43 students had Individual Education Plans. Of those students, 17 were identified with attention deficit hyperactivity disorder as either a primary eligibility (under Other Health Impaired) or a co-morbidity. Twelve students were identified as having autism spectrum disorder. Thirty-three verifications of Specific Learning disabilities in math, reading, or writing occurred. Several students had verifications of Speech and Language Impairment with either receptive or expressive language impairments cited as the primary eligibility or comorbidity. Three incidents of emotional disturbance or intellectual disabilities were also reported.

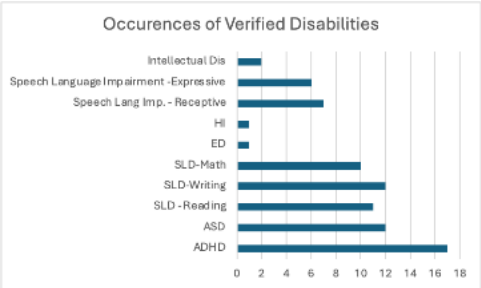


Figure 3.1 Occurrences of Verified Disabilities

The school has 35 full-time teachers. 82% of the teachers have a master's degree. All of the teachers are white (District Snapshot, n.d.). The average years of teaching experience is 18 years. (District Snapshot, n.d.).

The location was chosen based on need and convenience. The researcher is a special education teacher at this school. The researcher received approval from district and building level administration prior to completing the research within the work setting.

3.2.21 Sample Selection

3.2.21.1 Recruitment

Before asking for participants, the researcher gained approval from the district superintendent, the district special education director, and the school principal to conduct this study. After gaining approval, the researcher submitted a request to the Kansas State University IRB for permission to move forward with the research.

All participants were volunteers and the researcher's co-workers. The researcher recruited volunteers by sending an email to the school's certified staff members. Since the participants were readily available for the researcher, the sampling is considered a convenience sample.

3.2.21.2 Vetting Process

Participants were vetted using content area parameters. The first consideration was the individual's availability to attend all/most Professional Development Sessions. Second, special education teachers were excluded from the study. The reason for this is that the researcher sought the general education teachers' perspectives. Only one person from each content area was included. This allowed for perspectives based on content areas, core subjects, and elective courses. The participants were not compensated for their participation in the study. Each participant signed and informed consent for release of information before the first interview.

3.2.21.3 Demographics

The five participants consisted of 3 males and 2 females. All participants have bachelor's Degrees and are fully certified, in-service teachers. Three participants have at have two master's degrees; and one participant has a PhD. All participants are Caucasian. The participants' average years of teaching experience is 24.2 years. The content areas of the teachers include English Language Arts, Social Studies, Physical Education, Foreign Language, and Science. Four participants reported that they had not taken a special education class or participated in special education professional development since acquiring either a master's or undergraduate degree. One participant voluntarily attended a professional development session

regarding special education since acquiring a master's degree. One participant has a master's degree in special education, but has not taught as a Special Education teacher.

Participant Name	Theodore	Judy	Mary Ellen	Wallace	Clarence
Level of Education	PhD	2 Masters One in Spec Ed. But not a practicing special education teacher	2 Masters	2 Masters	2 Bachelors Degrees
Number of Years Teaching	20	15	26	32	28
Last Special Education Class or Professional Development	During master's degree Courses	10 years ago – During master's degree Acquisition	One professional development since obtaining second master's degree	During course work for second master's degree	During Coursework for initial teaching certificate

Figure 3.2 Participants Years of Teaching Experience, Level of Education, & Special Education Background

The sample, while not a comprehensive sampling of all teachers, is representative of the staff at this school. Further, the researcher took great care to ensure that the participants were from different content areas – great care was taken to include core and elective teachers. This gave different perspectives regarding inclusion and how inclusion works in various academic settings.

All the teachers selected for the study have had multiple years of teaching using an inclusion model – either at the chosen school or at previous schools. Each educator had students -either during the study or prior to-who have or had IEPs. One teacher began working with a co-teacher in the second year of the study. The other four teachers did not have co-teachers or paraeducators in the classroom.

3.2.21.4 Professional Development Sessions

The Professional Development took place during staff meetings which were scheduled on Monday mornings before school. Districtwide, class sessions start one hour later than Tuesday through Friday. This time is designated for professional development. The decision for using this time is made at the building and district level. Hence, the need for approval from both

district and building level administration. After obtaining district and building level approval to conduct the study, the researcher also submitted the presentation material to the superintendent, special education director, and principal two weeks in advance. The entities would then approve or ask for clarification as they saw fit. The session dates and times were scheduled with the building principal. The sessions were not to exceed fifteen minutes.

The Professional Development topics for this study were selected based on the researcher's perceived needs and special education staff input. The presentations covered information from the special education department and general information about disabilities and/or classroom techniques. Per the Principal's request, the sessions lasted approximately fifteen minutes and were given in the school's media center. The researcher had access to a smart board and computer during the presentations.

The presentations' subjects were as follows:

Fall 2024 – How to read a Student-at-a Glance & Overview of Special Education Law as it pertains to general educators;

Fall 2024 – ADHD;

Fall 2024 – Autism;

Spring 2025 – Learning Disability Reading

Spring 2025 – Learning Disability Reading

Fall 2025 – Student-at-Glace Review and the importance of having classroom teachers' input for IEPs.

Fall 2025 – Differentiated Lessons

Fall 2025 – Differentiated Assessment

Spring 2026 – Using the Student-at-a-Glance to plan Inclusive lessons

Spring 2026 – Graphic Organizers are more than writing tools

Spring 2026 – Language Disorders (this was presented by the school's speech and language pathologist)

Except for the Language Disorder presentation, all presentations were developed and presented by the researcher.

3.2.21.5 Semi-Structured Interviews

The participants took part in up to six semi-structured interviews over a two-year period for a total of 28 interviews. The researcher, with help from collegiate staff, developed the interview

questions. The researcher also conducted the interviews. 28 interviews took place in person, 27 interviews were one-on-one, one interview included two participants and one researcher, and one interview was a written response. The interviews took place at the following times: at the beginning of the beginning of year one; at semester break of year one; at the end of year one; at the beginning of year two; at semester break of year two; and at the end of year two. The questions are included in the following section.

Semi-Structured Interview Questions

Year One

Beginning of the Year

1. How many years have you been teaching?
2. What is your content area? Have you always taught in this content area?
3. Talk about your experience working with students who have IEPs.
4. Tell me your concerns when it comes to working with students who have IEPs.
5. When it comes to students with IEPs, what types of techniques have helped you in the past?

Middle of the year

1. Regarding students with IEPs, tell me things that are going well.
2. What PD information proved especially useful for you?
3. Please tell me what would make the PD more useful for you.
4. Talk to me about special education areas you feel uneasy about.
5. Has the PD changed your teaching style/approach? If so, in what ways did your teaching change? If not, what would influence you to change?

End of Year

1. What information from the PD sessions did you find most useful?
2. What information did you find irrelevant? Why did you find this irrelevant?
3. Describe ways to improve the PD sessions.
4. Based on the PD, what changes, if any, will you make to your teaching next year?
5. Tell me about the impact, if any, the PD has had on your teaching style, curriculum, lessons, assessments, etc.

Year Two

Beginning of the Year

1. What different concerns about working with students who have IEPs do you have this year?
2. Thinking back to the techniques and information you learned last year, what will you use in your lessons?

3. Thinking back to the techniques and information you learned last year, tell me about any adjustments you have made to your classroom's physical structure and procedures.
4. Have you set any goals for yourself regarding inclusive lesson plans?
5. What would you like included in this year's PD sessions?
6. Tell me your confidence level regarding working with students with IEPs. Is this different than past years?

Middle of the year

1. Regarding students with IEPs, what is going well for you this year?
2. Tell me about the PD sessions' impact, if any, on your teaching.
3. Tell me about your use of inclusive teaching strategies.
4. What changes would you make to the PD sessions?
5. Tell me about the tweaks you are making for the second semester.

End of the year

1. Tell me about PD sessions' information you have found most useful.
2. Tell me the biggest impact the sessions had on your pedagogy.
3. If there was not an impact on your pedagogy, why?
4. Tell me what, if any, difference the sessions made on your daily lessons.
5. Tell me what, if any, difference the sessions made on your classroom structures and procedures.
6. What changes should be made to the PD model to make it more useful and relevant?

Figure 3.3 Semi-Structured Interview Questions

The interviews were recorded using an app called OTTER®. The interview transcripts were downloaded, printed, and compared to the recording for accuracy. Each participant was issued a false name to maintain anonymity. The transcripts were identified by interview and participant number. The researcher coded the transcripts by annotating the transcripts. Codes were developed based on the participants' answers and the research question. The researcher looked for commonalities and strong statements from participants.

Each participant participated in at least 5 in-person interviews. The interviews were scheduled in accordance with the school year semesters. The table below shows the interviews each participant took part in.

Participant Name/ Dates	Theodore	Judy	Mary Ellen	Wallace	Clarence
Fall 2024	X	X	X	X	X
Winter 2024/2025	X	X	X	X (With Clarence)	X (With Wallace)
Spring 2025		X (Questions were answered via email)	X	X	X
Fall 2025	X	X	X	X	X
Winter 2025/2026	X	X	X	X	X
Spring 2026	X	X	X	X	X

Figure 3.4 Participants' Interview Participation

3.2.21.6 Anonymous Survey

To determine if the researcher's understanding of the participants' answers is correct, the researcher employed an anonymous survey. The survey responses added a layer of fidelity. The survey was conducted through Qualtrec's. This survey was administered the second half of the second year of the study. The questions were grouped according to the theories this study is based upon: Concept Based Attainment Model (CBAM), Andragogy, and Change Theory. Three participants responded. The questions are included in the chart below.

On a scale of 1-10 with one being strongly disagree to ten being strongly agree:

1. I believe that differentiated lessons are important for ALL students.
2. I believe that differentiated assessment is critical for understanding student progress.
3. I believe that all students can learn in my classroom.
4. My classroom materials are accessible for all learning levels.
5. My assessments are accessible for students with disabilities.
6. I provide a range of materials for a variety of learning abilities.
7. I understand the difference between differentiated instruction and providing accommodations in my classroom.
8. I understand the difference between differentiated assessment and accommodated assessment.
9. When I receive a Student-At-A-Glance, I read it in its entirety.
10. I use the Student At A Glance as a tool to create my classroom's physical structure.
11. I have made changes to my classroom environment due to information learned in the PD.
12. I use the Student At A Glance to create diversified assessments.
13. Because of information I learned in the Professional Development Sessions, I have increased my attempts to diversify assessments.
14. Regarding students with IEPs, I communicate regularly with their families.
15. Because of information learned during Professional Development Sessions, I actively participate in IEP meetings.

16. Because of information learned during Professional Development Sessions, I understand my role in an IEP meeting.
17. Because of information learned during Professional Development Sessions, I volunteer information when I attend IEP meetings.
18. If I cannot attend an IEP meeting, I contribute information about my students who have IEPs.
19. If I cannot attend an IEP meeting, I contribute information about my students who have IEPs.

Finish the following statements

20. One thing I would change about the Professional Development is….
21. Regarding Special Education, I would like to know more about….

22. Figure 3.5 Anonymous Survey Questions

3.2.21.7 Coding

Coding occurred in three rounds. Each round centered on one of the following codes: attitudes regarding inclusion, inclusive practices, and the professional development's impact on teachers. The anonymous Qualtrics survey served as a measure of fidelity. The researcher compared the interview answers with the Qualtrics survey and determined if the answers were consistent. This also served as a measure of ensuring participants were answering interview questions honestly and that the answers were interpreted correctly.

Round 1	Attitudes of General Educators related to inclusive education.
Round 2	Inclusive Practices verbalized by General Educators.
Round 3	The impact Professional Development had on the general educators' use of lack of use of inclusive teaching methods.

Figure 3.6 Coding

3.2.21.8 Measuring Change

Change in attitudes and practices were measured using Concerns Based Adoption Model and Change Theory. Data was collected through the use of semi-structured interviews. Participants' answers were compared with the two models. The researcher compared answers from one interview session to the next. The answers were then placed on the change continuum to determine if a change occurred. Further, participants' answers were analyzed to understand the impact of the principles of Andragogy.

3.3 Summary

To summarize, the study is a qualitative study that measures the changes in teachers' practices and attitudes as they pertain to special education inclusive education. Data was gathered through semi-structured interviews and an anonymous survey. Interview transcripts were coded for changes in inclusive practices, changes in inclusive attitudes, and the impact the professional development had on the participants.

Chapter Four will outline the results of the interviews and how the interviews align with the Qualtrics Survey. Chapter Five will frame the results in the following theories: Change Theory, CBAM, and Andragogy. Chapter Five will also identify implications for education, frame the results in research, and potential areas of research based on this study.

Chapter 4 – Findings

This study is a qualitative study that asks the question: what effects, if any, will secondary, school-wide professional development focusing on special education inclusive strategies have on teachers' attitudes and practices toward inclusive education? The study took place in a rural fringe school. 5 participants took part in certified staff professional development on special education inclusive practices. The study was conducted over a two-year time frame. Each participant participated in five or six interviews in which the researcher gathered data regarding their perceptions of both special education inclusion and any changes in attitude toward the same. The study is based on the theories of Andragogy, Concerns Based Adoption Model, and Change Theory.

The data indicates that the on-going professional development influenced teachers' attitudes about inclusion but did not significantly impact their pedagogy or classroom practice.

4.1 Inclusion

The start of this section defines inclusion and gives a brief overview of findings. The second section is organized by interview (one-six). The purpose of arranging the interviews chronologically is to show the reader how the participants' inclusive attitudes and practices shifted throughout the study.

4.1.22 Inclusion Definition

Inclusion "involves supporting students with disabilities through individual learning goals, accommodations and modification so that they are able to access the general education curriculum (in the general education classroom) and be held to the same high expectations as their peers."(Page 1: What Is Inclusion? n.d.) This definition is used throughout this study. It is also the definition that was intimated to the participants.

4.1.23 Teachers' Attitudes Towards Inclusion

Each teacher had a different understanding of inclusion. When the study began, teachers associated providing accommodations with inclusion. In other words, as long as students with IEPs were in their classroom and they were providing accommodations, the teachers indicated that they were using inclusive measures. This attitude shifted as the study progressed.

4.2 Interview Results

This section is separated by each interview.

4.2.24 Interview One

From the beginning of the study, teachers demonstrated positive social attitudes toward inclusion. They understand that students with IEPs may need supports that not every student needs but may benefit from using. Theodore stated that students with IEPs are not that different from other students except they may need a more specialized or specific tool to learn. "And so, you know, the expectation is that [students with IEPs] are doing the work just like everybody else, except they need more assistance in various different ways."

Theodore also viewed inclusion as giving students accommodations. However, he gives all students all the accommodations. During. the first interview his reason was to avoid isolating any one student. "And so what I've tried to adapt is that providing as many of those supports for all general education." This gesture is intended to eliminate feelings of being different or excluded due to "accommodated" assignments and tests.

Judy understood the importance of differentiation. When she received the SAGs from special education teachers, Judy looked for information regarding student learning. She described using the SAG as follows:

> So number one, I want to know if I need to have [students with IEPs], when I make the seating chart, in proximity to me, and then I go into what are the things that are going to help them find success as I go through a unit.

This indicates a desire to differentiate learning. Later in the conversation, she talked about how large class sizes interfered with her ability to know individual students' learning styles. Judy experienced this in a previous district. This was a contributing factor to her decision to change positions.

Mary Ellen stated, "It's more about providing [students with IEPs] time and strategies on how to work with the skills they have and use their strengths to maximize their potential." While Mary Ellen was positive about working with students with IEPs, she seemed to view inclusion as providing specific accommodations versus embedding supports that benefit all students. Mary Ellen acknowledged the issue with accommodations by saying.

> You know, when you talk about professional development with special education in mind, it feels like we are always looking at the results and not necessarily at the whole learning process. I feel like the accommodations are more to make sure the end result is where they want it rather than how I can best teach that child.

This shows an awareness that accommodations are often intended for assessments-formal or informal-versus providing students with learning strategies.

Wallace also viewed inclusion as providing accommodations versus embedding supports. He stated, "I guess the biggest thing I see about special ed now is it just levels the playing field to give kids [with IEPs] a chance." Wallace talked about how to individualize tests and assignments. However, at the beginning of the study, he did not discuss embedded supports. This should not be taken interpreted as not caring about his students. In fact, this participant demonstrated that he cares deeply about students.

At the beginning of the study, Clarence did not feel IEP accommodations applied to his content area – PE. "[IEP Accommodations] don't always apply fully to PE. If we take a random kid with an IEP and say maybe part of his IEP is sitting still or paying attention, you know that doesn't necessarily apply in the gym." This indicates a need to convey a multidisciplinary team is involved with the identification of students with IEPs. It also points to a need for informing teachers about how disabilities affect all parts of students' lives. Clarence also voiced that inclusion equated to supporting identified students with paraprofessionals and testing accommodations. Ironically, being a PE teacher, Clarence provided multiple embedded supports for students. Because he provided the supports for all students, he did not see that as a special education measure. This points to a need to reassure teachers that they are likely and, perhaps, unknowingly providing supports for students.

In summary, the participants displayed positive attitudes regarding students identified with disabilities in their classrooms. Judy voiced intentionality regarding a need to differentiate learning and understanding each student's learning style. The educators appeared to view inclusion primarily as providing IEP accommodations versus embedding learning supports through the use of differentiated instruction or universal design for learning.

4.2.25 Interview Two

The second round of interviews occurred after the first three professional development sessions. These sessions included information on using SAGs for lesson planning, ADHD, and Autism.

Theodore teaches primarily twelth grade students and honors classes. To promote independence, the building policy was to stop co-taught classes for most senior level classes. Theodore stated his frustrations with this policy.

> I hear the argument that at 12th grade [students with IEPs] need to be able to do things on their own, but they're not able to so they are floundering. Not only are they floundering but they are making if much more difficult for their peers to learn...we risk negating the education of the other students in class.

This comment demonstrates several systemic issues that need to be addressed from multiple perspectives – policy, administration, and practice. Even though the behavior and placement issues cannot be entirely addressed in professional development sessions, students struggling with self -regulation and other behaviors point to lack of student skills. Questioning placement is appropriate for a student whose behavior impacts the individual and peer learning. At the same time, this shows a need to teach self-regulation skills in the general education classroom. Many secondary teachers are well versed in their content area but are not prepared to deal with executive functioning skills – skill deficits that impact many students with IEPs.

Judy, who had a favorable attitude regarding inclusion, was asked about students with IEPs and what was going well. She mentioned how she was comfortable with certain procedures between the special education staff and general educators. She reiterated that smaller class sizes helped her relate to students and provide individualized assistance. While Judy had positive view of the professional development sessions, she did not state any change in teaching methods or incorporating additional supports or scaffold in lessons.

During the second interview, Mary Ellen indicated a change in how she approached students with disabilities. "I don't necessarily treat [students with disabilties] different, but I treat the situation as different as it comes up or as needs change." Mary Ellen went on to say that in the past she assumed if a lesson was successful for most students, it would be successful for a student with an IEP. "…But that's not always the case, especially for students with different abilities. I need to constantly be readjusting and so that PD….it just makes me more

conscientious and little more aware of what I'm doing." This comment demonstrates a shift from making a student conform to the lesson using accommodations to adjusting lesson delivery to meet the needs of the student. Throughout the conversation, Mary Ellen mentioned using several inclusive teaching techniques. After stating that speaking Spanish is uncomfortable for many students, Mary Ellen stated using techniques such as singing songs and saing rhymes in addition to simply speaking the language. Because students are given these choices, this is an example of diversified instruction. There was not a definitive statement that this was a result of the professional development.

Wallace stated that he did not have problems with students with IEPs. Based on the interview, his attitudes and practices remained static. This means that he continued to have a positive attitude toward students with IEPs but did not intimate making changes to his teaching pedagogy . Wallace did not indicate scaffolding lessons or using any differentiated teaching techniques during this interview.

In the second interview, Clarence, like Judy, stated that class size interferes with his ability to help students with IEPs. "It's hard to build relationships when you have a big class. Either you're putting out fires or you're trying to accommodate those IEPs. What's the best course of action? Roll with the punches – which isn't always the wisest thing." It can be inferred that rolling with the punches may mean that creating intentionally differentiated lesson plans is difficult. Clarence pointed out that helping with accommodations is challenging because all students need help in an inclusive setting.

In summary, the teachers were receptive to the professional development sessions. They did not, however, indicate a shift in a pedagogy. Mary Ellen noted a change in attitude and awareness as a result of the sessions. The other four neither confirmed nor denied any attitudinal changes.

4.2.26 Interview Three

The third round of interviews took place at the end of the first academic year. Between the second and third round of interviews, one professional development about SAGs and two about reading disabilities occurred. One of the reading professional development sessions included exercises to simulate how students with reading disabilities may feel in some general education classroom. The other reading professional development session provided strategies and materials to use in the classroom. Two participants, while not sharing any major

pedagogical changes during this round of interviews, voiced changes in awareness and attitudes about students with IEPs.

Judy stated the professional development was a reminder that each student is an individual. As such, teachers should not use blanket accommodations. "I think for me remembering that not everyone needs and or should have the same accommodations and changes made for them. Each kid is individual and so are their needs." Judy went on to say that the professional development reminded her of the fact that educators cannot "blanket code" all the students. This demonstrated a shift from thinking in terms of students categorically to seeing students as unique learners.

Mary Ellen intimated a shift in ideology after the reading professional development sessions. Concerning simulating the experience of students with reading disabilities, she said:

> I know what scientifically is happening, but I've never felt how [students with reading disabilities] felt…As a world language teacher, I always try to put myself in my students' place. I get that [the reading disability] is not just understanding the language, but when there's other difficulties and other challenges. It is important to see and feel what students do.

This comment indicates that Mary Ellen began understanding how a reading disability tends to have a ripple effect in that reading comprehension and fluency effects many aspects of life. While this comment did not demonstrate a shift in pedagogy, it indicated that, because of the professional development sessions, Mary Ellen developed a deeper understanding of how disabilities impact multiple areas of students' learning.

Theodore was not interviewed for Interview Three due to scheduling issues. Wallace and Clarence reiterated attitudes and teaching methods they stated in previous interviews. Thus, Wallace and Clarence did not demonstrate a shift in attitude or practice because of the professional development sessions.

In summary, Judy and Mary Ellen displayed signs of an attitude or awareness shift as a result of the professional development. A change in Theodore's attitude or practices could not be measured. Wallace and Clarence appeared to remain static.

4.2.27 **Interview Four**

Interview Four took place at the beginning of the second academic school year. The participants did not attend professional development sessions regarding special education over the summer break. Four participants participated in the interviews. Teachers were asked to reflect on how the previous year's PD impacted them as well as if they had any goals regarding inclusion.

Theodore's inclusive practices remained static. However, he indicated a change in reasoning for his practices. "I try to provide as many strategies as possible, and not just for students who have IEPs or 504s. Shouldn't everybody have access to these kind of strategies and tips?" This expanded on Theodore's ideology from his first interview in which he stated that he provides all the accommodations for all the students so as not to isolate students who need them for learning. In this interview, Theodore intimated an understanding that all students benefit from the learning strategies and supports provided for students identified- through IEPs or 504s -as needing additional learning supports. While neither of Theodore's reasons for including various strategies is "wrong", understanding that all students benefit from classroom supports illustrates an inclusive learning ideology. Not wanting to isolate students with IEPs (an equally important inclusive measure) shows a social reason for including supports. Later in the interview, Theodore noted that many of the stated accommodations are solid teaching strategies.

> And I am reading [the accommodations] and I start laughing because they are not accommodations. This is just called teaching. Restate the instructions? Check in to make sure the student is on task? Break the larger assignments into smaller ones? I'm doing this with every single kid.

The comment indicates that including differentiation through small tasks is one of Theodore's embedded techniques. It does not, however, show that this practice is or is not a result of the professional development sessions.

Mary Ellen voiced changes based on the professional development sessions. When asked if she was making any changes to her teaching based on the PD sessions, she stated:

> I think I'm going to definitely be a bit more conscientious about how I go about planning my more complicated tasks and concepts. The session you did with us about the reading disabilities is now in the back of my head.

This comment points to a slight change in pedagogy and a larger change in ideology. Mary Ellen went on to state that she is making changes to the classroom procedures by including a structured environment as much as possible.

Wallace stated that the information presented in the professional development sessions reinforced information he has already heard. "The thing is, the stuff you said is stuff that over the years I've heard and that I do. Really, nothing is off the table when it comes time to help students with IEPs." This points to an open and positive attitude toward students with IEPs. It also appears that Wallace is open to any teaching technique that will promote learning. In this interview, Wallace did not state if his techniques are embedded or if the techniques are used only with students with IEPs. The PD seems to have reinforced Wallace's use of current practices, but Wallace did not indicate a change in pedagogy or attitude based on it.

At the time of the fourth interview, Clarence's attitude appeared unchanged. Again, Clarence teaches a performance-based class. He referenced accommodations such as preferential seating:

> But again, the accommodations are more classroom oriented. You know preferential seating this side of the room…they have to be right in front of you during instructional time of game rules…well, our front of the room is constantly changing. What would you consider the front?

From this comment, it appears that Clarence continues viewing inclusion as the providing of accommodations versus providing supports as would be seen in diversified instruction or universal design for learning. Later, he also intimated that his input may not be as helpful to a student as that of other content area teachers:

> Now I could have a conversation with that person about this child that I have right now and what I think needs to be done in my opinion. But again, my opinion as a PE teacher is different than his English teacher.

This comment points to a possible a lack of understanding that a disability manifests itself in all aspects of a person's life. It also points to a systemic attitude that one content area is intrinsically more important than another.

This interview session did not include Judy's interview. Due to scheduling problems, an interview was not scheduled. The remaining four teachers indicated a shift in ideology and attitudes regarding inclusive techniques. Mary Ellen stated that her awareness is a result of

professional development. Wallace indicated that the professional development sessions reinforced the work he is doing in the classroom. Theodore demonstrated a shift in reasoning. However, he did not attribute the shift to the professional development, nor did he deny that it was a factor. Clarence's attitudes and practices remained static.

4.2.28 Interview Five

Interview Five occurred at the beginning of the second semester of the second academic year. Three more Professional Development sessions had occurred since Interview Four. They were about reading a Student-at-a-Gance, designing diversified lessons, and designing diversified assessments. All five participants were interviewed separately.

Theodore reiterated his use of supports and diversification. "I just provide everything to everybody – graphic organizers, sentence staters. I do that with everybody. I do that with honors courses. I give them choices in all the things we ever do." However, he did not attribute this practice to anything he learned in the professional development. In fact, he later stated that the PD sessions are a review of learned strategies. "For me, personally, there's nothing really going on that I don't know." Theodore generalizes this for the staff by adding, "It's not necessarily new information, which it might be for new teachers. But you're also working with teachers that the vast majority of us have been doing this fifteen, if not twenty years. You have a pretty seasoned faculty." In Theodore's opinion, teachers of this staff should know or have heard the information prior to the PD sessions. However, he does not state if his fellow educators are employing the practices.

Judy began co-teaching during the second year of the study. She had a positive attitude about working with a special education teacher in the classroom. Judy noted that having a second teacher in the room allowed her to develop stronger relationships with students as she had more time to do so. Judy also noted that the professional development provided her with a reminder to use certain techniques. "I do look at my stuff and change things often. It's fun to have a refresher on those techniques and strategies. Like on Monday we talked about graphic organizers." Judy went on to say that she employs strategies such as purposeful grouping and assigning specific roles for group work. Having the co-teacher makes discerning if the professional development was impactful difficult. Judy noted strategies introduced in the sessions, it appears the professional development had some impact on her teaching strategies.

Mary Ellen, the world language teacher, employed techniques learned in PD. When referring to use of graphic organizers, she stated, "I have one student that struggles with the area of reading. So giving them a task and saying why don't we think of it this way…why don't we try this and see if it helps has been helpful." Mary Ellen went on to say that she used the graphic organizers as a support tool to help students prepare for oral discussions. This points to a shift in thinking of inclusion as the practice of providing accommodations to inclusion as building an array of supports and scaffolds to enhance student learning.

Wallace continued to describe accommodations as a means to give students identified with disabilities a way to "level the playing field." When he discussed supporting students with IEPs, Wallace pointed to several embedded techniques. Speaking about his slide show presentations, Wallace said:

> I highlight the important things I want them to answer. We do it in class together while I'm teaching. And so I highlight the stuff so that it is easier to pick out. So even though it is for kids with IEPs, I make all the kids do it. The kids think it is normal, but it is a good teaching strategy.

Wallace went on to talk about providing study guides for tests as another embedded support. Wallace, like Theodore, did not state if these supports were provided because of the PD sessions. However, Wallace's vocabulary regarding inclusion shifted from providing academic accommodations to using words such as support and strategy. He also verbalized that all students benefit from the supports provided for students with IEPs.

The interview with Clarence indicated a shift from seeing identified students as needing only academic supports to understanding how a disability impacts his content area – PE. Clarence began identifying his methods of scaffolding and providing supports to students. "Whether they are on an IEP or not, everybody needs some sort of success. It's using a softball with a bat and giving chances to succeed. You know, getting a bigger bat, a bigger ball." Clarence did not limit these supports to students with IEPs. Clarence seems to understand such supports are important for many students. "I certainly try to accommodate everybody in my class, because I want people to be included." In earlier interviews, Clarence indicated that IEP accommodations and supports were important for other classes but did not directly pertain to PE. During this interview, Clarence demonstrates an understanding of how he uses inclusive techniques. He diversifies both his instruction and his methods of assessment by differentiating

how students can participate in PE. This points to a shift in attitude and awareness of his current inclusive practices.

This interview session pointed to a shift in attitude for all teachers. For Theodore, Wallace, and Clarence, the change was not in practice. The individuals seemed to be more aware of how they are using inclusive techniques. Further, they voiced their reasons and identified that all students benefit from additional learning supports. Mary Ellen stated incorporating strategies learned in the professional development sessions.

4.2.29 Interview Six

Interview Six occurred at the end of the second and last year of the study. Three additional professional development sessions took place. One was on the student-at-a-glance and planning inclusive lessons, the difference between using accommodations and planning inclusive lessons, and speech and language issues. The session on speech and language issues was led by the school's speech and language pathologist.

Theodore continued to use inclusive measures by stating that, "I try to give the strategy that I might use for one student, and I try to give all the students this strategy." Theodore went on to say that he is constantly reassessing students' needs and adjusting as needed. This is consistent with diversified learning in that Theodore adjusts his teaching methods based on student feedback (aka assessment). Further, Theodore uses multiple means of assessment for formative and summative assignments.

Judy showed growth in terms of inclusion. She stated that the professional development was helpful- especially, sessions that had ready to use strategies like graphic organizers or chunking. Judy also stated that the professional development was beneficial because teachers are given a lot of information at the beginning of semesters. On top of the information, they are also trying to develop student relationships. When speaking of the PD, Judy said:

> I do think it's [professional development] beneficial to me. It forces me to ask myself: hey are you looking at how you are chunking your material let alone your tests? Your notes? Whatever else? Truthfully, I like that…that I think has been the most beneficial for me and I would like to keep it.

This infers that the professional development has been a contributing factor for Judy's personal professional development. Her specific mention of chunking, a method of organizing content

for more manageable learning, indicates how the emphasis on special education techniques was influential.

Mary Ellen credited the professional development for impacting her teaching. "Taking little nuggets and pieces and just trying them out I think it helped out. I was doing a reading activity. I was like Mary said this, why don't I slip this in? I made sure that I had something on the display the whole time. [The professional development] really has impacted the way I taught." This comment seems to show a correlation between the professional development and Mary Ellen's teaching pedagogy.

Wallace also articulated that the information in the professional development did not change his attitude and/or teaching. "I haven't changed a lot. But I did think about what we talked about in the professional development…it just came to mind. I like to think I kind of do things by the book anyway." When Wallace stated that the information came to mind, he did so in the context of planning his lessons. Despite not changing his pedagogy, Wallace's awareness of practices intimates a change in attitude. Wallace began to verbalize a shift from inclusion as a social measure (aka accommodations level the playing field) to understanding that the supports impact how all students learn.

Clarence was definitive when asked if the professional development impacted him in any way. "I say yes. Those reminders or suggestions, just having that information presented in different ways, whether it be individual students or whole classes, having those things certainly makes you look at things differently." Clarence attributed the professional development as a catalyst for his shift in understanding students. He did not, however, state that he was moved to change his pedagogy.

The final interview session provided data that confirms a change in attitude toward inclusive attitudes may be attributed to the professional development sessions. The interviews do not indicate a change in pedagogy even though Mary Ellen and Judy did incorporate various techniques in their teaching.

4.3 Results of Qualtrics Survey

At the beginning of the second semester of the second year of the study, a Qualtrics Survey was survey was sent to each participant via email. The participants were also notified by the researcher via email. A reminder to complete the survey was sent approximately two weeks after

the initial survey. The survey was administered as a measure of fidelity and an attempt to ensure the researcher was interpreting participants' answers correctly. The survey also offered participants the opportunity to answer questions without the researcher present. Three of the five participants responded to the survey.

Figure 8 represents the results from questions regarding teachers' attitudes toward differentiation and student learning. All three respondents indicated confidence that students learn while in their classrooms. All three also acknowledged the importance of differentiated assessments and lessons regarding student learning. This demonstrates that teachers understand that their responsibility to differentiate lessons to facilitate learning.

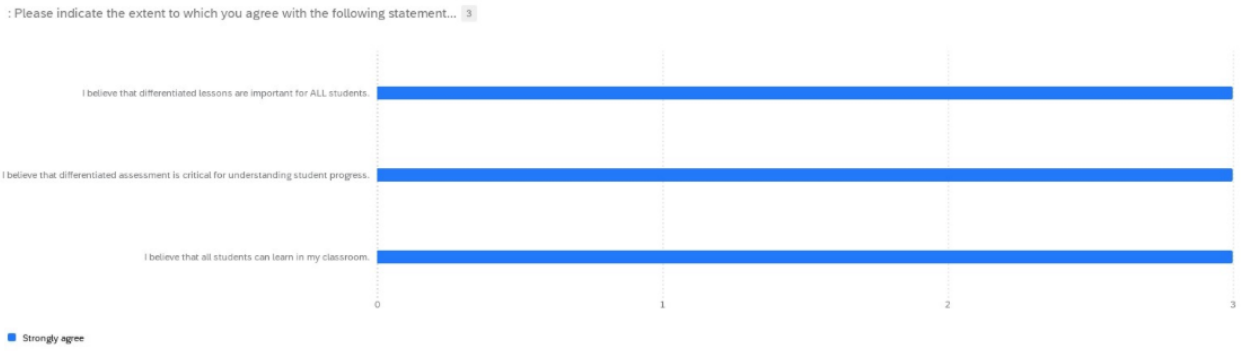


Figure 4.1 Qualtrics generated image of Anonymous Survey Responses

Figure 7 indicates the respondents have a clear understanding of the difference between accommodations and differentiation.

Figure 8 includes respondents' answers to questions regarding the Student-At-A-Glance. Two of the three strongly agreed with the statement that they read the document(s) in their entirety. Two out of the three also strongly agree with using the Student-at-a-Glance to create diversified assessments. One respondent indicated they strongly agreed they used the Student-At-A-Glance to arrange their classroom.

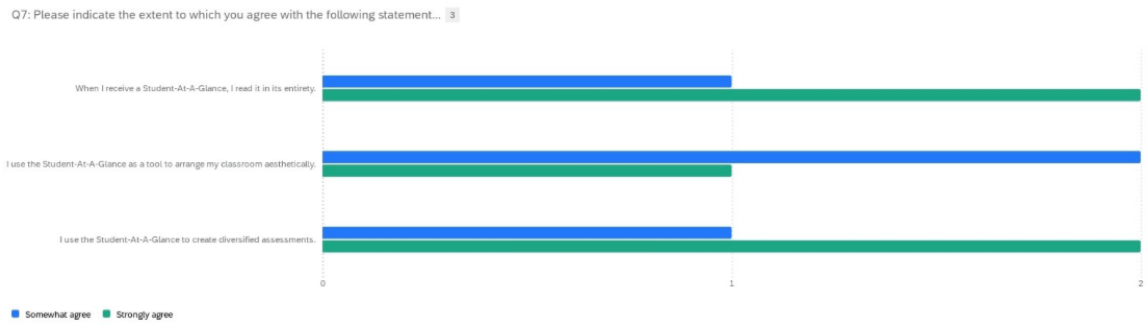


Figure 4.2 Qualtrics Generated Image of Teacher Engagement with SAG

Figure Nine provided feedback on the impact PD had on classroom practices. When asked if they had made changes to their classroom environment due to the PD, two responded that they neither agreed nor disagreed. The third respondent strongly agreed. Regarding assessments, the two respondents agree that the PD sessions impacted their diversifying/differentiating assessments. Two respondents strongly agreed that the PD impacted their understanding of the importance of participating in IEP meetings. The respondents either agreed or strongly agreed that the PD was meaningful to their teaching practices. The responses reveal that the PD impacted classroom environment, assessments, and practices. Two strongly agreed that the PD helped them understand their role in and comfort with participating in IEP meetings.



Figure 4.3ualtrics Generated Image of Professional Development Impact on Pedagogy

4.4 Semi-Structured Interview and Anonymous Survey Results Summary

The survey results appear consistent with interview answers. The interviews and the survey reflected respondents' positive attitudes towards inclusion. Respondents indicated an awareness of the difference between differentiation and accommodations in the survey. This was reflected in their interview answers. Further, respondents stated the professional development impacted their teaching. The interviews also noted a shift in attitudes and incremental changes in classroom methodology.

The following chapter will frame the results in: Change Theory, Concerns Based Adoption Model, and Andragogy, and current literature. It will also contain the implications for education and further research topics.

Chapter 5 – Discussion

1To summarize, this is a qualitative study that took place over two consecutive academic school years. Five participants participated in staff wide professional development regarding special education inclusive theories and practices for secondary, general education classrooms. Twelve professional development sessions were conducted over two academic semesters. Throughout the two years, the researcher conducted five or six semi-structured interviews with each participant. As a measure of fidelity, an anonymous survey was sent to all participants. Three of the five responded to the survey.

The purpose of the study is to answer the following question: what effects, if any, will secondary, school-wide professional development focusing on special education inclusive strategies have on teachers' attitudes and practices toward inclusive education?

The results of this study indicate that attitudes regarding inclusion may shift as a result of professional development. However, participants' interview and survey answers did not indicate a pedagogical change attributed to professional development.

This chapter intends to explain the results in terms of theory and research as well as to identify additional research required based on this study. As a result, this chapter is divided into three parts. Part One will compare the participants' answers with components of Change Theory, Concepts-Based-Adoption-Model, and Andragogy. Part Two will compare the study's results with current literature. Part Three will discuss incidental information acquired from the interviews that impact responses. Part Four will identify potential research based on this study.

5.1 Framing the results in Theory

5.1.30 Change Theory

Tony Wagner states that that change theory requires a shared learning vision, an urgent need for change, positive working relationships, and engagement. (Wagner, 2001, p. 380) The change in this study was using inclusive teaching strategies such as differentiated instruction and universal design for learning in secondary general education classrooms among other supports to facilitate an inclusive classroom. The district uses these methods as a means of supporting a Multi-tiered system of support (MTSS). However, at the building level, the staff appears to lack a shared vision for MTSS. As a result, there is not urgent need for change. It seems the

professional development information was viewed as a suggestion. It is the opinion of the researcher that this was a significant impediment for pedagogical change.

An aspect that was helpful for this study is that the staff has positive working relationships with one another. The presenter developed respectful relationships with other teachers. Further, the participants agreed that the professional development sessions were engaging. When asked what changes should be made, Wallace commented, "You've got [slide shows] put together. You try to add humor. Once in a while you put cartoons in there...I think you are doing a fine job."

To summarize, lack of shared vision may have been one reason for the absence of pedagogical change. Lack of urgency seemed an outgrowth of lack of shared vision. Yet, the professional relationship built between the researcher and the participants as well as the engaging nature of the sessions may have contributed to participants' changes in attitudes regarding inclusion.

5.1.31 Concerns Based Adoption Model

Concerns-Based Adoption Model (CBAM) also views change as a process not an event and that the change should focus on individuals, innovations, and context. (Hord et al., 1987/1987, pp 5-6) CBAM describes change in terms of stages. This study looked at individual change by conducting a qualitative study using semi-structured interviews. The interviews took place over a two-year time frame and were conducted at logical school year intervals. The use of semi-structured interviews allowed the researcher to clarify the information presented and ask probing questions to understand the changes.

The change sought was not clearly defined. The change was asking teachers to begin using or to increase the use of inclusive teaching methods – specifically, differentiated instruction and universal designs for learning. Since the full inclusion model was introduced six years before the study began and the current practices had not been questioned, the participants began the study in the personal stage. Hord et al. states that, "Another way teachers express personal concerns is to characterize the innovation as nothing new, but as something they have always done or used to do. With this conviction, they may convince themselves they really do not have to change."(Hord et al., 1987/1987, p 31) During the early interviews, the teachers indicated that they were confident teaching students with IEPs because they provided accommodations. One teacher-Theodore-discussed using flexible assessments but not in terms

of special education. This was for an unidentified student who had missed several class periods due to a family vacation. The assessment was in response to a specific situation versus intentionally offering multiple means of demonstrating learning.

It should be noted that until recently, special education staff at this building placed an emphasis on accommodations versus framing inclusion in terms of providing learning supports. It should not be surprising, then, that teachers at this school view inclusion in terms of how they are offering accommodations.

Throughout the study, the participants' responses changed from viewing inclusion as providing accommodations such as accommodated tests, preferential seating, etc. By the end of the study, participants identified how they provide academic supports. For instance, in interview five Wallace described how he uses slide shows, provides students with notes, and, as a class, highlights important information. Wallace indicated this is done primarily for students with IEPs. He also stated, "it's just a sound thing to do to make it, you know, a little bit take the load off a little bit, because there's one thing I've noticed is that kids these days are going through a lot of stuff ."

Theodore started the study stating he provides all the accommodations for every student in his classroom. To paraphrase Theodore, he did this to avoid any student being singled out by needing to use an accommodated assignment or test. At that time, it appeared Theodore did this for social reasons. In Interview Four, Theodore reiterated that he offers all IEP and 504 supports to all students. However, he articulated a different reason. "I try to provide many strategies, and not just for students who have IEPs or 504s. Shouldn't everybody have access to these kind of strategies and tips?" This demonstrates an attitude shift from avoiding a socially awkward situation to understanding the importance of providing learning tools.

In terms of CBAM, both Wallace and Theodore have gone from personal stage to task stage. Both educators showed behaviors consistent with individuals in the impact stage of CBAM. This is the stage of change in which teachers are concerned about how a change will impact students. (Hord et al., 1987/1987, p. 31)

Participants continued to voice attitude changes throughout the second year of the study. Theodore and Judy both voiced a desire to collaborate with peers regarding students. Collaboration is stage five of six in CBAM. (Hord et al., 1987/1987, p. 31) When Theodore asked what changes may be beneficial he stated, "I think what would be nice is

dedicated time for like-minded, energized, inquisitive colleagues to spend time together. It is just an informal think tank." What impeded in-depth collaboration was the time frame given for the professional development. The sessions were not to exceed fifteen minutes.

Like Change Theory, CBAM is built upon the idea that a clear change is being made. With this study, the change was not as clear – although the researcher contends, it is a necessary change. Further, it was not articulated by the building administrators. It can be argued that if the change had clear support from administration, an incentive to move through the CBAM stages.

5.1.32 Andragogy

Andragogy is defined as "…the art and science of helping adults learn, and was, ostensibly, the antithesis of the pedagogical model." (Knowles et al., 2005, p. 61) According to this model, adults bring their own set of experiences and learning into learning experiences. Andragogy claims that passive learning such as a teacher lecturing to passive learners is not an effective learning model for adults. Instead, adults need opportunities to incorporate their prior knowledge with new knowledge to make learning meaningful. Further, the learning environment should also reflect a place for adult versus child learning. For example, comfortable seating and meaningful choices should be a mainstay of an adult learning environment.

Andragogy is also based on several assumptions. These include: the need to know; the learners' self-concepts; the role of the learners' experiences; readiness to learn; orientation to learning; and motivation. (Knowles et al., 2005, pp 64-68)

Knowles' theory for need to learn is that an outgrowth of experiences should lead adults to areas of self-growth. "Even more potent tools for raising the level of awareness of the need to know are real or simulated experiences in which the learners discover for themselves the gaps between where they are now and where they want to be." (Knowles et al., 2005, p 65). The participants had many experiences teaching students in an inclusive setting. However, they did not have a distinct learning model to follow. While the district and state is invested in multi-tiered system of supports (MTSS), it is difficult to find a working model for a staff of teachers to observe, discuss, and try to emulate. Not having a clear model for all teachers impacted how teachers viewed inclusion. While every teacher in this study had a positive view of students with disabilities attending their classes, the responses indicated an understanding that inclusion was

providing accommodations versus accessible lessons. In fact, during the first year of interviews, the teachers specifically stated how they used accommodations and did not refer to differentiated teaching methods or assessments regarding students with IEPs.

This changed during the second year. The second year's professional development sessions included, among other things, teaching and assessment techniques to include in day-to-day learning. For Judy and Mary Ellen, this resulted in an increased use of inclusive methods. In Interview Six Mary Ellen stated, "I think sometimes when I was younger, it was always like, this is what you with those students receiving special services. But a lot of those things are useful for students of all abilities." Mary Ellen went on to say, "I was doing a reding activity. I was like, well, Mary said to do this. Why don't I slip this in?"

Judy stated she appreciated sessions regarding different techniques. Even though she was aware of the techniques, she was reminded to add them to her lessons. "Anytime you presented on different topics or different ideas...it was a really good reminder of what could be added, like even just adding one more step like shortened notes." These statements may be proof that the sessions are helpful for teachers.

Providing the information about differentiation seemed to increase teachers' self-concepts as inclusive teachers. At the beginning of the study, when asked about their views of inclusion or use of inclusive measures, the participants talked primarily about providing accommodations. During the last two interviews, teachers were realizing that they use inclusive methods beyond accommodations. During the first interviews, Wallace talked about accommodations and leveling the playing field. By the final interviews, Wallace identified using inclusive teaching techniques such as using slide show presentations while providing corresponding notes. The class highlights the key information together. Wallace admitted this was done primarily to help students with various IEPs. However, he also acknowledged this was useful for all students.

Clarence, a PE teacher, began the study by repeatedly stating the information on IEPs does not pertain to his content area. Despite talking about differentiated PE content and demonstrating knowledge, Clarence appeared to limit inclusive lessons as providing accommodations such as preferential seating and testing accommodations. His final interview showed a shift in his ideology. "Now I would say that a lot of the information presented was a review in a good sense. I would say, for a number of us, we haven't seen [information on special

education] in quite a number of years." By acknowledging that the information presented was important to hear was a change from his initial statements that intimated much of the information on an IEP was not applicable to PE teachers.

5.2 Framing Results in Literature

The teachers in this study voiced positive attitudes regarding teaching students with IEPs. Further, they indicated positive attitudes about inclusion. This is consistent with the results of a meta-analysis that wanted to determine teachers' attitudes regarding inclusion. Through a meta-analysis, they found, "The first finding of this meta-analysis is that teachers' attitude is globally favorable to inclusion." (Guillemot et al., 2025, p. 7). This is a positive finding as research regarding best practices continues to evolve.

In a small study conducted at a private elementary school in Massachusetts, a researcher sought to understand teacher practices and perspectives in working with students with ASD in the general education classroom. One finding included, "Teachers in this study emphasized that training on how to teach students with ASD is important for providing an appropriate education for these students. In addition, they agreed that GE teachers are unprepared to teach students with ASD." (Al Jaffal, 2022, p. 5)

The teachers in the current study all have multiple years of teaching experience. However, three teachers admitted to not having a special education class or professional development session since acquiring a Master degree. One participant stated he did not have a special education class since receiving his initial teaching certification. Only one of the five participants sought professional development for working with students who have IEPs. This lack of training points to a need for intentional professional development regarding special education issues. Additionally, professional development needs to be on-going rather than a "one and done" session. This is backed by Jaffal's statement, "In addition to expanding pre-service training, professional development must be provided on an ongoing basis to GE teachers to improve their knowledge and confidence regarding teaching students with ASD." (Al Jaffal, 2022, p. 7)

The results of this study indicated that teachers' confidence and awareness regarding inclusive practices appeared to increase after attending professional development sessions. For instance Theodore began the study stating he gave all students accommodations for social reasons. As the

study went on, he restated that he offered all students accommodations. The second time he did not say accommodations, he said supports. Theodore also noted that all students benefit from said supports. Wallace had a similar situation. At the start of the study, Wallace equated inclusion as giving students required IEP accommodations. During the second year of the study, Wallace described his inclusive measures of conducting classroom activities that included supports available for all students. Neither Theodore nor Wallace attributed the practices to the professional development sessions. However, it may be possible that professional development created an awareness of how their current practices are as much inclusive practices as is their administration of accommodations.

This idea is much like a meta-analysis that reviewed 102 papers regarding what attributes to teachers' inclusive practices and beliefs. The researchers found, "that, on average, teachers hold self-efficacy beliefs toward inclusion that suggest only modest self-efficacy in teacher students with SEN." (Dignath et al., 2022, o. 2639) The teachers in this study had likely been using multiple inclusive measures. However, when asked in the first interview, the participants spoke in terms of accommodations. As the study progressed with additional professional development, teachers began identifying their inclusive practices. It is this researcher's contention that the professional development and information contained therein improved teachers' understanding of inclusion. This may have resulted in their realization that they naturally use inclusive teaching techniques.

Ann DeVaault stated a similar phenomenon in her study with Iowa World Language Teachers. DeVault sent a survey to Iowa World Language teachers and followed up with interviewing some of the respondents. One finding was, "...as teachers' ratings of their knowledge of how to teach WL to SWDs increased, their attitudes toward inclusion of SWDs also increased." (DeVault, 2020, p 681).

Theodore pointed to the impact of collaboration with peers. He stated that discussing student learning with peers is an activity he would like to include in professional development. Other educators have similar opinions. A 2023 meta-analysis stated, "In terms of collaboration, teachers strongly valued working with other teachers, special education teachers, and professionals to support students with disabilities." (Chow et al., 2024, p 3336)

5.3 Implications for Education

This study points to the need for creating clear expectations for professional development. The professional development sessions were presented with the goal that teachers' attitudes towards inclusion shift from simply providing accommodations to understanding the impact of providing academic supports. The second goal for teachers was to provide inclusive academic supports versus simply offering accommodations in the general education classroom. The general educators in this study exhibited signs that they had changes in attitudes toward inclusion. However, the pedagogical changes were minimal. One reason may be that the purpose for the professional development was not clearly articulated. Further, there was no expectation to change teaching methods. This made changing pedagogy based on professional development alone difficult.

The second implication is that successful professional development should include a reliable assessment measure. The assessment in this study was the semi-structured interviews. However, without a measure of assessment the facilitator has no means with which to measure success or failure.

The third implication is that professional development does not need new techniques to be effective. The educators in this study stated they were familiar with the information presented in the professional development. They also acknowledged that the reminders were beneficial. For Wallace it was reassuring to hear the information as it reinforced his teaching methods. For Judy and Mary Ellen, the information assisted them with planning lessons with revitalized techniques. For Theodore the information was a reminder of the issues surrounding special education. Finally, for Clarence, the information provided a shift from viewing his content area as not being affected by special education to appreciating the information. This data points to the idea that professional development does not need to always be about new teaching techniques. It can be a refresher about the information the teachers already know.

The finding that directly impacts students is the importance of educating teachers about inclusive methods and theory. The educators in this study noted that professional development served as a reminder about using differentiated teaching methods as well as a method to inform general educators about special education issues. This indicates future professional development may be useful for promoting inclusion.

5.4 Factors Related to Inclusion

5.4.33 Class Size

Both Clarence and Judy indicated that class size impacted their ability to provide meaningful inclusive teaching measures. In fact, Judy intimated that a contributing reason for leaving a previous position was that she had to teach several students with IEPs in large classes. Clarence indicated that having large class sizes left him teaching from a responsive position versus being intentional about lesson planning. From these comments, schools may want to find procedures that reduce class sizes when students with IEPs are included in the classes.

5.4.34 IEP Goals

Theodore related a situation in which he had a student who refused to begin a writing assignment. Certainly, this may have been a manifestation of his disability. However, his IEP goal related to writing conventions of grammar and word choice. When the Special Education teacher asked about his progress relating to these goals, Theodore could not answer since the student refused to initiate a writing assignment.

This anecdote shows the importance of identifying the true barriers to student learning. While academic goals are important, it appears that the barriers to learning need to be addressed as well. Determining the barrier to student learning is also important for helping teachers develop appropriate supports in their classrooms.

5.5 Potential Areas of Future Research

5.5.35 Action Research Regarding Professional Development and Inclusion

This study developed Professional Development Sessions based on observation and input from the special education staff. Future research regarding that includes participants' input and progress may provide guidance for identifying information that would best serve general educators and enhance inclusive teaching. Models.

5.5.36 The Effect of Class Size on Inclusion

Two teachers in this study mentioned large class sizes being a negative factor for planning and implementing inclusive teaching methods. Given the teachers' experiences

mirrored each other, it seems reasonable to conduct research regarding the impact class size has on inclusive teaching.

5.5.37 Inclusion in Performance Based Classes

Clarence, a PE teacher, began the study stating IEPs do not entirely pertain to PE classes. However, by the end of the study, Clarence was verbalizing the importance of the professional development. Further, he expressed multiple methods he used when teaching. These methods were congruent with differentiated instruction. Based on this observation, it may be meaningful to study performance-based classes and ascertain how general educators can incorporate their teaching styles.

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Appendix A

TO: Suzanne Porath Proposal Number: IRB-12328
Curriculum and Instruction
Manhattan, KS 66506

FROM: Lisa Rubin, Chair Committee on Research Involving Human Subjects
DATE: 10/11/2024
RE: Proposal Entitled, "The Effect of Professional Development Regarding Special Education Inclusive Practices on Secondary General Education Teachers."

203 Fairchild Hall, 1601 Vattier St., Manhattan, KS 66506 | 785-532-3224 | fax: 785-532-3278 | comply@k-state.edu

The Committee on Research Involving Human Subjects / Institutional Review Board (IRB) for Kansas State University has reviewed the proposal identified above and has determined that it is EXEMPT from further IRB review. This exemption applies only to the proposal - as written – and currently on file with the IRB. Any change potentially affecting human subjects must be approved by the IRB prior to implementation and may disqualify the proposal from exemption.

Based upon information provided to the IRB, this activity is exempt under the criteria set forth in the Federal Policy for the Protection of Human Subjects, **45 CFR §104(d), category:Exempt Category 2 Subsection ii.**

Certain research is exempt from the requirements of HHS/OHRP regulations. A determination that research is exempt does not imply that investigators have no ethical responsibilities to subjects in such research; it means only that the regulatory requirements related to IRB review, informed consent, and assurance of compliance do not apply to the research.

Any unanticipated problems involving risk to subjects or to others must be reported immediately to the Chair of the Committee on Research Involving Human Subjects, the University Research Compliance Office, and if the subjects are KSU students, to the Director of the Student Health Center.

Electronically signed by Lisa Rubin on 10/11/2024 12:13 PM ET

Appendix B

TO: Suzanne Porath
Curriculum and Instruction
Manhattan, KS 66506

FROM: Lisa Rubin, Chair Committee on Research Involving Human Subjects
DATE: 02/18/2026

RE: Proposal #IRB-12328, entitled "The Effect of Professional Development Regarding Special Education Inclusive Practices on Secondary General Education Teachers."

MODIFICATION OF IRB PROTOCOL #IRB-12328, ENTITLED, "The Effect of Professional Development Regarding Special Education Inclusive Practices on Secondary General Education Teachers"

203 Fairchild Hall, 1601 Vattier St., Manhattan, KS 66506 | 785-532-3224 | fax: 785-532-3278 | comply@k-state.edu

EXPIRATION DATE: Exempt

The Committee on Research Involving Human Subjects (IRB) has reviewed and approved the request identified above as a modification of a previously approved protocol. **Please note that the original expiration remains the same.**

All approved IRB protocols are subject to continuing review at least annually, which may include the examination of records connected with the project. Announced in-progress reviews may also be performed during the course of this approval period by a member of the Office of Research Integrity, Compliance and Security (ORICS) staff. Unanticipated adverse events involving risk to subjects or to others must be reported immediately to the Chair of the IRB, and / or the ORICS.

It is important that your human subjects activity is consistent with submissions to funding / contract entities. It is your responsibility to initiate notification procedures to any funding / contract entity of any changes in your activity that affects the use of human subjects.

Electronically signed by Lisa Rubin on 02/18/2026 4:43