NARROWING THE ACHIEVEMENT GAP IN A SOUTHWEST UNITED STATES HIGH SCHOOL

BY

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DEDICATION

This paper is dedicated to my family—I could not have accomplished this without their support.

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I would like to thank my family for the time they allowed me to work on this. Their support throughout this process has been instrumental in its completion.

To my parents, thank you for the support you gave while you were here and the support you continue to give. I wish you were here to see this accomplishment, along with the accomplishments of all your grandkids and your kids. You would be so proud of what we have all done and what we are doing. You are missed every day.

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LIST OF ACRONYMS

ACT	American College Testing
CTE	Career and Technical Education
EAHCA	Education for All Handicapped Children Act
FAPE	free and appropriate public education
IDEA	Individuals with Disabilities Education Act
IEP	individualized educational plan
LEA	local education agency
LRE	least restrictive environment
NCLB	No Child Left Behind Act
PARC	Pennsylvania Association for Retarded Children
PLC	professional learning community

ABSTRACT

Special education students spend most of their academic school days removed from the general education classroom, thus losing instruction from content specialists. This study was designed to help the researcher understand how general education teachers' self-efficacy influences their preparedness, whether general education teachers feel adequately prepared to educate special education students, and if feelings affect their classroom outcomes. The data acquired from this study helped create professional development, ongoing supports, and embedded training for teachers to increase their self-efficacy regarding their abilities to teach special education students and help build the teachers' collective efficacy. A qualitative case study was designed to investigate these phenomena at a high school in the southwestern region of the United States. General education teachers at a southwest United States high school completed an anonymous demographic survey. This voluntary anonymous demographic survey was sent to all general education teachers to complete, with a request that teachers volunteer to participate in an interview (two teachers from each department). A criterion sampling method was used to collect data from participants using thematic analysis; the demographic survey allowed the researcher to group responses based upon content, experience, education, perspective, training in special education, and their comfort level teaching special education students. The responses to the interviews allowed the researcher to gain more information about how to increase their self-efficacy when educating special education students. The responses led the researcher to understand that time and professional development were needed to enhance the collective efficacy of the general education teachers working in inclusive classrooms. Time is necessary for the

collaboration of lessons and the students' needs associated with those lessons. Time is also necessary so that teachers can modify and accommodate lessons for the various learners in the room. Professional development on the various inclusion models, as well as how to modify and accommodate appropriately are skills that can be learned during this time. This research has also led the researcher to understand that more research can be completed on grading for students. While various grading models are used in classrooms and schools, the rationales for those grading models to determine the learning that has occurred can be enhanced.

CHAPTER 1: INTRODUCTION TO THE STUDY

General education teachers are tasked with educating special education students while meeting their general education classroom needs. Many general education teachers feel unprepared to effectively teach students with disabilities. These teachers' self-efficacy about educating these students is essential to their success. When general education teachers need to teach special education students with educational challenges ranging from learning deficits to behavioral disturbance disorders that they have not had training in during pre-service or in-service classes, teachers' stress levels increase (Hanisch et al., 2020). An example of this is when teachers must provide more than typical classroom instruction to students. They must create strategies for additional individualized instruction for students with disabilities. They must do this all while maintaining the privacy of those students and without segregating them from other students (Gaines et al., 2017).

The researcher investigated teachers' perceived self-efficacies at a rural southwest United States (U.S.) high school and how those perceptions influenced special education students' academic outcomes in the general education and co-taught placements. The results obtained served as a guide to create appropriate in-service programs, training, and other support mechanisms needed to increase academic achievement for special education students.

General education teachers are responsible for educating special education students while meeting their general education classroom needs through the inclusion mandates of the Individuals with Disabilities Education Act (IDEA). Inclusion is when students with learning or behavioral needs are educated full-time in the general education

program. When the inclusion model is followed, the student with special education needs attends general education, age-appropriate classes throughout the day (Idol, 2006). The mandates about inclusion were set forth by U.S. Congress in the Individuals with Disabilities Education Act, which provides partial funding to states to educate more than six million students identified as needing special education services (O'Connor et al., 2016).

Self-efficacy is an individual's perceived ability to complete tasks (Bandura, 1977). Self-efficacy comprises two different aspects: personal and task-specific. Personal means that the individual determines if they are competent to complete the task. They judge based on different criteria (e.g., experience, training, data). The task-specific components mean individuals may feel they have perceived efficacy in one area but not in another.

Bandura (1993) wrote that a person's belief about self-efficacy influences goal setting. If individuals have strong confidence in their competencies, their goals would be set much higher. These beliefs are prevalent in the educational field and classrooms across the country. Teachers' trust in self-efficacy influences their persistence when tasks do not go as planned and they face disappointment with their plans and expectations (Francisco et al., 2020).

Study Background/Foundation

Students with disabilities have historically received unequal treatment in the public education system, and many children with disabilities were denied the opportunity to receive an education (Hurwitz et al., 2020). Special education in the U.S. officially began with the passing of the Education for all Handicapped Children Act (EAHCA) in

1975. However, some school districts provided limited education to disabled children before that time. EAHCA created IDEA and began to formalize many of the current processes regarding special education. During the 1960s and 1970s, many changes occurred that led to positive outcomes for special education students. The EAHCA was passed in 1975, and numerous court cases ruled in favor of disabled students and groups. President Kennedy piqued national interest in students with developmental delays by bringing this issue to the national stage during his campaign. President Johnson created the War on Poverty, which led to funding educational programs for at-risk children.

Although these programs created opportunities and funding for special education services, students with disabilities still faced discrimination and exclusion from the education sectors (Cornett et al., 2020). EAHCA and IDEA assisted in addressing inequity in education for special education students. To assist in reducing the inequity, a study conducted by Bottge et al. (2018) found that special education created significant gaps in their abilities for most special education students, except for an inclusive classroom. Inclusive classrooms are general education classrooms where students with disabilities learn alongside their non-disabled peers. The increase of inclusive classrooms rather than pull-out classrooms helps expose students to the same learning that their non-disabled peers receive. The teachers in the inclusive classroom also model appropriate behaviors and social standards to special education students. Exposure to more content and standards positively impacts educational achievement (Scruggs et al., 2007). Exposing students to grade-level standards instead of alternative work helps close the learning gap between general and special education students. Addressing teachers' self-

efficacy about educating special education students is also essential in reducing the learning gap and improving comprehensive student academic outcomes.

Current State of the Field in Which the Problem Exists

Federal legislation in education—EAHCA and IDEA—has mandated that students who receive special education services are educated in their least restrictive environment. The least restrictive environment is defined in federal law as the requirement that students with disabilities receive their education, to the maximum extent appropriate, with non-disabled peers that special education students are not removed from regular classes unless, even with supplemental aids and services, education in regular classes cannot be achieved satisfactorily (Giangreco, 2020). The inclusive classroom gives students with disabilities access to general education as often as possible in classrooms with their non-disabled peers. The inclusion mandates affect the students that receive special education instruction and influences everyone involved in the student's education, such as classmates and teachers. Federal legislation guides the placement of special education students and does not mention the impact that placement will have on non-disabled peers. The legislation also affects building leaders and general education teachers.

Most building leaders graduate with their degrees in administration. Still, they are not adequately prepared to work with students with individualized educational plans (IEPs) or oversee special education programs (Pazey et al., 2013). The lack of experience working with special education students means that the individuals selected to run schools do not have the adequate training or experience to make the decisions necessary to improve teachers' self-efficacy and increase academic achievement for special

education students. These decisions will influence the entire school population. While the special education population is only a small subset of the school, the classes they are enrolled in affect the teachers who teach them.

The U.S. Supreme Court has heard seven cases regarding special education since 1975; five of those cases focused on procedural matters (Wagner et al., 2010). A local education agency (LEA) monitors procedural issues to assist schools and students. The LEA representative is also a member of the IEP team, helping to participate in the student's decision-making process. The LEA representatives are also expected to know the IEP's laws and the school's services. School leaders (administrators and designees) need special education training to reach special education decisions regarding placement, services, and specially designed instruction. Leaders who have special education experience are more likely to improve special education instruction and services at their schools (Bettini et al., 2016). They better understand student needs, support school, and family partnerships, and help create integrated programs (DeMatthews et al., 2020). Understanding how special education can function within a school and administrators who have special education knowledge can help create a unified system in their buildings.

Most notably, general education teachers have experienced many consequences of legislative changes in their classes. The inclusion mandate created a classroom environment that many teachers had not experienced or trained in. Hwang et al. (2011) wrote that teachers view inclusion more favorably because of a legislative mandate. From building and district leaders, teachers who have the direction to change are more apt to demonstrate their classroom changes and instruction. Their study showed that

approximately 78% of general education teachers looked at inclusion positively and that this optimistic viewpoint led to successful inclusive practices.

The severity of the students' disability and the lack of support offered to those students negatively impact the teacher's inclusion beliefs (Hwang et al., 2011). School building leaders working with teachers to provide support while learning about special education supports is a positive way to promote school growth (measured by American College Testing [ACT] outcomes, attendance rates, graduation rates, and proficiency rates).

Historical Background

Special education in the U.S. began with EAHCA in 1975. Regulation of special education has continued to expand through different legislation, IDEA (1990) and various court cases, that has changed the way students with special education needs are educated. The change in legislation, the No Child Left Behind Act (NCLB) (2001), also impacted the way schools educate special education students. NCLB mandated that all students show adequate yearly growth. This legislation meant that schools needed to ensure that they were educating all students at high levels and that those students could demonstrate what they had learned through standardized tests (Ladd, 2017).

The call for greater accountability has helped encourage change in education and foster relationships between different teachers. Teachers are working together in schools to educate all students, licensing boards are working to increase the core content knowledge, and colleges and universities are expanding their programs to include special education courses for all teacher candidates (Blanton et al., 2018). Accountability has encouraged many positives in education, and those positive changes are still occurring.

Deficiencies in the Evidence

Special education teacher efficacy and general education teacher efficacy are frequently studied topics. The literature gap revolves around general education teachers working with both general and special education students in the same classroom. Many studies and reports are written about special education teachers' efficacy, but general education teachers' effectiveness in educating special education students is an area that needs more investigation. Investigating from a different lens will close this gap and improve academic achievement for this population of students.

Problem Statement

Special education students do not perform on par with their non-disabled peers at a rural high school in the southwest U.S. The problem exists because general education teachers do not feel that they can educate students with disabilities (Byrd, 2020). The researcher sought to determine the in-service needs of general education teachers to increase these teachers' self-efficacy to educate special education students in their classes. Teachers who have little to no professional development in educating special education students have fewer positive feelings toward educating them (Kosko et al., 2009). The results of this study will serve as a guide for determining the needs of teachers for building and district leaders.

As a state requirement for graduation, all students must take the same ACT exam in their junior year of high school, except for the small population of students that will graduate with an alternative diploma. The average ACT composite score for a general education student is 17.3, and the average composite score for a special education student is 13.5 (Statereportcard.state.gov, 2021). The difference in the scores is 3.8 points. More

than 60% of special education students were deemed self-contained because they spent more than 50% of their school days removed from the general education environment. The school-wide data reflect that students from the resource education classroom are not performing on par with their peers. Embedding support and professional development for teachers to help grow their self-efficacy will increase ACT outcomes for special education students.

A 2015 article written by Spooner et al. reflected on what they described as the three significant advances in learning for students with significant disabilities (Spooner et al., 2015). They identified three areas of focus that have proved critical toward shifting mindsets about students' capacities with significant disabilities. These three areas include applying systematic instructional techniques rooted in applied behavior analysis, teaching functional skills, and promoting academic content.

Changes have coincided with the advances in the *how* and *what* of the least restrictive environment placed for students with significant disabilities. In the span of 30 years, students with significant disabilities have seen the *where* of their education gradually move away from segregated classrooms and facilities and toward more inclusive environments (Giangreco, 2020). What needs to be better understood is that shifting the teachers' capacities also shifts the skills/tools/training they need to give them the confidence to educate all students in their classrooms and help all students reach their potential. Identifying the appropriate in-service programs and supports to increase teachers' self-efficacy is the goal of this study.

Audience

This research will help building and district leaders identify methods for increasing the self-efficacy of general education teachers in their buildings and districts to enhance their skillsets through appropriate professional development. The professional development offered will help improve teachers' self-efficacy, building collective efficacy for all.

Specific Leadership Problem

Building principals are challenged to create systems in their schools that spawn students' learning opportunities and teach. Building leadership is second only to teachers in impacting student learning (Roberts et al., 2017). Leaders must provide support and professional development to assist in successfully implementing inclusive settings in schools. The more specialized training teachers are given about inclusion and special education, the greater their positive feelings are (Kwon et al., 2017). Providing training and support to teachers to help them gain knowledge, exposure, and experience while assisting them to have positive feelings toward special education will help them feel adequately prepared to work with special education students.

Purpose of the Study

The purpose of this study was to understand how to raise the teachers' self-efficacy at a rural southwest high school when teaching students that require special education services by identifying the areas that teachers feel need professional development. Teachers must be aware of the students' needs and know how to address those needs in the classroom (Rae et al., 2011). Increasing an individual teacher's self-efficacy will help build the collective efficacy for the entire school and provide this

professional development. Special education is one of the most discussed, yet least analyzed, areas of education. It is challenging to compare special education students to general education students when they are different (Hanushek et al., 2002). This qualitative case study identified the needed areas of development for the staff to build their self and collective efficacies. In comparison, this study focused on understanding teachers' efficacy; the three components of how education works together—curriculum, instruction, and assessment (Kurz et al., 2010) were investigated. Improving the overall academic achievements of all students is crucial to students' future success.

Methodology and Research Design Overview

A qualitative case study design was used, and data was gathered through demographic questionnaires and semi-structured individual interviews with various teachers using videoconferencing software. The information taken from the interviews was analyzed. The participants were volunteers from a range of years of experience, grades 9–12, from all subject areas (English, Mathematics, Science, Social Studies, Career and Technical Education, and Electives). Their answers were compared with colleagues of similar knowledge and differing backgrounds. The demographic questionnaire was distributed to all general education teachers via email from the school secretary. The secretary sent out a request for any volunteer to respond if they would like to be part of the interview process. The interview was the primary data gathering strategy, questioning their experience level, the special education training they received in college, their feelings regarding special education (what they felt was going well and what was not going well), and their desired areas of improvement.

The demographic questionnaire focused on the teachers' perceptions of their self-efficacy and how to improve it. The demographic questionnaire consisted of Likert-scale questions and short-answer questions. The Likert-scale questions revolved around their perceptions of self-efficacy, and the short-answer questions revolved around their beliefs of what can be done to help them improve. A demographic questionnaire also gathered information about their years of teaching, degrees, and department. The demographic questionnaire was anonymous, and those that responded to the secretary's email about participating in an interview gave up their anonymity to the researcher. The interview focused on the individual's feelings toward their skills and professional development.

The U.S. has seen numerous reform initiatives to increase student achievement for all students, including special education services. The students at a southwest U.S. high school have not seen a growth in achievement, although they have experienced many reforms that others across the nation have. The state where the site is located has removed all testing requirements for graduation, meaning students only need to pass classes to obtain their standard high school diploma. The removal of these assessments positively affected the graduation rate, but many schools question the diplomas' validity (Holopainen et al., 2019). This removal is particularly proper for special education students because they were being pulled out of the general education classrooms and spent most of their day in a special education classroom. These classrooms did not expose the students to as many academic standards as their non-disabled peers.

Studies with adverse disabilities live an oppressive life facing the dangers of poverty, poor health, low education, and many others (Doren et al., 2012). Doren et al. (2012) also wrote that students with disabilities face limited access to education and job

prospects after graduation. This study aimed to give tools to administrators and teachers to help narrow the achievement gap for special education students.

Interpreting experiences and backgrounds is a vital component of this study and addresses the root cause of the lack of academic achievement for special education students. The following research questions were addressed:

1. Do teachers feel that all students in their classrooms can learn from them?
2. Do teachers feel prepared and qualified to teach all students in their classrooms?
3. Do teachers that feel prepared and qualified work in schools that show growth/achievement for special education students in their schools?

This study sought to determine the most appropriate and effective interventions to increase general education teachers' self-efficacy in teaching special education students. This case study was steered by teachers' education, training, experience, and special education perspectives.

The interview was in person or conducted virtually, with the interview audio recorded. The researcher documented changes in body language that occurred during different interview points. Emotion is a multidimensional phenomenon associated with various physical traits (de Gelder et al., 2014). Tracking the different physical reactions to the interviewee's questions helped determine the validity of statements and the respondent's beliefs. Darwin theorized that emotions prompt actions that benefit the organism, and the interviewee's comments would most likely be made to satisfy themselves (de Gelder et al., 2014). This case study intended to determine if teachers felt prepared to work with special education students. The qualitative information was critical to determining the appropriate professional development necessary for the school.

A quantitative study was not selected because the students see multiple teachers over a day and throughout their academic careers. They have had many teachers before their arrival at the school. Data from each teacher is looked at on an ongoing basis at the school, on a formative and summative level. This study was intended to understand teachers' self-efficacy and give them the professional development that they felt they needed to raise ACT scores. These reasons were also why a mixed-methods study was not selected.

Research Questions

The following questions helped the researcher understand why general education teachers in the co-teaching model felt the way they do about educating special education students and what could be done to help them feel more capable of teaching students with special needs:

1. What are general education secondary school teachers' perceptions regarding how their self-efficacy influences their students' academic achievement?
2. What personal characteristics do general education teachers feel add to their positive or negative self-efficacy in teaching?
3. What factors do general education teachers identify as influencing their professional self-efficacy in teaching (personality traits, outside circumstances, number of students, pre-service teaching experiences, etc.)?

Study Limitations

A study limitation includes individuals' responses, both verbal and physical. Answers are significantly limiting when interviewing males. According to Knorr et al. (2019), the lack of male participants' emotional responses makes the process difficult.

This limitation was overcome by speaking about the interviewee's emotional issues in the third person, indicated by Affleck et al. (2013). Another way the researcher overcame these limitations was to allow the participant to pick the time and the location of the interview. This accommodation allowed the participant to control part of the interview (Schwalbe et al., 2014).

Another limitation was also the participant's lack of anonymity. The participants may have felt that they were less desirable employees if they did not answer the questions in the manner that the interviewer expected. The interviewer's role and the interviewee's perceived role may have led the interviewee to hesitate when answering questions, but this was remedied through appropriate opening questions and answers and rapport building between interviewer and interviewee. The researchers' biases were overcome by the standardization of the questions and the anonymous nature of the demographic questionnaire. The interview was the only portion where the researcher knew the individual. The questions' Likert-scale format helped to eliminate many of the demographic questionnaire's biases (Brown, 2015). The researcher also journaled his own perceived biases that he reflected on when conducting interviews. The interviews' recording also helped the researcher evaluate whether any preferences were implied during the interview.

Study Delimitations

This study was conducted by interviewing and sending a demographic questionnaire to high school teachers in a public high school in a rural school district during the 2020–2021 school year. The findings may not apply to other schools in rural

or urban areas of the state or outside of the state because of the demographics of the teachers and the students.

Definitions of Key Terms

Co-taught classroom: the practice of pairing teachers together in a classroom to share the responsibilities of planning, instructing, and assessing students (Wexler et al., 2021).

Free and appropriate public education (FAPE): the right to a FAPE is an educational entitlement of all students in the U.S., guaranteed by the Rehabilitation Act of 1973 and IDEA (Kauffman et al., 2021).

General education teacher*:* instructs all students in the core academic curriculum in the general education classroom (Brownell et al., 2005).

Individuals with Disabilities Education Act*:* U.S. legislation that ensures students with a disability are provided with FAPE tailored to their individual needs (Kanaya, 2019).

Individualized education plan (IEP)*:* a document detailing a plan for educating a student with a disability eligible for special education (Sec. 300.320 definitions of individualized education program, 2017).

Inclusion: the educational policy of placing students with physical or mental disabilities in regular classrooms and providing them with specific accommodations (Soukakou et al., 2014).

Least restrictive environment (LRE)*:* the requirement in federal law that students with disabilities receive their education, to the maximum extent appropriate, with non-disabled peers and those special education students are not removed from regular classes unless, even with supplemental aids and services, education in regular classes cannot be achieved satisfactorily (Giangreco, 2020).

Perception*:* an element of social cognition, referring to how the set of processes that governs how we perceive others—individuals, groups of individuals, and symbols—in our social world governs how we understand our social world (Tillas et al., 2017).

Self-efficacy: a personal judgment of how well one can execute courses of action required to deal with prospective situations (Bandura, 1977).

Social Cognitive Theory: portions of an individual's knowledge acquisition can be directly related to observing others within the context of social interactions, experiences, and outside media influences (Bandura, 1982).

Special education teacher: someone who teaches children and youths with various disabilities (Brownell et al., 2005).

Summary

The purpose of this case study was to narrow the achievement gap for special education students in a southwest U.S. high school. The focus was on the historical implications of federal legislation on special education in the U.S., the achievement gap between disabled and non-disabled students at the southwest U.S. high school, and the perceived efficacies of general education teachers and their abilities to educate special education students. The results of this case study helped create professional development aimed at improving the deficit areas that teachers were aware of to increase their self-efficacy, which helped to build the school's collective efficacy.

CHAPTER 2: LITERATURE REVIEW

Access to education has been limited to different populations throughout the history of education in the U.S. Historically, students of color and students with disabilities were denied access to an equitable education. The Civil Rights Movement, beginning in the 1960s, helped create the Special Education Movement. Special Education Movement advocates used many of the same principles that Civil Rights Movement advocates used and had similar results (Skiba et al., 2008). The movement created EAHCA in 1975, which guaranteed FAPE for all students, regardless of disability (Spaulding et al., 2015). This legislation was the first legal effort to ensure that all students have equal access to education.

> These days, it is doubtful that any child may reasonably be expected to succeed in life if denied the opportunity to an education. Such an opportunity, where the State has undertaken to provide it, is a right that much be made available to all on equal terms. (Warren, 1954, p. 493)

EAHCA (1975) was the first step in creating legislation to educate students with disabilities; it was replaced in 1997 with the Individuals with Disabilities Education Act, revised in 2004 (Russo et al., 2005). This legislation was enacted to ensure that students with disabilities received FAPE and this education in the LRE.

The LRE, according to IDEA, is the maximum extent appropriate to educate special education students in general education classrooms with supplementary aids and services (Underwood, 2018). The LRE, whether a student is removed from the general education classroom or stays to access the instruction that the teacher presents, is determined at the student's IEP meeting. The team members decide how much time the student will be removed from the general education environment and its effect. Meeting

as a team and attempting to determine the most appropriate placement for the student can be difficult, and individuals have differing opinions of the LRE. The definition, or applying the definition, references placing a student where their needs will be best met, whether in general education or in a classroom that removes them from the general education environment (Marx et al., 2014). This literature examines the history of special education, the changes federal legislation has created, and ways to improve students' instruction to narrow the achievement gap between disabled and non-disabled students.

History of Special Education

During the 19th and 20th centuries, as many different immigrant groups began to come to the U.S., the preoccupation of lost values began to plague the current U.S. population. Citizens were worried that these new immigrants would bring hatred, religious intolerance, crime, and violence, so leaders began to discuss what could prevent this. The social and political leaders attempted to find ways to influence the less fortunate portions of the current population and teach those children the rest of society's values and ideals. This idea was conceptualized by Horace Mann, the founder of public education in the U.S., who proposed that communities establish schools funded by tax dollars, that students from all religious, social, and economic backgrounds could attend together where they would learn to accept and respect one another. These community schools would socialize the children, which would improve their interpersonal relationships and, thus, improve social conditions. Mann felt that for schools to succeed, the mission must be toward socializing children through mandatory attendance. Unfortunately, poor children did not regularly attend, graduate, or enroll. The lack of attendance led schools

to lobby for compulsory education attendance laws that punished parents for their children's absenteeism (Reyes, 2020).

In the 19th century, special education was marked with special schools and special classes for students with disabilities, especially deafness, blindness, and mental retardation. The 19th century also had the first special programs to prevent delinquency in children, primarily for at-risk children who lived in slums. These programs focused mainly on vocational skills, carpentry, metalwork, sewing, cooking, and drawing (Wright, 2020). The 20th century saw a gradual increase in special schools and classes, which responded to equity requests within schools stemming from the Civil Rights Movement.

Brown v. Board of Education, the Supreme Court decision that ended the *Plessy v. Ferguson* separate but equal doctrine that ruled different parts of society impacted education because schools functioned with the idea that separation was legal as long as the services provided were equal. *Brown v. Board of Education* desegregated schools nationwide, eliminating racial segregation in public schools (Smith, 2002). The Justices of the Supreme Court wrote,

> Segregation of white and colored children in public schools has a detrimental effect on the colored children. The impact is more significant when it has sanctioned the law, for separating the races is usually interpreted as denoting the inferiority of the Negro group. A sense of inferiority affects the motivation of a child to learn. Segregation with the sanction of law, therefore, tends to [retard] the educational and mental development of Negro children and deprive them of some of the benefits they would receive in a racially integrated school system (Wright, 2020, p.2).

The parents of special education students were motivated by *Brown v. Board of Education* to question the education they received. *Brown v. Board of Education* focused

on the Equal Protection Clause of the Fourteenth Amendment. Parents of students with disabilities looked beyond race and questioned why their children's rights were violated. The students were deemed uneducable or untrainable due to the Civil Rights Movement's rising influence. They began a class-action lawsuit against the State of Pennsylvania. Pennsylvania allowed schools to deem students uneducable or untrainable, preventing 70,000–80,000 students from receiving an education (Horrocks et al., 2008). The parents, known as the Pennsylvania Association for Retarded Children (PARC), challenged the legislation that prevented their children from receiving an education. A three-judge panel from the U.S. District Court for the Eastern District of Pennsylvania sided with PARC, ruling that mentally impaired children were guaranteed free public education and appropriate training with their capabilities (Horrocks et al., 2008).

During the PARC lawsuit, a similar lawsuit took place in the District of Columbia. *Mills v. Board of Education of the District of Columbia* was a case that revolved around the suspension, expulsion, and exclusion of children with disabilities. Attorneys for the Board of Education of the District of Columbia argued that the high cost of educating students with disabilities would prevent them from educating all students effectively. Still, the courts ruled that they could not deny education without first affording students due process rights (Yell et al., 2017). This case initiated due process rights for students in special education and led Congress to investigate special education in the U.S.

PARC v. Commonwealth of Pennsylvania and *Mills v. Board of Education of the District of Columbia* led the U.S. Congress to review how students with disabilities were educated. The decision led to the creation of EAHCA (1975) legislation. EAHCA was

signed into law on November 9, 1975, which set the stage for the evolution of special education students in the U.S. (Wright, 2020). This legislation guaranteed education to all students regardless of disability. Previously, schools excluded students that did not fit into their course of study; EAHCA ensured that schools now created courses of study to fit all of their students (Keogh, 2007). The creation of this act also encouraged colleges and universities to train teachers and specialists to work with a wide-ranging group of students.

The authors of EAHCA also mandated the IEP and the LRE (Keogh, 2007). Legislators argued for the IEP because they felt it was the only way to monitor the law (Smith, 1990). The IEP provided school administrators with compliance procedures, teachers with a formalized and uniform plan, parents with a voice in their child's education, and most importantly, students with a guaranteed education. These stakeholder groups and their part in the IEP process ensured that the IEP could not be ignored.

The conceptualized LRE in EAHCA (1975) gave rise to the mainstreaming concept, educating students with disabilities in classrooms of non-disabled students (Alquraini, 2013). This act mandated that all students ages 5 to 21 be educated with their non-disabled peers to the fullest extent possible, regardless of the severity of the disability of the student. EAHCA remained in effect until 1990. The authors of IDEA amended EAHCA and brought changes that increased schools, families, and students' opportunities. IDEA also supported educating students alongside their non-disabled peers, but instead of using the term *mainstreaming*, IDEA used *inclusion* to describe the practice.

In 2001, President Bush appointed special education experts to study special education. This commission went to many cities across the country. It held town hall meetings where they heard testimonies from hundreds of special education individuals: students, parents, experts, administrators, teachers, and support staff. From these testimonies, the commission presented its final report entitled, *A New Era: Revitalizing Special Education for Children and their Families* (Yell et al., 2006). This report was one of two that U.S. Congress used when creating IDEA in 2004. The other document that U.S. Congress reviewed when creating the legislation was a series of 14 reports issued by the Thomas B. Fordham Institute, entitled *Rethinking Special Education for a New Century* (Finn et al., 2001). These two publications helped to guide legislation with caveats: decreasing the number of students labeled *disabled* due to inadequate instruction, merging special education and general education into one system whose purpose is to provide quality instruction to all, and making funding contingent on positive gains (Finn et al., 2001).

Federal legislation, civil uprisings, and demands for change dramatically affected public education in the United States. The country's social change altered how parents perceived their children with disabilities should fight for equity rights (Fenton et al., 2017). Equity is defined as ensuring all students are supported to reach their highest capabilities (Nadelson et al., 2019). All three branches of the federal government have intervened over time to help students gain equity in their education. However, there is still room for progress to ensure that all students have access to equity to help them reach their highest potential.

Least Restrictive Environment

The LRE, according to IDEA, is the maximum extent appropriate to educate special education students in general education classrooms with supplementary aids and services (Underwood, 2018). The LRE, whether a student is removed from the general education classroom or stays, is determined at the student's IEP meeting. The team decides the amount of time the student will be removed from the general education environment and placed in a resource setting, self-contained setting, or an alternative location, and how that will affect the student. Meeting as a team and determining the student's most appropriate placement can be difficult, and individuals have differing LRE opinions. The definition, or the application of the definition, can be taken, as in general education, as placing a student where their needs will be best met (Marx et al., 2014).

Students should only be removed from the general education environment when their needs cannot be met, even if they are given access to extensive aides and support (Kurth et al., 2019). These supports can be educational, behavioral, social, communication-based, and collaborative. General education teachers believe that students can access the classroom's educational aspect outside their walls. They do not need to be in a general education classroom to learn the information. The belief is that students can access the curriculum in a setting removed from the general education setting, even while knowing that the pace and the rigor in those classrooms are much lower than their own (Bacon et al., 2016). Special education students learn positive behaviors in the general education classroom (Ballard et al., 2017). Ballard et al. (2017) conversely state that students learn more negative behaviors in the special education classroom, creating more reason for students not to be pulled out of the general education classroom.

Kurth et al. (2019) looked at 88 IEPs from 6 states reviewed by 41 special education teachers; their study was designed to determine if the IEPs were written with sufficient support for the student to be in an inclusive environment and for outside specialists to answer two questions: What factors do teams consider when making LRE decisions? and In what classes are students placed in the LRE? The IEP review results showed that most justification statements for removing students from the regular education environment describe why they cannot be taught in the regular education classroom. The IEPs that the students had were not always individualized; they were created from a template and did not focus on the abilities of the students, instead of focusing on the disability and how it would affect all students, not focusing on what the student could do and what the school could do to help the student be successful in the general education environment (Kurth et al., 2019). The professionals charged with creating and implementing the IEPs looked at what students were unsuccessful at, using the IEP as a shield from general education rather than a successful plan. These educators were afraid of the LRE, fearful that the general education classroom would be too difficult for the student or that the student's needs would be too intrusive in the general education classroom. The supports were minimal, and the outcomes were less than desired (Giangreco, 2020).

Decision Making

One reason for not using the LRE for special education students is funding (Francisco et al., 2020). Lack of funding and resources has led schools and educators to be creative in educating students, including students with disabilities. This creativity has led educators to be protective of their special education students, not allowing them to

fail because they do not have the resources they feel necessary to educate them to the level that will enable them to be successful students and adults outside of their classrooms. The study, led by Hasazi et al. (1994), investigated the LRE and how schools made those determinations. While many of those questionnaires stated that funding was a large part of the decisions made, others said this allowed them to think outside of the box and be creative in reaching and educating students.

Educational researchers O'Laughlin et al. (2015) researched schools' policies and procedures within their home state with a history of oppression in schools. As mentioned above, the approach to safeguard students from failing infused these schools with the desire to make students earn their way out of the more restrictive classrooms. Many of the decisions that came out of IEP meetings in their states were not about the student; they were about the power struggle regarding the school's wishes and the parents' wishes—a win/lose scenario that did not focus on the student, who should always be the winner—and, subsequently, the school and parents would win as well.

A 2012 study conducted by McLeskey et al. looked at placements for special education students across the U.S. The study focused on the trends of special education placements of students since 1990. Their findings revealed three trends: 1) students with disabilities have risen in the general education environment since 1990; 2) students pulled out of the public education environment have fluctuated since 1990, with rises and falls; and 3) the number of students educated in self-contained or separate schools has decreased since 1990. The study also affirmed that students across various eligibility categories were more consistently exposed to the general education classroom since

1990. These changes began under EAHCA and continued under the IDEA legislation in 2004 and the inclusion mandates.

The segregation of students has historically been accomplished because of the assumption that some students cannot learn. These archaic beliefs are one of the main reasons federal courts intervened and created legislation. In 1982, Heller et al. reported that segregating students with disabilities proved positive to students: smaller class sizes, expert-provided instruction, and no attacks on self-esteem because teachers would be working with similar students (1982). Kurth et al. (2019) scrutinized the positives that students experienced expressed by Heller and attempted to examine the segregated students and how segregation was beneficial. They found that students with low-incidence disabilities tend to be segregated the most often. Low-incidence disabilities are students with a disability for which a low number of qualified and trained personnel are needed. Students with high-incidence disabilities are (more often than not) segregated for most or all of their school day (IDEA, 2004).

In 1982, Heller found that qualified professionals would educate segregated students. Still, a study led by Mason-Williams et al. (2017) discovered that in their sample of elementary-level special education teachers, only 40% held an elementary license, and only 26% held degrees in special education and elementary education. Of the respondents to the study, 75% answered that they had completed at least three teaching courses while in college and that 60% of elementary special education teachers hold a degree and a license in special education. This discovery by Mason-Williams et al. demonstrates disproportionality between students educated by professionals trained in a grade level or content level and those trained in special education. Students pulled out of

the general education environment are placed into segregated classrooms and taught by individuals who are not trained to educate them on content but help students overcome issues.

The research of high-quality schools focuses on the importance of high-quality instruction from qualified individuals that improve the outcomes of students of all students (Taylor et al., 2000). Kalogrides et al. (2013) examined teachers' characteristics and related to the respective schools' effectiveness. Their work uncovered that schools with low proficiency rates have fewer senior teachers than the number of senior teachers in high-achieving schools. Teachers with less seniority are typically given students that struggle. This practice is consistent with special education, where teachers with less experience are given the most challenging students. Special education students are not always placed in the appropriate classrooms with minor restrictions; they are also taught by teachers that do not have the same experience, credentials, and resources as other teachers, which creates another gap.

Free and Appropriate Public Education

EAHCA introduced the FAPE requirement through IDEA. Although the FAPE requirement has been part of special education legislation since the beginning, what the term means has evolved. In *Board of Education v. Rowley*, the U.S. Supreme Court developed a two-part test to determine whether FAPE had been met. The first part is whether or not the school complied with EAHCA. The second part is whether the student's IEP was written to receive an educational benefit (Yell et al., 2019). This decision created a test for all schools and districts to determine if they adequately applied FAPE. FAPE, as written into EAHCA, was defined as a special education-related service

provided at the public's expense. It also meets the standards of the state's educational agency. FAPE spans the entire scope of the student's academic career, and that specially designed instruction was provided within the student's IEP (IDEA, 2004). The U.S. Supreme Court's decision was an attempt to make FAPE less ambiguous than how it was written. This decision was not the last time the U.S. Supreme Court would render a decision on FAPE.

The U.S. Supreme Court heard *Endrew v. Douglas County School District,* which revolved around the concept of FAPE and what determined FAPE. In this case, a student with autism and attention-deficit hyperactivity disorder was withdrawn from public school and enrolled in a school for students with autism. While enrolled and attending the private school, he progressed in his academics and behavior. The student's parents filed a suit against the district that they did not provide FAPE because he was not making academic or behavioral progress while enrolled in the public school.

The case was heard through various courts, and all sided with the district, that the district had met FAPE based upon the *Rowley* decision, the tenth circuit court writing that the district met FAPE as long as the educational benefit was merely more than *de minimis* (Yell et al., 2017). The parents appealed this decision to the U.S. Supreme Court. In this case, the U.S. Supreme Court decided to hear arguments unanimously, overturning their previous decision in Rowley and changing the standard to determine FAPE. In his decision, Chief Justice Roberts wrote: "To meet its substantive obligations under the IDEA, a school must offer an IEP reasonably calculated to enable a child to make progress appropriate in light of the child's circumstances" (*Endrew*, 2017, p. 11). This decision gave a more definitive definition of what school districts needed to do to meet

the FAPE standard. All schools and districts will hold this more definitive standard as leaders make positive changes in public education.

The school principal is held responsible for ensuring that all IDEA legislation mandates are implemented correctly within their schools. Sumbera et al. (2014) concluded that there is a false thought among principals and building leaders that there are no due process hearings or public complaints or mediations and that they are doing what is correct in their buildings. These feelings are based on the lack of training in special education and the knowledge that comes from that training. The lack of training, experience, and understanding of terms (LRE, FAPE, inclusion, etc.) creates many special education issues.

In 2016, The National Center for Educational Statistics reported that 13% of students enrolled in public schools nationwide were eligible for special education services. As of 2016, approximately 6.4 million students were receiving special education services in the U.S. DiPaola et al. (2004) determined that most principals have not had proper field-based experience from preparation programs and have not had the proper academic instruction to administer all aspects of their special education programs. Roberts et al. (2017) sent questionnaires to over 300 principals in Texas about their special education knowledge, and over 95% of the respondents said that they had the appropriate expertise to oversee the special education processes at their schools, with 93.8% responding that they understood the LRE and 100% responding that they know IDEA.

Inclusion

Federal legislation mandating students be taught in their LRE has increased the number of inclusive classrooms. According to Francisco et al. (2020), inclusion is first used in the 1994 Salamanca Statement. It is not just another reform model; it responds to a need to educate diverse learners and provide similar opportunities to non-disabled peers. The number of special education students receiving their education in inclusive settings has increased since the inception of EAHCA. The reauthorization of IDEA and NCLB authorization has led to increases in students' number in inclusive settings. The number of students in inclusive classrooms is the largest in secondary settings so that students have access to teachers with content area specialists.

The number of students educated in inclusive settings has increased, and they received their education from content area specialists. According to Francisco et al. (2020), this is most likely due to the NCLB Highly Qualified Educator mandate. High school teachers are qualified in subject areas, i.e., English, Physical Science, Life Science, etc., and those subject areas vary from state to state. Goldhaber et al. (2015) wrote that teacher quality is the most crucial factor when predicting academic success. Special education teachers are licensed with what is categorized as a stand-alone certificate, and they are typically licensed to teach in K-12 classrooms. This training and licensure prepare special education teachers to work with special education students instead of teaching content (Blanton et al., 2017). The demand to educate disabled students in general education classes has led to general education and special education teachers' roles. It has also led to many educators earning dual licensure in content and special education.

Self-Efficacy

One of the most extensive changes that education has faced over the past 40 years is the mandate of equal educational opportunities for all students, including at-risk and special education students, to be educated in general education classrooms (Leyser et al., 2011). The country, state, and district policies, the availability of resources, school leadership, and the teachers' collaboration all affect the development of inclusive practices in the school and classroom. Yet, the teacher's attitude and willingness, along with their confidence or perceived efficacy, will ultimately determine the inclusive classroom's success (Solis et al., 2012). Increasing teachers' self-efficacy working in inclusive classrooms is key to ensuring the inclusive classroom's success.

Cook et al. (2017) reported that one-third of secondary students were educated in co-taught classrooms, students with learning disabilities making up the most considerable aspect of that one-third. These co-taught classrooms comprise a general education teacher and a special education teacher who combine their skills to educate students. Teacher self-efficacy is linked to student success, and teachers with a high sense of self-efficacy were more open to trying new and different methods to meet the learners' various needs in their classrooms (Tschannen-Moran et al., 2001).

Ruppar et al. (2020) found that individual teachers are barriers or facilitators in a student's general curriculum involvement. This ability to be either a barrier or a facilitator has been identified as influencing literacy for students with extensive needs (Ruppar et al., 2015). Bock and Erickson (2015) discovered that teachers who implement a student-centered teaching philosophy increase student engagement and progress in a comprehensive literacy curriculum. Those teachers' expectations were related to student

outcomes. Ruppar et al. (2015) found that teachers' beliefs about the causes of student learning and their assumptions of possible student outcomes positively or negatively influenced their self-efficacy. This study also found that their student needs knowledge was related to their self-efficacy and instructional decisions; they planned what their students needed and expected them to learn created student-centered classrooms.

Teachers with high self-efficacy are thought to work harder, have less stress, and be more involved in informal learning activities (Lohman, 2006). Ross (1998) theoretically predicted self-efficacy to affect the teacher's level of performance. Bandura (1977) began looking at social cognitive theory and started to look at the concept of self-efficacy. During his studies, he found that peoples' actions are affected by the outcomes they intend to receive. This definition has evolved, and Bandura eventually defined it as one's ability to carry out and achieve a specific goal (Bandura, 1978). Teachers' self-efficacy is indirectly associated with student achievement and directly correlates to teachers' classroom behavior and the strategies they use in their classrooms (Gálvez et al., 2018). Ultimately, the teachers' greater belief in themselves embarks upon their students' and their students' expectations. Teachers with an assured sense of self-efficacy plan and teach lessons that encourage student growth and manage them in meaningful ways.

Determining self-efficacy involves questioning teachers about their beliefs regarding their position at the school. Günes et al. (2017) created a Likert scale and distributed it to teachers, and 641 responded. Many teachers use this tool, but using it in a school or on a smaller scale would help determine where teachers stand regarding their abilities and create professional development that fits a need.

Determining the needs of the staff will allow leadership to build upon those perceived gaps. Research has shown that for educators to be successful in professional development, the training programs must be intensive, ongoing, and connected to classroom practice; focused on specific subject content; and necessary to encourage relationships with a more substantial impact between teachers (Wei et al., 2009). Research evidence shows that merely developing skills is not a catalyst to sparking instructional change if the teachers lack the will to apply these newly learned skills in their practices (Chong et al., 2012). Teachers with positive beliefs about persevering through adversity enhance skills acquisition in the classroom and help students achieve the desired learning outcomes. Bandura's (1997) social cognitive theory shows that teacher efficacy is about the teachers' abilities to influence their students' results. Teachers who feel as if their students can be successful and reach the standards they set possess self-efficacy, while teachers who feel as if students are incapable do not have self-efficacy.

Building Self-Efficacy

Research has shown that pre-service teachers are impressionable, and their self-efficacy is the highest at the beginning but decreases as they begin teaching (Clark et al., 2019). Individuals who start their teaching career do so with the knowledge of their own educational experiences and believe that they know what is best, capable, and need no additional information. Bandura (1997) found that four primary sources contribute to one's self-efficacy: mastery experiences, vicarious experiences, verbal persuasion, and physiological arousal.

Mastery experiences are those hands-on experiences working with students, helping them achieve and learn. Mastery experiences have been found to have the most significant impact on self-efficacy, and multiple researchers have shown that mastery experiences positively enhance teachers' self-efficacy (Clark et al., 2019). Vicarious experiences, which individuals do not physically experience but imagine themselves in, positively impact self-efficacy. Imagine that you can succeed in a teaching environment; working through problems and inspiring students leads to self-efficacy upticks.

Verbal persuasion is the third source that impacts self-efficacy. Verbal persuasion is the encouragement, mentoring, and feedback individuals receive while developing their skills. Effective verbal persuasion depends upon the person's trustworthiness, credibility, and expertise providing it. Motivational feedback helps to increase the specific actions through improved attention (Wright et al., 2016). Feedback, praise, and motivation from a trusted individual or source help improve teachers' self-efficacy. Physiological arousal is how your body responds to completing a task (Hoi et al., 2017). Having positive feelings while teaching a lesson and obtaining the desired responses help increase teachers' self-efficacy.

Boosting teachers' self-efficacy helps them believe that they can educate students and face complex challenges with perseverance. Trust is the most significant factor in building self-efficacy within teachers at a school (Ghamrawi, 2011). The trust must be prevalent between teachers and building leaders (formal and informal). Classroom teachers do not have the necessary or adequate knowledge regarding special education or inclusion (Brijmohan et al., 2009). To build these skills, teachers must go through professional development to enhance their knowledge and skills.

Summary

The special education movement in the U.S. was born of the Civil Rights Movement. The *Plessy v. Ferguson* case decision, separate but equal, had a wide-ranging effect on other aspects of everyday life, not just racial segregation. The decision was used to disparage the segregation that students were experiencing. Parents found their voices and rose against the harshness of education to allow their children to reach their fullest potential in school and life.

From this parental uprising, politicians listened, acted, and change began. EAHCA laid the groundwork for the changes made in states, districts, and schools worldwide. These initial changes have been modified through IDEA and the reauthorization of that legislation. Change continues to occur in the way students with disabilities are educated as research is conducted, legislation is made, court opinions are given, and schools utilize the resources they have to give their students the most significant benefit.

The influence of outsiders of education—social groups, politicians, judges, advocacy groups, etc.—will continue to influence the necessary changes and be essential for our educational system so that all students can flourish and succeed. The accountability aspect of education (assessment data) will most likely continue so those specific agencies can track what students are learning and from whom they are learning. These accountability measures will continue to influence the research conducted to determine what is most effective.

Students of all genders, ages, races, socioeconomic status, disability status, state, county, and school are included when tested and compared against one another. Schools

are treated like businesses, and failure can have tragic consequences. The pressure to perform and show how efficient and precise the school can be is intense, with decisions on improving testing outcomes. NCLB and the reauthorization of IDEA in 2004 added requirements for students with disabilities to make similar progress as their non-disabled peers, which fueled angst among many educators (Pazey et al., 2015). The uneasiness created by testing students with disabilities is the focus of many schools to ensure that they are making adequate progress and being educated according to federal standards. Unfortunately, the fear of losing funding and being deemed a *needs improvement school* has continued but has created changes within the system. Testing outcomes carry significant clout when it comes to funding and recognition. Schools and districts use this information to formulate plans to improve, with or without the requested and sometimes necessary funding.

Education will continue to evolve, and special education will grow with it. Educational research will continue to try and increase the positive outcomes for all students. Federal and state legislation will continue to impact education funding and how accountability is measured. Educators will continue to work to benefit students and society, and the outcomes will continue to be measured to determine the schools' merit.

Increasing the knowledge of educational stakeholders to ensure that they are all aware of education legislation requirements and what can be done to support students will improve education. The legislation's information should benefit all stakeholder groups, not a barrier to the student, school, or district but a tool to help even the playing field for all students. Real success and growth can be experienced and measured.

Legislation and accountability measures that have been attached to this legislation have changed what education looks like in the U.S. Teachers are working with students that they did not expect to work with while going through their training program, working with students that they are not prepared to work with, working with teachers that do not share a similar mindset with, participating in meetings revolving around unclear topics, and making decisions that have a lasting impact on entire classrooms of students. Building teachers' ability levels to increase students' achievement rates is one of the principal's many roles in the school building. Regardless of special education status, all students deserve the best education possible in classrooms with content-trained teachers. Building the ability levels and self-efficacy of the teachers is the role of the school leader.

CHAPTER 3: METHODOLOGY

This researcher conducted this qualitative case study to understand general education teachers' self-efficacy levels with students who have IEPs in their classrooms. This goal was reached by analyzing the data from interviews conducted with a minimum of two general education teachers from each department (English, Social Studies, Science, Mathematics, Electives, and Career and Technical Education [CTE]) that work in the co-teaching model. The answers to the following questions determined why teachers felt the way they do about educating special education students and what can be done to help them feel more capable of teaching students' special needs:

1. What are secondary school teachers' perceptions regarding how their self-efficacy influences their students' academic achievement?
2. What personal characteristics do teachers feel add to their positive or negative self-efficacy in teaching?
3. What factors do teachers identify as influencing their professional self-efficacy in teaching (personality traits, outside circumstances, number of students, pre-service teaching experiences, etc.)?

Research Method

Quantitative studies are determined to produce accurate, valid, or unbiased inferences (Zyphur et al., 2017). While this study was intended to produce unbiased inferences and their perspectives from the participants in the study, the quantitative data was not the key focus of the study. Quantitative research involves the process of objectively collecting and analyzing numerical data to describe, predict, or control variables of interest (Powell, 2019). This research study sought to look at human

perspectives, not numerical data. Therefore, the option of choosing a quantitative study was not an appropriate choice.

Qualitative studies seek to determine a deep understanding of events that can be flexible in their design (Jeffrey, 2016). This study focused on teachers' self-efficacy feelings regarding special education students in their classrooms. This study had two components: an anonymous survey and a voluntary interview—the flexible aspect of the qualitative study during the interview process provided credence to this method's value. Qualitative research aimed to clarify the structure, order, and patterns found among the southwest U.S. high school teachers. Therefore, selecting the qualitative research method was the most appropriate for the study.

Mixed methods studies collect and analyze quantitative and qualitative means data for a study (Shorten et al., 2017). This study focused on events, perspectives, and beliefs, not all of which can be quantified. The researcher looked for patterns in the classroom to improve outcomes, not the outcomes precisely. A longitudinal study of this nature would also look at the quantifiable outcomes. The quantifiable data in this study was used for demographic purposes, to categorize information by department. Therefore, due to the lack of quantitative needs decided to use a mixed-methods study an unnecessary choice.

Research Design

This study was a case study design that investigated the self-efficacy of 59 teachers. This study was completed by distributing a demographic questionnaire and semi-structured interviews. The demographic questionnaire went out to all teachers via email. They could have completed it anonymously with the option to sign up for an

interview as a follow-up to the demographic. These emails were sent out by a third party from the school that did not supervise the individuals. Norman (2010) looks at the Likert scale's ordinal nature but writes that while the categories have a rank order, the intervals between them may differ. This difference may lead the researcher to jump to the wrong conclusions, so a duality of data must be completed.

A qualitative case study was selected for this research because the study was conducted at a single high school in the southwest U.S. The high school has shown deficits in academic achievement for special education students. According to Smith (2002), the interpretive approach indicates that the research aims to understand meanings, why things occur, and the different ways that they can be understood. This study looked to determine the background of teachers (education, experience, subject). This information was gained by completing the demographic questionnaire and why and how they can improve their self-efficacy (interview). The focus of this study was to improve the outcomes at one high school and using the case study was the best method for doing so. Because this was a bounded study, a case study was the best fit. A quantitative study would look at student outcomes, not teachers' perceptions.

A qualitative methodology was selected for this study due to the teachers' singular nature (only teaching one subject); general education teachers not having experience working with students with disabilities, and the ability to focus on a single group of teachers working with the same student population to help enhance the outcomes' application on increasing student achievement. This qualitative case study involved multiple data collection methods, including individual interviews from a small group of teachers and a survey completed by the staff. This qualitative case study identified

teachers' needs in the questionnaire and during the interview to give them skills and confidence to teach special education students.

Quantitative research tends to be more black and white, while qualitative data is excellent for insights and open-ended reactions. This study was best served through qualitative data ascertained from an interview. The researcher examined how feelings of teacher self-efficacy influenced student outcomes. This qualitative study looked at one particular school (case) investigating the needs of teachers. The issue that was researched revolves around teachers at a particular school. Creswell et al. (2007) wrote that case study research does not necessarily focus on the individual but the individual case. A case study compiles the individuals' stories to clarify the issues involved in the case. Quantitative research was not chosen for this study because its issues are more than just data; it focuses on the perceived causes for the student outcomes. A mixed-methods study was also not chosen because the quantitative aspect was not the target of the study.

Focusing on the teachers at the school and their self-efficacy toward the students in their classrooms will help impact students' academic outcomes and improve teachers' job quality (Zee et al., 2016). According to Zee et al. (2016), improving job quality also positively correlates to classroom outcomes. Improving outcomes for special education students was the ultimate goal of this study, but the ancillary outcome of improving teacher job satisfaction would be welcomed.

Instruments

Technology was a vital component of this study. The demographic questionnaire was sent to the teachers through their school secretary's email. The demographic questionnaires were completed anonymously, and the teachers were notified that the form

was not collecting email addresses to secure the respondents' anonymity. The idea of trustworthiness was grounded in the researcher's moral claim of confidentiality. According to Vacek et al. (2017), anonymity collects no identifying information that is a functional attribute of the research design. This design's anonymity was quintessential to the demographic questionnaire's outcome because the questions revolved around teachers' feelings and feelings that they may not have wanted to express outwardly. The demographic questionnaire asked the general education teacher's experience, education level, area of expertise per their degree, bachelor's degree and master's degree (if applicable), their feelings toward special education, their comfort level toward special education, the professional development/training they have had, and whether or not accountability impacts their perceptions.

The qualitative data that came from the interview instrument was also used for this study. Most respondents were anonymous, but those that agreed to an interview gave up that anonymity so that they could be interviewed. If no teachers agreed to the interview, or enough to ensure saturation, the researcher would have had to look to Teacher Groups on Facebook for participants. The teachers received an email from a third party that asked them if they would like to participate in a one-on-one interview with the researcher. Each interview, which took place individually, was also recorded for audio and transcribed. After the transcription, the coding process took place. According to Fowler et al. (2016), one of the most significant advances in demographic questionnaire research has been the increased use of cognitive interviews to evaluate the demographic questionnaire's questions. Using the respondent answers during the interview to drive the conversation only helps to enhance the coding process. The audio

recording of the interview and the transcription of the responses helped the researcher write a complete story of the interview process's data. The questions that were asked in the interview were open-ended, investigating the beliefs and feelings that the teachers held. The questions clarified what they felt they and the school did well, what they felt the school did not do well and what could be done to help them do better. From these questions, additional questions were asked based upon their initial responses.

Participants

This study took place at a rural high school in the southwest U.S. The school population is more than 1,300 students, 59 teachers, four counselors, and two social workers. The teachers are divided into English, Science, Social Studies, Mathematics, Electives, and CTE. The special education teachers did not receive the demographic questionnaire, and they were not counted in the totals. This demographic questionnaire investigated the self-efficacy of general education teachers only. After the third party sent out the demographic questionnaire to general education teachers, the third party requested teachers to inquire whether or not they would like to participate in a one-on-one interview about their responses. Only those that responded to the third-party message participated in the interview process. The goal for the study was that 80% of teachers complete the survey, and 20% participate in the interview aspect. Qualitative sources tend not to focus on numbers but on the quality and the richness of the information provided (Francis et al., 2010). Saturation of the study was contributed by 80% of teachers completing the demographic questionnaire and 20% completing the interview. The general education teaching staff that worked with students with IEPs were the population for the questionnaire, and those that participated in the study were the sample.

This high school is a Title I school, with all students receiving free lunch and breakfast. The school's special education population is 21%, and most students were educated in co-taught classrooms. This schedule transitioned in the master schedule from the 2019–2020 and prior school years, where resource pull-out was the most used form of instruction for special education students. The focus of this study was the 59 teachers who educate special education students in their classrooms and those who did not have special education students.

The state mandates that all students who graduate with a Standard High School Diploma participate in the ACT graduation requirement. The outcomes of this test are also used as a component of the state accountability system. The rural southwest high school had a graduation rate of 95.45% at the 2019–2020 school year's culmination. The special education population graduation rate for the 2019–2020 school year was 84.8% (28 of 33 students), graduating with a minimum of a standard high school diploma. The southwest United States had a special education graduation rate of 67.4%, with 2,630 of 3,902 special education students graduating.

While the school had a higher graduation rate of 17.4% than the special education population, the proficiency rate is lower, meaning that the school's special education students were not proficient in English Language Arts or Mathematics. The most recent ACT data from the state showed that 24.8% of the juniors that took the ACT were proficient in Mathematics, and 48.4% were proficient in English Language Arts. Of the 29 special education students who took the math portion of the ACT that school year, none were deemed proficient, and of the 28 that took the English Language Arts sections, none were deemed proficient. The percentage of proficient special education students in

the state was 3.1% in math and 8.9% in English Language Arts. The teachers at the school were aware of the academic outcomes and are working to raise the achievement rates for all students.

Data Analysis Methods

The demographic questionnaire was sent to the teachers was be completed as a Google document, and the answers were compiled and analyzed directly. The demographic questionnaire was sent to each teacher's email—a criterion sampling method (participants that fit the criteria for the survey); the data were analyzed based on the Likert scale's responses and the multiple-choice and short-answer questions answers. The demographic questionnaire data was compiled based upon departments. The department data was then analyzed using a compare-and-contrast model regarding perceptions and experience.

Interview Coding

Each interview that was held was audio recorded. The researcher took note of body language throughout the interview as well. Coding is the actual work of analyzing the interview information (Deterding et al., 2018). Coding is also the most labor-intensive and time-consuming aspect of the interview research process. The origin of the coding process began with a rather simplistic approach and has grown in complexity over time, and many computer programs assist with the coding process. The interviews were coded based on the thematic analysis derived from the demographic interviews.

Open-ended interviews are a way of allowing respondents to engage in a wide array of conversation topics (Aberbach et al., 2002). Aberbach and his co-authors stated three areas of importance when working with open-ended interviews. The first is that the

researcher must be well versed in the topic. The second is to allow the respondent to answer within their framework, which allows for more in-depth and exploratory conversations. The third is that educated people prefer open-ended interviews because it will enable them to articulate their views on the subject matter.

Conducting open-ended interviews allows the educated respondent to feel that their words carry merit. According to Van der Zouwen (2001), coding interviews enable the researcher to use the interview as a diagnostic tool, and they can also be used as a problem-solving instrument. Using the interview as a diagnostic tool will advance the topic and create an opportunity for the teachers to discuss their self-efficacy viewpoints. This research project utilized the Atlas.ti coding software. Atlas.ti. coding software allowed the researcher to collect, analyze, and display findings (Woods et al., 2016). Linneberg et al. (2019) stated that coding is essential in turning raw qualitative data into storytelling. Having these capabilities within one program will put all of the information into one place that is accessible for the researcher, ensuring that no data is lost in the process. Using themes among the interviews, departments, and the whole school assisted the researcher in determining common areas of perceived strength and perceived areas of need.

The demographic questionnaire data was compiled based upon departments. The department data was then analyzed using a compare-and-contrast model regarding perceptions and experience. The professional development was looked at as a whole and among departments to determine any apparent strengths or weaknesses in each department. This data was used to support the study and assisted in determining needs. A question regarding their perceptions of special education, compiled with the anonymous

capability of their response, assisted the researcher in determining accurate perceptions among the teaching staff. Making an attempt and effort to show that responses are anonymous is a positive step that a researcher can take. Teachers were informed that this demographic questionnaire does not collect emails (Ardalan et al., 2019). The assurance that the demographic questionnaire is anonymous assisted in soliciting accurate responses. If more than two teachers volunteered from each department, one male and one female would have been chosen as the participating members.

Limitations

The limitations of this study were human-based. The respondents to the demographic questionnaire were all teachers at the high school, and even though the demographic questionnaire was confidential, the respondents still had to answer sensitive questions.

The response rate for online demographic questionnaires also varies and creates limitations. Comley (2000) cited three factors that affect the response rates in online demographic questionnaires. The first is the style of the page of the demographic questionnaire. The demographic questionnaire looks and the ease that the respondent addresses the demographic questionnaire are limitations that the researcher faced. The relationship with the brand, the school, and the researcher is also a limitation that the researcher faced. The third is the interest or relevance of the demographic questionnaire to the respondent. Informing all teachers to help serve them and improve student outcomes boosted their interest and relevance.

Another limitation that the online demographic questionnaire brings is that teachers can postpone filling it out or not filling it out. The personal aspect of this

demographic questionnaire adds another layer to the limitation. The researcher did not know who had and had not filled out the demographic questionnaire. Lefever et al. (2007) also state that population sampling is another limitation due to the selected participants' non-random nature. The demographic questionnaire was based on volunteers rather than any statistical probability.

There are also limitations involved in the qualitative component of the research. Alvesson (2003) wrote about the concept of reflexivity, which he states is the researcher's ability to view the subject matter from multiple angles to avoid biases. The researcher's ability to look at various angles is an essential skill for a researcher to help ensure that their work is robust, valid, and reliable. Ensuring that the work is vital, accurate, and reliable helped decrease interview limitations.

Impression management is when individuals attempt to control the impressions and behaviors that create impressions when meeting people (Peck et al., 2017). Impression management suggests that supervisors are familiar with their employees' level of competency, and people become more modest over time, leading to a more incredible validity outcome for interviews. Motivational interviewing fulfills a profound learning function using collaboration and connection. This connection between supervisor and supervisee is vital for accuracy in the interview (Barac et al., 2018). The motivating individual is a function of the leader, so motivating during the interview should continue this function. Due to the familiarity of interviewee and interviewee, there was a possibility that the interviewee may create false impressions or behaviors, but reassuring and continuing to develop a rapport during the interview assisted in overcoming this limitation.

Interviewing individuals about sensitive subjects can create obstacles, but developing a rapport with those individuals helped the researcher overcome that obstacle. Developing an effective connection allowed the respondents to relax and treat the interview as an open and collaborative process (Coleman, 2019). By creating a rapport with the interviewee, they began to gain the confidence to speak openly and honestly. Being able to talk openly and honestly helped enhance the interview outcome and the research process. Not having open and honest dialogue created limitations with the outcome of the qualitative case study.

Delimitations

One delimitation is the access to updated records. The most recent data available for the state is for the 2018–2019 school year. However, the researcher had access to school-wide ACT data before the state published it for the 2020–2021 school year. Therefore, the data discussed in this paper may influence teachers at this high school, but not others who similarly work with special education students. While this study investigated the needs of general education teachers, it may not necessarily impact the needs and concerns of other schools. Therefore, the findings and results may not necessarily generalize to other subjects, locations, or future periods.

Summary

This research study was conducted using a case study. A demographic questionnaire was used to gain information from many teachers, and an interview was used to gain qualitative data from a small group of teachers. The qualitative data was confidential and dictated the individuals who opened themselves for an additional interview. The quantitative data was compiled and analyzed independently. The

qualitative data were coded using a qualitative data analysis software program to help the researcher ensure consistency with the coding process. Both data points were used to determine teachers' self-efficacy rates at a rural southwest U.S. high school.

CHAPTER 4: FINDINGS

Presentations of Findings

This qualitative study aimed to determine the self-efficacy of general education teachers working with special education students. The teachers may have worked with the students in an inclusive or general education setting. The reason for the study was the significant achievement gap between general education and special education students at a southwest U.S. high school. This achievement gap was noticed when comparing the results from the ACT that all students are required to take as a graduation requirement.

The ACT scores showed an achievement gap between special education and non-special education students in a southwest U.S. high school. ACT scores can be found on the state reporting website. The results from 2017–2021 in Mathematics and English Language Arts were broken down into five standards: proficient, emergent/developing, approaches, meets and exceeds. The data for special education students versus non-special education students showed a stark difference in outcomes from 2017-2021 (non-special education is bold and italicized in Table 1).

This data showed a significant gap in proficiency between special education and non-special education students at the school. In the 2017–2018 school year, the difference between proficient and non-proficient was 20.6% of students. A total of 388 students took the ACT in 2017–2018, and in that number, 30 were special education students. From that 388, 80 students were deemed proficient in Mathematics, 0 of those students were special education students. In the 2018 school year, 20.8% of students were proficient in Mathematics, and 0% were special education students. A total of 390 students were tested that year, 29 of whom were special education students. The 2019–

2020 and 2020–2021 school years had similar results, with 2019–2020 having 17.6% proficiency and 2020 having 13% proficiency. Both of these years, 0% of special education students met or exceeded standards in mathematics.

Table 1

ACT English Language Arts Outcomes 2017-2021(general education in bold)

	% Proficient	% Emergent/ Developing	% Approaches	% Meets	% Exceeds
2017–2018	-	56.7	43.3	-	-
2018–2019	-	60.7	35.7	-	-
2019–2020	-	77.4	-	-	-
2020–2021	-	60.5	39.5	-	-
2017–2018	***20.6***	***21.1***	***58.2***	***16.2***	***<5***
2018–2019	***20.8***	***28.1***	***51.2***	***14.5***	***6.2***
2019–2020	***17.6***	***27.5***	***54.9***	***14***	***<5***
2020–2021	***13***	***26.5***	***60.5***	***11.5***	***-***

The results from English Language Arts in 2017–2021 did not vary much from the results in Mathematics (non-special education results are bold and italicized in Table 2).

In the 2017–2018 school year, 32% of students were deemed proficient in English Language Arts, and 0% were special education students. At the culmination of the 2018–2019 school year, 42% of students were in the proficient range, and again, 0% of that group was special education. The 2019–2020 and 2020–2021 school years had similar results, 39.8% of students were proficient and 36.8%, and in neither year were any special education students proficient.

Table 2

ACT Mathematics Outcomes 2017-2021(general education in bold)

	% Proficient	% Emergent/ Developing	% Approaches	% Meets	% Exceeds
2017–2018	-	63.3	-	-	-
2018–2019	-	37	44.4	-	-
2019–2020	-	-	75.9	-	-
2020–2021	-	58.1	39.5	-	-
2017–2018	***32***	***24.7***	***43.3***	***25.8***	***6.2***
2018–2019	***42***	***18.4***	***39.6***	***33.8***	***8.2***
2019–2020	***39.8***	***16.8***	***43.5***	***34.8***	***5***
2020–2021	***36.8***	***22***	***41.2***	***30.4***	***6.4***

The ACT is a test that all students take as a requirement to graduate high school. The results are also used as an indicator of school success. The results from the state do not vary much from the southwest U.S. high school (see Table 3).

Table 3

State ACT Outcomes (general education in bold)

	% Proficient	% Emergent/ Developing	% Approaches	% Meets	% Exceeds
*2017–2018	<5	50.8	46.8	<5	<5
2018–2019	<5	57.7	39.3	<5	<5
*2019–2020	<5	62.7	34.1	<5	<5
2020–2021	<5	57.6	40	<5	<5
2017–2018	***25.1***	***21.1***	***53.7***	***17.2***	***7.9***
2018–2019	***25.5***	***22.3***	***52.2***	***17***	***8.5***
2019–2020	***25.8***	***25***	***49.2***	***16.2***	***9.6***
2020–2021	***22.4***	***25.7***	***52***	***15.5***	***6.8***

The state outcomes showed that less than 5% of special education students were proficient in math while a range of 22.4–25.8% of total students were proficient. This significant gap shows that this issue is not isolated to the southwest U.S. high school but is statewide.

The outcomes of the ACT exam show that 0% of special education students were proficient in English Language Arts and Mathematics at the high school with less the 5% across the state. However, the special education graduation rates at the school and across the state showed that students are graduating from high school. The school had a graduating class of 2018 had a special education graduation rate of 80.9%. The class of 2019 had a special education graduation rate of 84.8%. The class of 2020 had a special education graduation rate of 85.3. The special education graduation rates from 2018, 2019, and 2020 were 66%, 67.1%, and 66%.

Because of the low proficiency rates for students at the high school, the school modified the master schedule beginning in 2020 to increase the amount of lesser restrictive classes. Before that school year, the school offered no co-taught classes. This change aimed to expose more special education students to grade-level standards to increase the ACT scores for that subpopulation of students. Co-taught classes can improve general and special education students (Kearns et al., 2020). Improving the learning is the goal; the improved outcomes are an added benefit.

The master schedule for the 2019–2020 school year called for 39 co-taught classes across mathematics, English, Science, and Social Studies. The master schedule for the 2018–2019 school year had 41 resource classes across the same four areas. A study conducted by Bottge et al. (2018) compared the outcomes of students taught math

in co-taught classrooms and resource classrooms. The outcomes showed that special education students from co-taught classrooms performed better than their peers in resource classrooms.

The first year of co-taught classes was a challenge. The school worked hard to create classroom partnerships that would be successful for both teachers and students. Teachers' input to the process allowed them to identify peers they would like to work with and content they would like to teach (special education teachers in the state do not have to be certified in a content area, only in special education). Many of the teachers had experience working in the resource setting, and making a shift to co-taught classes could have been a struggle, especially without the content expertise that their general education peers had.

After the first year of the change to more co-taught classes, the proficiency rate for special education students remained at zero. However, the change was that the emergent development group decreased from 77.4% to 60.5%, with 39.5% in the approaches standards group. The emergent/developing group of students has the lowest quartile of proficient skills after less than one year of less restrictive instruction (students take the ACT exam in February). (This is marked by a * on Table 2)

Presentation of Results

The shift from a resource-driven master schedule to a co-taught-driven master schedule worried teachers. Special education and general education teachers were worried that the students would not be successful in the co-taught classrooms and that the general education teachers would not be able to meet the needs of the special education students. This concern is not found only in this high school; it is worldwide. Rasmitadila

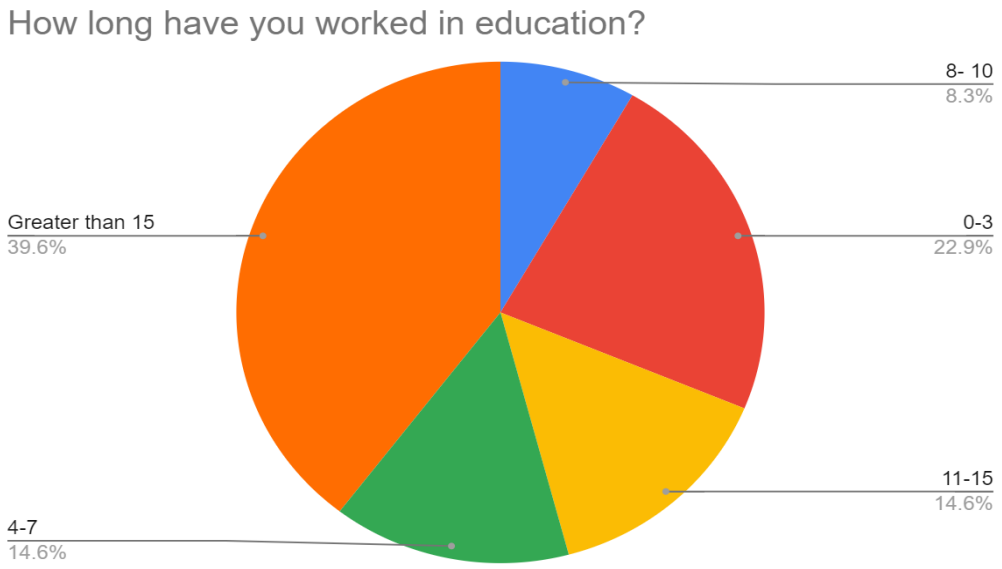
et al. (2020) found those general education teachers were hesitant to work with special education students because they did not feel qualified or prepared to meet the needs of special education students.

A demographic questionnaire was sent to all general education teachers at a southwest U.S. high school. The purpose of this demographic survey was to understand the teaching staff. The demographic survey was sent via email to all staff with the disclaimer that this was an anonymous questionnaire and that it was not tracking the emails of the respondents.

The first question asked how many years they had been teaching, with the choices 0–3, 4–7, 8–11, 11–15, and Greater than 15. Teacher response was greater than 91%, and the outcomes are shown in Figure 1.

Figure 1

Questionnaire Experience Outcomes

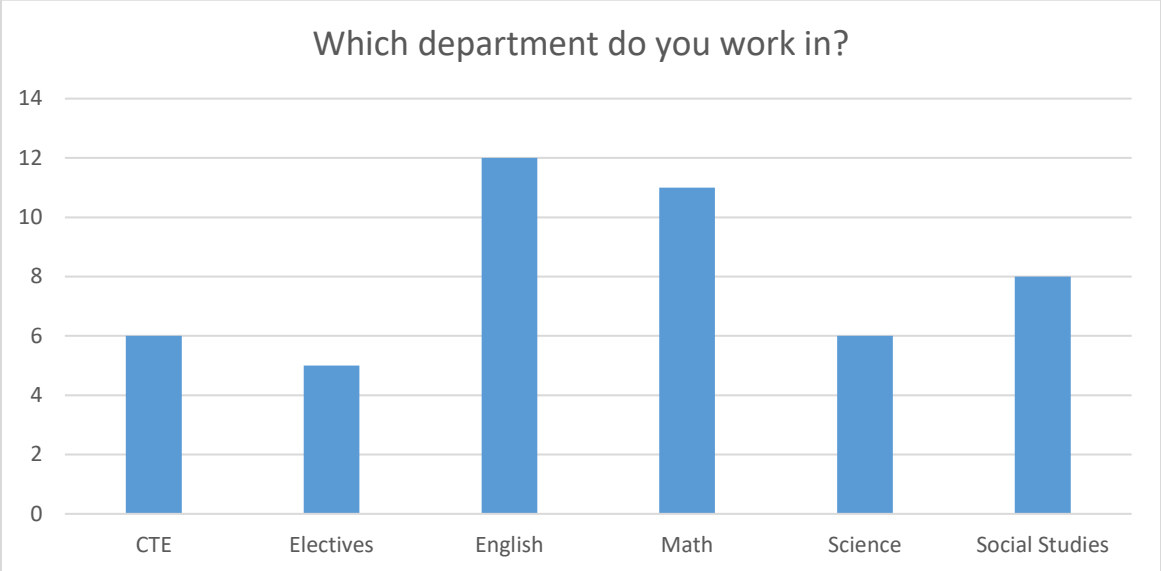


The largest group of teachers at the school has taught for more than 15 years, and the second largest group has taught for 0–3 years. Eleven teachers have taught 0–3 years, and 18 have taught more than 15. The difference in years of experience is a significant gap in experience with the exact expectations from teacher to teacher and classroom to classroom.

The next question addressed the department that the teacher worked in. The choices for the department were English, Mathematics, Science, Social Studies, Electives, and CTE (see Figure 2). This question was asked to gain a well-rounded view of special education in the school, although those that chose to respond were unknown.

Figure 2

Questionnaire Department Outcomes



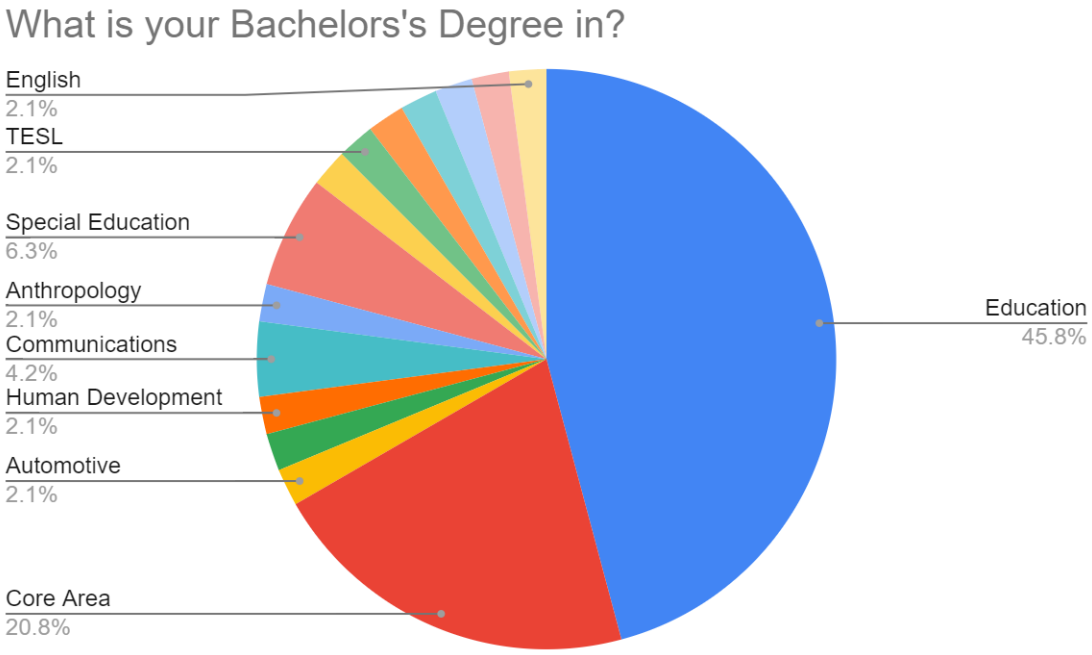
Questionnaire respondees included 12 English teachers, 11 Mathematics teachers, 6 Science teachers, 8 Social Studies teachers, 5 Electives teachers, and 6 CTE teachers.

Knowing the department helped the researcher get a clear picture of teachers' self-efficacy toward special education.

The third question of the demographic questionnaire asked what the teachers' bachelor's degree is in. Knowing the bachelor's degree area is essential because it helped the researcher determine the content specialties that the teachers were licensed in and educated in. There were seven response areas for this question, 52.1% responded with Education, and 20.8% responded with Core Area (see Figure 3). Those that selected core have a foundation in the area that they teach. Those who selected education had various classes and general studies, a lower number of core classes.

Figure 3

Questionnaire Bachelor's Degree Outcomes

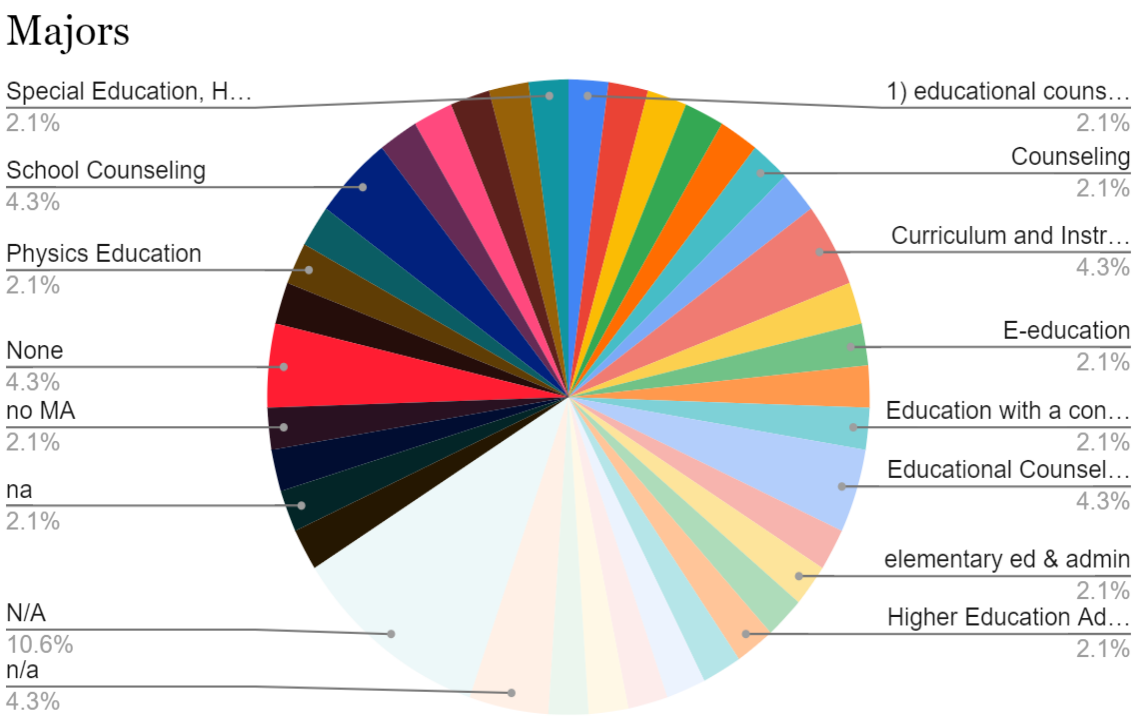


There are a plethora of majors from teachers at the school, from trade to the core; the opportunities to disseminate information to students are vast.

The next question asked whether or not the teacher has a master's degree, to which 70.8% of respondents said yes and 28.2% said no. Most teachers had taken classes to enhance their education, knowledge, and pay (see Figure 4). The areas in which the teachers received their master's degrees vary based on what the individual did or what they would like to do in the future.

Figure 4

Questionnaire Bachelor's Degree Major Outcomes



There was a wide variety of majors among the staff who earned a master's degree. Some look at the curriculum, some focus on counseling, and others focus on core

instruction. There was also a group that has earned a master's degree in educational counseling. One respondent earned their degree in special education, and another in physical education focused on adapted physical education.

The next section of questions looked at teacher self-efficacy toward special education. The next question asked, "I think of accommodations and supports that are available to students?" This question brought about a litany of responses. The majority of responses for this question were about accommodations, the need for scaffolding, and more assistance.

Two responses to this question are the most alarming, however. The first, "Just that....special education. Though after this year, it's more negative as they are teachers that are supposed to 'Co-teach but do not share that responsibility, and it is all on the regular ed teacher." This teacher's response demonstrated the need for more outstanding training of teachers on the role and responsibilities of teachers in the co-teaching model. Co-teaching has various models that can be implemented in the classroom. The one-teaches, one-assist is one method. In this model, one teacher teaches, and the other assists students individually. Station teaching is when the classroom uses various learning stations, and each teacher helps at one or more stations. Parallel teaching is when teachers teach similar content in different groups in the classroom. Alternative teaching is when one of the teachers takes a group of students to an alternative classroom for instruction for a limited time. Team teaching is when both teachers in the classroom share the teaching responsibilities and are equally involved in the instructional process in the classroom (Scruggs et al., 2007). In the eyes of this teacher, the building and department

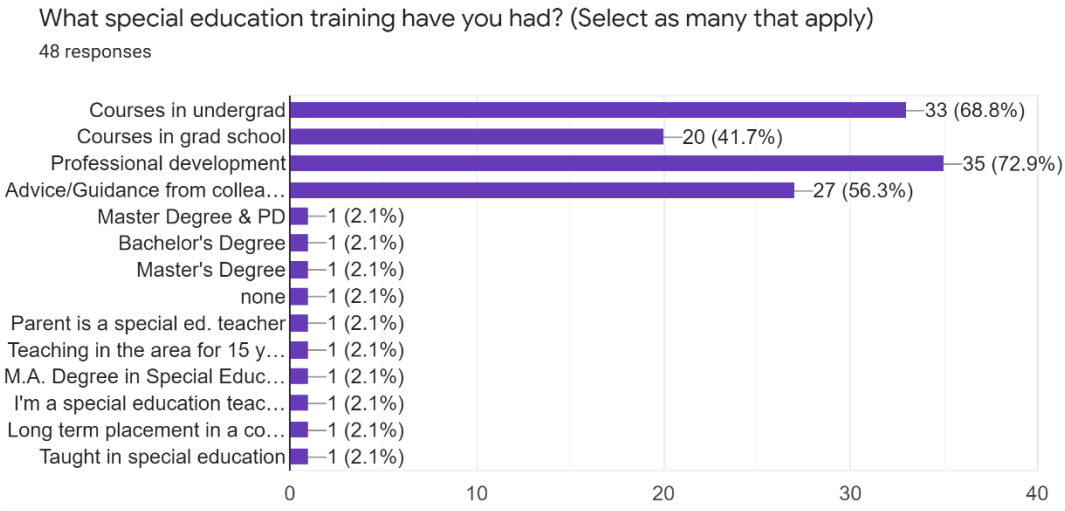
leaders must do a better job of ensuring equity among teachers in the classroom, possibly through better professional development.

The other response that does not fall under the same umbrella as the others was, "Little or no education involved." This response indicates that this teacher felt that the special education department is not at the same standard as the other departments in the school; they are not educating students to the same level. This belief that teachers and students are not working at the same level, pace, and rigor as most other students and classrooms demonstrated the need for conversation and change.

The next question on the demographic questionnaire asked what special education training the respondent has had. Of the respondents, 68.8% answered that they had classes in their undergraduate studies. Many teachers had 15 or more years of experience, so there was a significant time gap between when they took those classes and today. Ongoing professional development, which 72.9% of respondents selected, was a positive sign that teachers are getting the development they need, sometimes request. Of respondents, 56.3% selected Advice/Guidance from colleagues (see Figure 5). This number was consistent with the collaborative culture that has been created at the school with common planning time and the opportunity to share workspaces (Carpenter, 2018). The master schedule allows for 45 minutes of collaboration time each school day before students arrive, allowing teachers to plan, discuss data and students, and meet. This collaboration led to the sharing of knowledge for teachers.

Figure 5

Questionnaire Special Education Training Outcomes



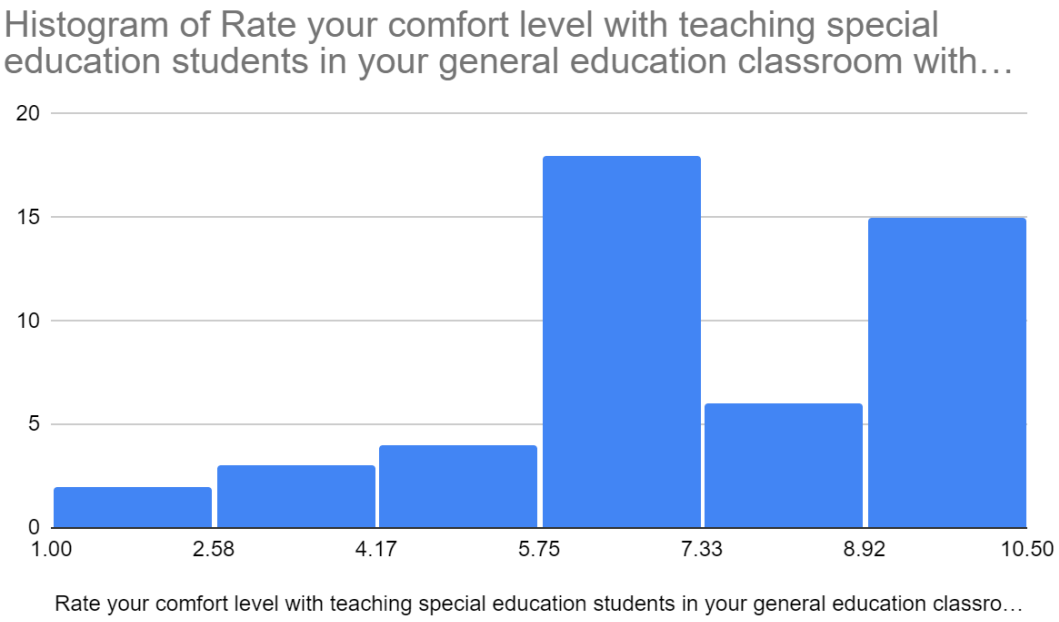
The next question asked about teachers' comfort level when working with special education students. The most common responses for that question are 7 and 10, meaning that most teachers feel more than comfortable when working with special education students (see Figure 6). These responses were a positive sign for the school and the students when looking toward the future. Additional professional development and training on the roles of teachers in co-taught classrooms will only help increase the comfort level.

The next question was whether teachers felt supported when working with special education students. The responses on the questionnaire showed that the majority of teachers felt supported when working with special education students (see Figure 7). The responses indicate that more teachers need to feel supported, which may be done through additional professional development. The additional professional development will help

to increase knowledge and awareness of what leaders are looking for, giving teachers a more concrete expectation of best practices in the classroom.

Figure 6

Questionnaire Special Education Comfort Outcomes

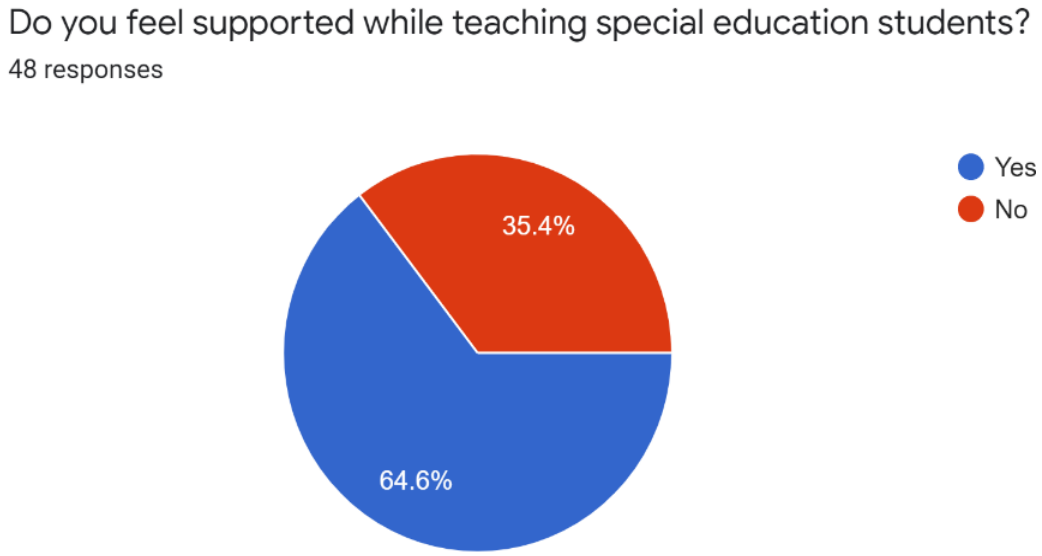


The next question's focus on the questionnaire addressed student outcomes and teacher and school evaluation tools. Student outcomes are currently 30% of the teacher evaluation system, leading teachers away from struggling students. When teachers feel the pressure to increase student achievement as a factor in their evaluation, they regularly use fear and timing reminders (Putwain et al., 2018). In the U.S. and the southwest state, the accountability system does not rely upon one factor for the school, district, or the state. The multiple accountability factors all accumulated to the outcome, creating a complex accountability landscape. Of the responding teachers, 25% reported that

accountability measures correlate to their comfort level working with special education students (Figure 8). The low academic achievement rates of these students reflect this insecurity among teachers. The largest group of respondents answered with uncertainty. These results can be attributed to various reasons. During the 2020-2021 school year, the state was not using evaluation measures, and many teachers did not fully grasp the evaluation system.

Figure 7

Questionnaire Special Education Support Outcomes

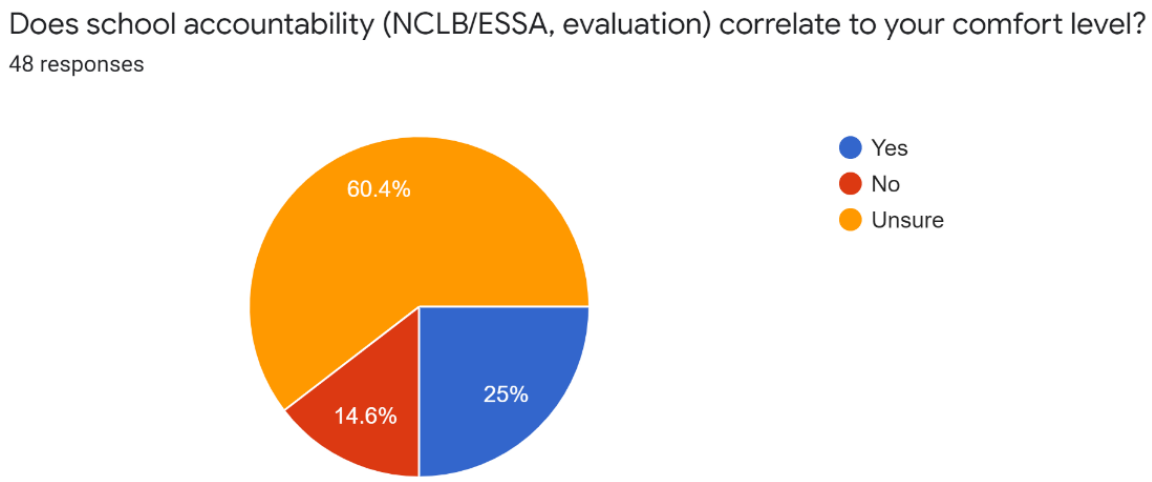


The final question on the demographic questionnaire asks what teachers need to improve their self-efficacy. These questions were all answered in short answer form, and the responses are all individualized to the respondent. An extensive collection of responses focuses on assistance needed from the special education department regarding professional development, information, best practices, the special education department's role when working with special education students, appropriate accommodations, and

how to implement them effectively non-intrusively. More than any other, this question shows the lack of self-efficacy that general education teachers feel when working with special education students.

Figure 8

Questionnaire School Accountability Outcomes



Presentation of the Interview Results

The qualitative interview was coded using the Atlas.ti software. The interview was conducted with two teachers from the six departments (English, Mathematics, Social Studies, Science, Electives, and CTE). The interview was not an anonymous process; each individual volunteered after completing the demographic questionnaire. The interview comprised seven questions:

- What are your experience and education?
- What are your impressions of special education, what do we do well, what do we do poorly, or are you indifferent?

- What do we do well in the classroom and what do we do, what can we improve upon?
- Do you think teachers are intimidated by special education students?
- How do you think we could help better prepare people, teachers?
- Do you believe that accountability measures—things such as the star ranking, graduation rates, F lists—have any bearing on teachers not wanting special education students in their classrooms?
- What preparations can we do for you to help you work with special education students?

These questions were used to answer the three research questions:

1. Do teachers feel that all students in their classrooms can learn from them?
2. Do teachers feel prepared and qualified to teach all students in their classrooms?
3. Do the teachers that feel prepared and qualified work in schools that show growth/achievement for special education students in their schools?

The interview process was selected to gain a deeper understanding of the levels of self-efficacy in the area of teaching special education students. Saturation is the key to a qualitative study, but there is no set guideline to determine saturation; the researcher determines whether or not saturation has been met (Marshall et al., 2013). The researcher has requested two teachers from the six departments for this study and two counselors as well. The researcher was able to secure 14 volunteers for the interview aspect of the study.

The interview was coded using 14 codes. These 14 codes were chosen before the interview based on the created questions. The codes are accountability, background,

communication, content specialty, co-teach, experience, grading improvements, intimidation, non-inclusive setting, professional development, strengths, supports, and weaknesses. Coding allows the researcher to deduct relationship data from the interviews (Deterding et al., 2021). The interviews' codes help bring forth the relationships between general education teachers and special education at the southwest U.S. high school.

Accountability

Accountability refers to being held accountable to student learning either by an LEA, a state education agency, or stakeholders (Booher-Jennings, 2005). Accountability in the state that the high school is in uses different factors to determine accountability (ACT scores, graduation rates, attendance rates, academic growth, etc.). When teachers were questioned regarding accountability, it was discussed 12 different times.

The majority of teachers mentioned that accountability measures have no bearing on whether or not they want special education students in their classrooms. Three of the teachers interviewed mentioned that they have had peers say that they do not prefer to have special education students in their classrooms out of worry that low test scores will bring down their reputation as a teacher. When there is no accountability attached to assessments, students may not fully demonstrate what they have learned (Steedle et al., 2017). More discussion about accountability led more teachers to talk about preparation and what they can do to assist students in performing better on the ACT. Teachers discussed focusing on what was tested, allowing for practice tests during class time, allocating more time for test preparation. Math teacher 1 stated:

> I think it does have some, some impact on at least some teachers just worried about how that perception of the perception of them as a teacher, and, you know, how they're doing in their classroom based on the fact that they have special ed

> teachers that may, they may have a fear that would lower their person the perception of them as a teacher.

These perceptions can be altered through professional development that focuses on the process of co-teaching, not the outcomes.

One interviewed teacher discussed peers who pushed students to get an alternative diploma so that low-performing students would not be in their classes. The teacher stated that they had not heard anything of that nature since working in this high school, but it was common practice in previous schools.

Teachers were asked about the special education graduation rate in comparison to the proficiency results of ACT. One teacher pointed out the high graduation rate and low proficiency rate for the entire school, not just the special education subpopulation, tying the low rates altogether. This teacher also discussed that he has not talked with any teacher about the school's accountability score outside of a staff meeting. These accountability scores are essential for the school. They create opportunities for the stakeholders and take opportunities away if the score falls. They were ensuring that accountability was a part of each classroom. Students that perform well on assessments have a higher sense of motivation and expectation that they will be successful (Steedle et al., 2017). Ensuring that teachers are aware of the outcomes of the student body and working to improve those accountability measures will help students perform better on the assessment.

Background Knowledge

Background knowledge for teachers was only mentioned three times. Background knowledge did not reference background knowledge of the material, but background

knowledge of the student and their needs. When teachers discussed their students' background knowledge, they wanted to know more about them, not just a quick email or piece of paper that informed them of the modifications and accommodations that the student requires. Wu et al. (2017) found that teachers that know more about their students are more likely to get them academically engaged in the material and lessons. Teachers wanting to know more about their students to help them be successful was a positive sign for teachers and students.

The benefit of knowing students go beyond just special education; knowing how students learn has shown to be a positive in student performance as well. Research has shown that teachers that create mental representations of students when planning lessons are more likely to produce those lessons in real-time (Riley, 2016). Teachers who can see students' learning in advance and understand how students learn can perform better and demonstrate what they have learned.

According to Sizer (1999, p. 6), "We cannot teach students well if we do not know them well." A knowing relationship allows teachers to connect to their students (Vithal et al., 2016). Interaction is paramount to the human experience, and human nature is critical in education. Science teacher 1 said:

> If the special education teacher could just like because they have like a lot of personal experience with these students sometimes like if they could give that background knowledge of like what you know helps that student, you know whether he, you know. I don't know maybe you say he gets frustrated easily and he just needs like to walk around the hall like one time and then come back or something like that, even like, just like things that make management of, you know, helping them stay on task and do well in class.

The student's background knowledge can be learned in different ways: solicited and unsolicited. Solicited knowing is when students give you the information in a general

conversation that is factual. Unsolicited information is information that you cannot prove to be true. Knowing how to differentiate between solicited and unsolicited information is necessary to understand your students.

Communication

Communication was the most commonly discussed code. Communication was missing between different groups and one of the most requested aspects. One of the most requested actions was communication between the special education teacher and the general education teacher. The general education teachers requested more than just an email about students in their classrooms, requesting time. Time with the special education to discuss the needs of the students in the classroom is a commonly requested commodity in many schools throughout the educational community. Finding that time is one of the barriers to that occurring (DaFonte et al., 2017). Creating a schedule that will allow teachers to communicate before students begin the year and during the year will assist in this, but this time must be sacred for these meetings and the time valued by those participating.

The sharing of information between co-teachers was also something teachers pointed out as lacking. Teachers expressed that only one teacher was often given information about scenarios involving students when both teachers needed to be aware of co-taught settings. History teacher 1 said:

> Um, I would say it happens on special occasions, so if there's an obvious issue, then I'm going to work like reach out to case managers. I don't think that there is as much communication with those things as there could be, but like any time that I've had a specific issue and reached out with case managers and talked it out.

Strieker et al. (2017) found that communication among co-teachers helped create a sharing of power and responsibilities among colleagues. These shared responsibilities and shared power help balance the classroom and create cohesion between the educators.

Research has demonstrated a correlation between effective communication and achievement (Shan et al., 2014). Effective communication between colleagues expands the students' background knowledge for the teachers and helps create a positive environment for all. Elective teacher 1 said:

> We need to collaborate, you know, maybe once a week or once every two weeks, but having a student, and never actually talking to their case manager is a concern for me as an educator. I think there has to be some sort of communication there. If I was a first-year teacher worried about teaching math, there is no way I could see having the time to understand how to read the language and the IEPs. That's why they're there, they're the experts for that. They're the facilitator of that, the case manager and they're responsible for it. In the end, at least that's what I've always been taught.

A positive environment coupled with effective communication helps create positive outcomes for students, which is the goal for all. A positive environment that focuses on successes as opposed to failures where teachers and students interact with one another is the foundation for successful academic achievement, according to Shan et al. (2014). English teacher 2 stated:

> No I don't because they always send out those notices that we hope that we remember to respond to in our spare time. That allows us to speak about a student. And then also I've been in an IEP meetings where I found out some of those things that I had never found out before and I was able to speak up there. I don't think that I'm ignored. I think that I've heard.

An environment where all teachers are valued in meetings and when working with students needs to be made to improve the culture at the school. Creating this atmosphere allows students to grow and flourish and create a sense of community in the classroom and the school.

Content Specialist

A content specialty was discussed during eight different interviews. Content specialists are licensed teachers in a specific area, whereas most special education teachers are licensed in special education. Teachers spoke of the comfort levels that special education teachers have to work in rooms; some teachers spoke about how the co-teacher did not participate in any part of the instruction or planning but appeared to seem as if they were learning the material as the students were. This inconsistency in the classroom was an issue with the co-teacher pairings and can be adjusted and improved.

Content teachers tend to not think about how to teach literacy during their instruction because that is not what they have been trained to do. Still, students with disabilities need literacy instruction compiled with their content instruction (Lauterback et al., 2020). Studies have also shown that content teachers can adapt their lessons much quicker to respond to student needs (Stough et al., 2003). Counselor 1 (who is also a licensed special education teacher) said:

> I also think that kind of leaning towards special ed teachers having, whether it's licensing or just knowledge of a particular subject working with those co-teachers that you know the gen ed teachers, I think it can, can be intimidating to a special ed teacher, okay this year you're going to be the code teacher for chemistry and physics, and you know I have no experience where I know if I was working with an English teacher, I think, as a special ed teacher I could be more successful as a co-teacher.

Content teachers working with special education teachers to enhance the instruction for the entire class is a possible benefit to the learning of others.

Hiring dual-licensed teachers (content specialty and special education) has proved complicated. IDEA (2004) instilled the notion that any individual with a bachelor's degree can be licensed to be a special education teacher, with the intent that they

complete additional coursework while they are working (McCormick, 2005). This concept is also applied to other licensing areas in education due to the teacher shortages experienced in this state. Finding qualified individuals has been challenging for the school, district, and state, making finding licensed teachers in a content area and special education much more difficult. Science teacher 1 responded:

> I agree. And to add to that, I feel like it sort of depends on the individuals in the team. I feel like sometimes when you get an agenda teacher that's been teaching, like a subject for a long time and then you put into work co-teaching. Sometimes those sped teachers don't have as much background information on the subject. And so it really makes like the classes feel like, like, more one-sided which is not what you want that co-teaching scenario.

Recruiting and hiring or encouraging teachers to become licensed in more than one area has proven to be difficult, even with the district offering financial incentives to do so. The school currently has three special educators licensed in a specific content area. Still, only one has taught that subject as a general education teacher before being a special education teacher.

Co-Teaching

Co-teaching is pairing two teachers together in a classroom; in this case study, it is pairing a general education teacher and a special education teacher together in the same classroom. A co-taught classroom is used so that special education students can get the same content level instruction while getting additional supports from a special education teacher. The southwest U.S. high school is in its second year of utilizing co-teaching in the master schedule without offering many pull-out resource classes.

To teach effectively in a co-taught classroom, the teachers need to spend time doing various tasks: getting to know one another, sharing skills and philosophies, and co-

planning (Hang et al., 2009). Teachers who can do this are more likely to succeed in the co-taught setting and have successful students. Teachers complain, however, that the time to work together before teaching the lesson is not always available. The lack of time was a common critique of the teachers' co-taught settings during the interviews.

One of the main concerns brought up during the interview process was the schedule. While teachers did have a co-teacher, that special education co-teacher was also working with sometimes three other general education teachers throughout the day, making it challenging to find time to plan and prep with one individual teacher. Science teacher 1 stated:

> Yeah, I think there's a big parity issue, like, It's very easy because the role is so undefined, it's very easy for one person to do a lot of the work, or, I mean, either way, right, and I think that most of the time most, like people bring in strengths that they're really awesome at, but they're not always equal, so it's a little bit frustrating sometimes. What do you think we can do as a school. What do you think we can do better. Just in the realm of special education. Um, I personally feel like special ed teachers need more time to work on their caseload but I'm from a very different standpoint, from a lot of people because I see how much extra time it takes. So really, like if there was any way that we could give special ed teachers more time to work on that stuff I think they really do need it. I think that just from personal experience having a way for people who are in co-teaching situations that aren't super awesome to express that and actually feel like they're hurt a little bit.

The time issue may be mitigated by re-working the master schedule, creating more consistent pairs, and hiring qualified individuals for open positions.

Another critique of the co-taught classroom is the breakdown of the duties. This critique goes back to the main issue, time. Social studies teacher 1 responded:

> What do you think we can as a school. What do you think we can do better. Just in the realm of special education. Um, I personally feel like special ed teachers need more time to work on their caseload but I'm from a very different standpoint, from a lot of people because I see how much extra time it takes. So really, like if there was any way that we could give special ed teachers more time to work on

> that stuff I think they really do need it. I think that just from personal experience having a way for people who are in co-teaching situations that aren't super awesome to express that and actually feel like they're hurt a little bit. The time to work together, plan, discuss, collaborate, and understand instructional methods.

Pratt et al. (2017) discussed the most effective ways to make a co-taught classroom successful. This group of researchers found that co-planning is essential to productive lessons. Both teachers must know what will occur, who will teach what, the instructional models used, and what accommodations and modifications will be used that day.

They also found that the primary component that leads to an unsuccessful co-taught classroom is ineffective co-planning. The most significant complaint in the co-taught study that Pratt (2017) led was the lack of co-planning time. Science teacher 1 stated:

> Well I think that one of the biggest issues with the co-teaching model is I don't believe that it's set up in a way that would enable it to be the most successful, so I did have a co-teaching experience but I had a co-teacher that was with multiple other teachers, so they're responsible for two preps they're responsible for learning the management style, two teachers, they're responsible for somehow having equal stake in a classroom as I do, even though they're not there all the time. It's a really, really difficult situation for special ed teachers, and just as somebody who was in the co-teaching model I think that it, it feels like something that's pushed down from the district but we're not given the tools to be successful on it. So, I mean I think some situations could be really awesome and I know that for sure there are some really awesome code teaching teams.

The lack of cohesive planning types, distractions, colleagues, and student discussions that impact the planning time that the teachers do have. Reworking the master schedule to alleviate the co-taught pairings can help alleviate some of this. However, the people pairings will have to work together for the benefit of the students. They must determine what type of co-teaching model they will use, how the pair will instruct, and how they share duties. Professional development on the models that teachers can use will give teachers the models they may find success.

Preparing teachers to work in co-taught classrooms was also positive for the teachers (Chitiyo et al., 2018). Professional development on the co-teaching models will be positive and create time before the school year starts for students to allow the pair the opportunity to begin to plan and plot out their roles. On-going professional development on research-based instructional methods for co-taught classrooms is a benefit. The professional development can be done throughout the year, during teacher in-service time. Math teacher 1 said, “It's early, so it's hard to say but I definitely believe that it can be successful. Gad, giving the students that added support in the classroom. I don't think we can ever go wrong with that.” This comment was the most positive of all the comments made regarding co-teaching and the outcome that it may help create.

Grading

Grading was an area that was brought up five times throughout the interview sessions. English teacher one and her co-teacher agreed that the special education teacher would grade the work completed by the special education student. In contrast, English teacher 2 struggled to find the appropriate grading model to grade students that she felt could not complete the assignments and general education students. While all interviewees did not discuss this, comparing proficient students to graduates demonstrates a misconception with grading procedures.

Most special education students pass academic classes with a below-average grade, less than C (Bursuck et al., 1999). The school currently uses a 100-point grading scale: 0–59 is an F, 60–69 is a D, 70–79 is a C, 80–89 is a B, and 90–100+ is an A. With the school’s current grading system, it means that the majority of special education

students in co-taught classes are passing with a C–D, average–below average, but not performing that way on summative assessments.

English teacher 2 tends to change her letter grades based on the students' work. This teacher changed the letter grade because they have changed the curricular expectations for a group of students. Widiastut (2018) theorized that incentivized grading structures help to provide different incentives for students in different social classes, ability levels, and tracks. Changing the grades for students may incentivize them to complete work, but it does not give a clear picture of what standards the students have learned or mastered from the instruction that the teacher provided. English teacher 1 stated:

> I would like to see what that should look like when we're looking at mastery Now Becky and I have tried to use rubrics. I almost always tried to use a rubric. But just because you have certain things on a rubric that a kid is doing it doesn't mean that their actual writing of that is legible understandable.

The English department in conjunction with the special education department will need time to sit and discuss the most appropriate way to grade student work, work that is tied to standards, and ways to raise the performance abilities of all the students in the class.

The school as a whole must find a grading system that demonstrates what students have learned, not just what they have completed. The majority of comments discussed compliance in grading; a large portion of the grade was due to work handed in, not necessarily work done correctly. Creating a school-wide or department-wide grading system will help to ensure student learning is tracked and interventions implemented when necessary.

Intimidation

Teachers were asked whether or not they were intimidated by working with special education students. Not a single teacher that was interviewed stated that they were intimidated working with special education students but did mention that they have had or have peers that prefer not to work with special education students out of fear that they would be looked at poorly because the students tend to perform poorly on standardized assessments. Math teacher 1 stated the following regarding intimidation, “There are a lot of teachers that are perfectly well having special ed students in their classroom, but I do think that there are a certain percentage, probably do have some comfort level and intimidation with it.” This comment looks at both sides of the issue but is positive that the majority sees special education in a favorable light. Social studies teacher 2 believes, “It depends on the number of years that each one has been teaching and the personality of the teachers.” This comment can help to shed light on professional development that can be done for beginning teachers.

Assessment results are an indicator of accountability and can be looked at, but growth is also an accountability measure. Scammacca et al. (2015) wrote that the bottom quartile of students, which most special education students tend to be in, have the highest propensity for growth. This indicator is an incentive for many teachers to work with this population, as the growth indicators are a portion of the state accountability measures. Counselor 1 focused on the confidence level of teachers and stated the following:

> Confidence of the teacher knowing their content and standards, first, and then incorporating another teacher into that classroom, to provide those scaffolds or those supports that, that not only their students need or the students that are, you know, that have an IEP, but all the students.

Increasing the confidence level of teachers through focused professional development and time to meet, discuss and plan with colleagues can be worked out through the schedule.

General Education Setting

Special education students in the general education setting were a topic that only Science teachers discussed. They discussed how they had to make IEPs work in their classrooms. They discussed how to help students be successful and utilize outside resources when necessary. The respondents did not discuss issues other than finding the appropriate place to test with accommodation for alternative testing locations. Looking at the master schedule to help alleviate these issues is a task that will be done to help with this situation. Science teacher 1 stated:

> I believe that that I'm able to meet the needs a lot of times, I could just talk to that student and like figure out like what they need, you know their accommodations and stuff and see how they're doing and normally we're able to work it out. And then I know like with a lot of the ones that need more support they get a pair of pros and my experience with that has been wonderful care pros are always, you know, really willing to help out and, you know, help the students keep up with like the work and stuff. Oh yeah, all the peripherals I've had this year have been really awesome too. And they make it pretty easy for, for me to interact and make sure that everything's going smoothly for that student.

Science teacher 2 stated, “My experience is that while even, even this past year, like I had several students with IEPs in my deal science class, and that, and I, you know, didn't, didn't have any help or anything.” Creating a schedule that allows for planning and collaboration will help both teachers meet the needs of the students in their rooms.

Professional Development

The topic of professional development was discussed 15 times during the interview process. Professional development revolved around the co-taught classroom

and ways to enhance the instruction provided to the students and create a positive relationship between the teachers.

Science teacher 1 mentioned professional development on organically implementing modifications and accommodations into lessons. The teacher stated:

> I think that maybe some PD on actually implementing accommodations in a way that is that flows in a regular classroom that doesn't, you know, specifically calls out that kid like hey, everybody's got 10 minutes on this test except for you, Johnny, you got 20 So, you know, just like ways to implement them in a very natural way. That's really kind of beneficial for everybody. I think that training on like strategies that help not only special ed students but, you know, general ed students I am a firm believer in students don't get harmed by receiving a modification. So if I've got seven kids in there that need a test read to them and nobody to take them out. I don't think anybody's harmed by me reading a test out loud, you know what I mean. So I mean teaching students strategies to be better readers to be, you know, critical thinkers to help them out because really, not only special ed students need support in a lot of those areas.

The purpose of giving students accommodations and modifications is to allow students to access the general education environment (McGlynn et al., 2019). Accommodations are commonly seen in IEPs as they help students fully understand and master new material; modifications are made for students that are not expected to master the same standards as their non-disabled peers without them (Zollman, 2020). Explaining to teachers, not just general education teachers, but all teachers, what the differences are would be a good starting place.

Social Studies teacher 2 requested training on what goes into an IEP, stating:

> That he would like to just, you know, sit with someone, and, and talk about the IEP its roles and all that and I think that's, that's crucial and we definitely need to implement something like that for new teachers, yeah definitely new teachers get some use like that's going on, and even veteran teachers just as a reminder that it's not just a document that it's something that it belongs to the kid and can be changed and modified but right, we still need to follow it.

This professional development can be done with the current special education staff and the special education facilitator. It will allow information to be shared and create an openness that inhibits questioning about the process rather than ignorance.

A professional development conducted with the co-teaching pairs at the beginning of the year should also be planned. This professional development will allow the pairs to learn about the different types of co-teach models and allow them the opportunity to select the model that will work best for them. Time for them to observe other teachers at the school and other schools will also be allocated to see the models in action and talk to others implementing the models effectively. The peer observation feedback model—pre-observation, observation, post-observation feedback, and reflection—helps the observer examine content and delivery. Teachers and observers can discuss the changes they have made throughout this model, with the conversations before and after being a critical aspect of the process. The cycle is an informal process, and the informality of the conversation helps each participant be honest and gives more valuable feedback than a formal process of a questionnaire (Sullivan et al., 2012). Conversations, feedback, and reflection on implementing these processes into their classes help grow teachers and increase achievement. Math teacher 2 stated, “Real, like in class situational training.” Providing training that teachers can utilize in the classroom, which they can reflect on and respond to will help them grow.

Strengths/Weaknesses/Supports

Teachers were asked what the strengths of the co-teaching process were and if they had positives to share about the special education department. The interviewees mentioned topics such as the strength of the special education department, the

communication of the special education department, how teachers work very well together. Math teacher 1 stated, “Communication is one of the stronger points versus other places that I've been.” These strengths indicate the special education department's processes and the potential for success after one year of implementing co-taught classrooms.

The teachers were also asked about the weaknesses of the special education department, and they mentioned topics such as time, the lack of time to plan together, and the inconsistencies in grading from classroom to classroom. English teacher 2 responded that “There wasn't a lot of time to interact and discuss and make modifications and accommodations that were very deep.” Creating time in the master schedule is a goal for advancing and creating a consistent grading plan between departments.

The teachers mentioned support during the interview as well. The supports they mentioned were the staff and the assistance they could give when needed. They also spoke to the level of support the students were given and the freedoms that teachers had in their classrooms; they felt like they could make lessons student-centered rather than scripted, and that freedom was excellent support.

Summary

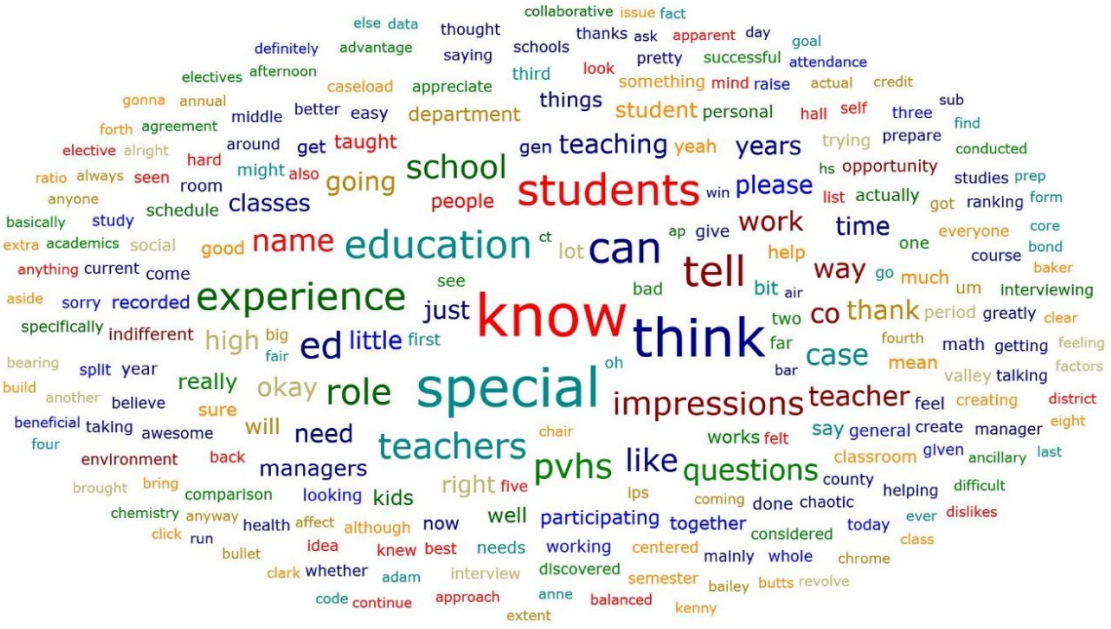
The interview demonstrated to the researcher that the teachers who participated want to do what is best for the student body. ACT scores are important but are only a tiny fraction of what the students can do. The interviewees also demonstrated that they are hungry to learn more, that professional development is necessary for their careers, and they desire to help them perform better to reach more students. The interviews helped the researcher create a schedule that allows for time for teachers and incorporates

professional development time that will meet their needs and desires to impact the teaching and learning occurring at the school.

Figure 9 provides a word cloud data visualization that allows the reader to focus on the teacher response topic at a glance. Chapter 5 summarized the outcomes of the interviews and presents the conclusions and the recommendations for application and additional research.

Figure 9

Interview Word Cloud



CHAPTER 5: CONCLUSIONS AND DISCUSSION

The distributed questionnaire and interviews conducted with the teachers at the southwest U.S. high school demonstrated the need for changes to facilitate the co-teaching process better to help close the achievement gap between special and general education students. The main area of concern brought up was modifying the master schedule to limit the variety of classes that the special education teacher has to allow for more time to co-plan regularly. This time spent together can be used to plan, discuss, and prepare. The recruitment and hiring of teachers will also help to ensure that this can be done.

A second need that was expressed was for professional development. Whether it occurs at the school level or outside the school, peer observations will demonstrate how co-teaching can be implemented in classrooms effectively. Professional development on the various co-taught models will also benefit because teachers will see that the classrooms can be taught in various ways. The teams can select the model that will be the most effective for them and their students.

The third need is improved grading. An equitable grading system for all students and teachers that demonstrates learning needs to be implemented in each department. A consistent grading system for each department will benefit all students throughout the school. The consistent grading system will also help use data to drive instruction—data that will be schoolwide and applicable to all students to monitor learning.

Discussion of Findings and Conclusions

The findings from the interviews demonstrate a need for changes to the master schedule. Of students nationwide, 63% are educated in the general education setting,

while 79% take state summative assessments (Rodgers et al., 2019). ACT is the assessment that is measured in this southwest U.S. high school. Of students at the high school, 98% take the ACT, which is significantly higher than the statistics found by Rodgers et al. (2019). All students who graduate with a standard or adjusted diploma must take the ACT to graduate.

The achievement gap is based on a yearly average, with an approximate 3-point difference between special education students and their non-disabled peers. The 2020–2021 school year showed a difference of 2.7 points in the composite category. The 2020–2021 school year was the school's first year implementing co-taught classrooms, thus, exposing more students to grade-level standards taught by content specialists. These changes were implemented because research has shown that special education students that spend time in non-special education classrooms perform better on standardized assessments than students in pull-out classes and special education schools (Rana, 2017). The master schedule was created for the 2020–2021 school year with various co-taught classrooms. All teachers worked with more than one general education teacher, limiting the amount of planning time that the teachers had together. This issue was slightly mitigated for the 2021–2022 school year because the school was given two additional special education teacher allocations, one Science teacher allocation, one English teacher allocation, and one Mathematics teacher allocation. These additional allocations helped to create more flexibility in the schedule. However, all of these positions have gone unfilled, and substitutes are currently working in those positions.

The master schedule can benefit students' learning by limiting the number of special education teachers and partnerships in their classes. Limiting the amount of co-

taught assignments will allow for more planning time with the general education partner, and this increase in planning time, the roles and responsibilities must be clarified on whom will be delivering the content as well as discussing and identifying the various strategies that students will need (Silbey, 2019). This planning time must be respected and not interrupted to enhance the pairings' abilities to work together.

Grading

The grading inequity is also an issue that must be addressed. Teachers must be able and willing to grade student learning—actual student learning rather than expectations that a student cannot reach a standard, which occurred in English teacher 1's classroom. Ensuring that grading is equitable from classroom to classroom will help create consistencies between formative and summative assessments.

Grading is the symbol assigned to individual student work that measures student performance (Brookhart et al., 2016). Teachers grade student work based upon expectations from the assignment that was given. Most high schools across the county use norm-referenced grades to fulfill the ranking requirements that many colleges desire. Elementary schools tend to use the same grading system. There are elementary schools across the country that have transitioned to mastery or standards-based grading.

Grading has been questioned when more than student achievement is a part of the overall grade (Bonner et al., 2021). Grading effort put into an assignment rather than accurately completing the assignment creates inequity for other students in the classroom. When teachers grade effort, the overall grade becomes less meaningful. Experts agree that when grades fail to accomplish their primary goal, the purpose becomes unclear to identify student achievement. Grades become a fusion of non-academic topics such as

ability, effort, behavior, and achievement. According to Kunnath (2017), most teachers make grading decisions based on student ability, behavior, and effort.

There are a variety of reasons why teachers grade for more than achievement. One of those reasons is to satisfy external pressures. Those external pressures come from various sources, such as parents, administration, and peers. As Kunnath (2017) reported, the pressure from parents is a significant issue that teachers face. Teachers try to appease parents and discuss more compliance and behavior-based issues than academic achievement. Teachers have stated that when students behave and appear to put forth the maximum effort, they are more likely to give them a better grade to continue to encourage them to try.

The idea of self-enhancement, making oneself appear better to others, is commonplace in education (Sticca et al., 2017). Teachers do not want to give off the impression that students struggle to learn the material they are teaching and share that with others, so they adjust grades based on non-academic indicators, i.e., effort and compliance. One reason for the enhancement of grades is student motivation. Better grades will lead to a higher student motivation, which will help the student put forth more effort, which will help raise the overall learning for the student achievement (Scanlan et al., 2004). Another reason for grade inflation is past performance. Teachers who review past grade history expect students to work at a higher level and grade them under that, not wanting to feel inferior to their peers, parents, students, or administration.

Securing a way for teachers to grade following ability levels instead will benefit all stakeholder groups. To facilitate a shift like this, first, a shift must be made from fixed mindset learning to growth mindset learning. According to Boaler et al. (2017), learning

stops when grades are given. Rather than giving grades, diagnostic comments show the student what they have learned, what they are doing well, and what they need to improve. Instead of giving a grade, the teacher gives them their knowledge on what they have learned and need to learn. Written portfolios and sliding scale rubrics are two methods to utilize growth mindset grading in a classroom setting (Mahmood et al., 2019). Using a written portfolio that can show mastery over an extended period in writing, mathematics, science, and history is a way to demonstrate equity and to be able to demonstrate to parents, students, peers, and administration. The lack of finality with the grading process also expresses to students that the grade is not finalized. The teacher's information for the student in the form of feedback helps to continue the learning process and the exchange of information. Sliding scale rubrics continue this trend: learning is not a finite experience.

> Students, parents, and teachers alike need to know where a given student is performing relative to the set standards and how well the student is growing. Those below the line need to catch up, those on target need to stay on target, and those above the line need to reach ever higher. Taking both growth and performance together gives the most complete picture. The Slide Rubric helps make that possible in transparent and straightforward terms. (Aguire, 2012).

According to Aguire (2012), Sliding scale rubrics allow the teacher to see where the students are performing and adjust the instruction and help individualize the instruction to ensure growth among the students. The grade can be based on the growth made over the year rather than just specific points of preferred learning for the teacher.

It will be crucial for teachers to understand growth mindset grading systems for the upcoming school year. If done early enough, the systems may be implemented by a select group of teachers beginning in the upcoming semester. Having a growth mindset,

as opposed to a fixed mindset, does not infer that all students are of equal intelligence; rather, it implies that the intelligence of all students can be further developed (Aditomo, 2015). Enhancing or even beginning the conversations on what that means for teachers and students is a starting point.

Professional Development

Professional development for teachers can be conducted throughout the school year. The daily schedule allows for 45 minutes of collaboration and professional development time. Creating a schedule for professional development on co-teaching models and applications and meeting with special education teachers regarding students can be implemented. The time spent can be utilized in a beneficial way for student and teacher growth. Professional development is a means to support and help develop teachers and their growth (Xu, 2016). Professional development for teachers can help to lead to significant gains for students. Johnson and Fargo (2014) found that professional development with a clear and robust content focus that involves a large section of teachers spread throughout the school year can lead to success for both the student and the teacher. This professional development can begin early and continue to the following year. Using teacher suggestions to steer the professional development calendar will help create buy-in and substance.

Professional development can be defined as the processes and activities designed to aggrandize the teacher’s professional knowledge, skills, and attitudes to improve students' learning (Imants et al., 2020). Surveying teachers will allow building leaders to determine the professional development they desire, which will help fulfill those desires with meaningful professional development. Professional development for teachers has

proved successful when there is a positive teacher learning culture. Postholm (2018) relies on three pillars: structures, values, and relationships. Leaders must also be aware of the culture that exists in the school. A proper learning culture refers to how people act, beliefs, and how those ideas interact.

Teachers tend to request professional development on classroom management and engagement strategies for learners (Nagro et al., 2020). These requests are made because student misbehavior and poor classroom management are the main reasons for negative perceptions of special education students' instruction in the general education classroom (Belknap et al., 2015). The instructional strategies and co-teaching professional developments will help in classroom management and engagement strategies. These skills can also be utilized by teachers who are not in co-teaching environments, enhancing the learning for all.

Observing those working in successful co-taught classrooms is another request that needs to be appreciated. The idea of peer observation adds to the concept and raises awareness of the notion of the collective responsibility of the educational process (Torres et al., 2017). This collective responsibility can extend beyond the school walls when teachers begin to look at the experiences and capabilities of teachers at different schools. The sharing, critiquing, and rethinking part of the peer observation process helps lead to a healthy and professional culture (Reilly, 2017). Continuing to grow and flourish a culture that emphasizes collaboration and communication is an aspect of the school that contributes to teacher and student learning.

Application of Findings and Conclusions to the Problem Statement

Special education students are not performing on par with non-disabled students. The teachers interviewed, and those who completed the survey expressed that they want to do what is best for all students at the school and are willing to help narrow and close the achievement gap between special education and non-special education students. Co-taught classrooms in which special education students receive instruction from a general education teacher and a special education teacher is a positive way to expose students to grade-appropriate standards.

The teachers at the southwest high school have requested training and time. Both of these must occur before the beginning of the next school year, and the foundational work can begin during the 2021–2022 school year and continue into the 2022–2023 school year. Beginning this process sooner will allow for time for professional development, reflection, growth, and the changing of personnel as teachers leave and are hired. Beginning sooner will allow for flexibility within the schedule to place teachers appropriately.

The professional development and alterations to a fluid master schedule are the areas that will be addressed first. Professional development or a series of professional development sessions on the types of co-teaching environments needs to occur before the beginning of the 2021–2022 school year. This professional development will allow the staff to see the different types of co-teaching models used in the classroom and possibly experiment with them (if they are currently in a co-taught setting). This time will also give co-taught pairs time to communicate, experiment, reflect and change if necessary.

Surveying teachers to gain their desires about co-teaching and what co-teaching style they prefer is another step taken at the school. Surveys will provide information for the master schedule to begin construction. This information and time will also allow teachers to observe peers currently functioning in co-taught classrooms, whether within or outside the school. Reviewing and applying research when making changes within an educational system is a must to help facilitate that change (Booher et al., 2020). Teachers should not just be told to make changes; instances of successful practices must validate these changes. Allowing teachers the opportunity to view changes in action is an opportunity that must be taken.

The master schedule considerations can be made early enough to change at a later date if necessary. The master schedule covers more than just the inclusive classrooms, and it covers all classrooms throughout the school. Visiting the master schedule early and often considering changes that would allow for more consistent teacher pairs that work with students will help enhance the time that teachers can plan together. Time to co-plan was another request made by teachers in the case study. The 45 minutes that teachers have every morning can partially be used for this, as this time is expected to be focused on student learning as a part of the professional learning community (PLC) process. The master schedule must be created to increase the efficiencies that can enhance the learning by students and teachers. When this occurs, the school can begin to move away from the education assembly line. Students are in age-based groups and given one year to learn the appropriate standards in fixed periods and school days. The focus needs to shift to what needs to be learned and what has been learned.

Application to Leadership

School culture and collaboration are foundational aspects of school improvement (Carpenter, 2018). Leaders who can create pairs that the teachers have requested and a schedule that allows for collaboration among those pairs facilitates that collaboration helping to change the culture to a culture of learning rather than a teaching culture. Narrowing the achievement gap for special education students starts with the collaboration between general education and a special education teacher is the goal of this case study, and increasing the opportunities for collaboration between the general and special education teachers is one of the most beneficial aspects that would increase the self-efficacy of the teachers based on the interviews.

Creating opportunities for collaboration would mean that leadership has to look at the master schedule. Looking at and manipulating the master schedule to incorporate more collaboration time and the 45 minutes of PLC time offered before student arrival each day is a must for school leadership. The master schedule currently in use has a combination of core classes (English, Mathematics, Science, Social Studies, Electives, and CTE). The average course number for a teacher in the English department is 2.7 (with 9 of the 25 classes being electives taught by English teachers), the average course number for a teacher in the Mathematics department is 1.86 (with 0 of the 15 classes being taught as electives), the average course number for a teacher in the Science department is 2.0 (with 2 of the 14 classes being electives), and the average course number for a teacher in the Social Studies department is 2.75 (with 9 of the 22 classes being electives) (see Table 4).

Table 4

General Education Courses

	Number of Teachers	Number of Courses	Average Number of Courses by Teacher
English	9	25	2.777777778
Mathematics	8	15	1.875
Science	7	14	2
Social Studies	8	22	2.75

The special education department currently has ten teachers. The breakdown of the classes is shown in Table 5.

Table 5

Special Education Teacher Courses

	Course Number	# of Teachers Worked With	# of Resource Classes Taught
Teacher 1	5	2	3
Teacher 2	3	2	1
Teacher 3	6	4	2
Teacher 4	4	1	3
Teacher 5	5	3	2
Teacher 6	4	2	2
Teacher 7	4	2	2
Teacher 8	2	1	1
Teacher 9	4	2	2
Teacher 10	3	3	0
Average	4	2.2	1.8

The average special education teacher teaches four classes on the schedule. They collaborate with an average of 2.2 teachers and prep for 1.8 classes they teach independently. The difference in courses taught is considerable between special general education courses taught and responsibilities. The inequity is one of the first issues that leadership needs to address to raise the self-efficacy of general education teachers and

narrow the achievement gap for special education students. Fixing the number of special education teachers, some working with as many as four, is a scheduling issue that can be changed. Allocating special education teachers to a department instead of having their own can help fix this issue.

Limiting the number of teachers that special education teachers work with will allow for collaboration time. Teacher planning time can be used to prep lessons with teachers, determine needs for the class, and morning PLC time can be used to discuss data and outcomes and create a road map for planning purposes. Collaboration has been shown to ensure the professional development of teachers throughout their careers and offers substantial benefits in the areas of teaching and learning (Forte et al., 2014). This schedule prohibits collaboration and communication, leading to improvements in teaching and learning.

Allocating the human capital at the school into the positions that offer the most significant benefit for all stakeholders is a function of the building leader, and this must be changed to change the dynamics and outcomes of the special education students. The southwest U.S. high school is told by the district how many teacher allocations it is allotted and must hire for those specific positions. The district decisions limit the leader's flexibility in creating the schedule but can use state and federal grants to create some flexibility. Using the allocations that are given and placing them in the most appropriate and beneficial positions on the master schedule to enhance student outcomes needs to be considered when reworking the master schedule to allow for more collaboration and more equity between general and special education teachers course numbers.

Recommendations for Action

The recommendations for action for the southwest U.S. high school are to create a master schedule that is equitable for all teachers, create professional development for the remainder of the school year, survey teachers after a professional development on the various co-teaching models, and complete professional development on alternative scoring models and growth mindset and monitor reflections after each professional development session. This research aims to increase the self-efficacy of general education teachers working with special education teachers, and one of the most effective ways to do this is through collaboration and communication and providing opportunities for professional growth.

The master schedule in its current form is not equitable for special education teachers. The special education teachers at the school have almost double the course responsibilities of general education teachers. That inequity leads to a lack of collaboration and communication due to lack of time. Figure 6 and Figure 7 demonstrate this inequity and the changes that can and need to be made to encourage equity. The human capital allocations from the school district will not be changing for the upcoming school year. Hiring staff to meet the needs of the schedule is an important step, however. Removing the inequity was the goal of Horace Mann's public education,

> Rather than serving as the "great equalizer" as envisioned by Horace Mann, one of the early architects of American public education…schools in the United States more often have been sites where patterns of privilege and inequality are maintained and reproduced (Noguera, 2003, p. 42).

But inequities continue to exist, and they exist at the southwest U.S. high school.

Creating a schoolwide culture focused on a growth mindset will help move the school in a positive direction, one where students and teachers have the mindset that they can grow, learn, and be better citizens of the school. Yeager et al. (2019) describe the brain as a muscle, and it grows stronger and wiser when it undergoes rigorous learning experiences. Teachers with a fixed mindset tend to look at students as "the best and brightest" and dismiss the "weaker" students. Odom et al. (2020) that assessment is a large part of the growth mindset criteria for educators.

The daily schedule for the school allows for 45 minutes of student free time for PLC purposes. The PLC process involves collaboration with teachers regarding students and outcomes from common formative assessments. Teachers have the opportunity to meet and discuss outcomes from common formative assessments. The outcomes of these assessments can be used to demonstrate potential more than the outcome. The conversations about the growth and feedback on an assignment positively affect student morale and production (Ganimian, 2020). Helping to encourage and facilitate those conversations is a role that leaders must take to encourage the culture to accept a growth mindset culture.

School leaders also need to assist departments in creating a grading system that reflects student achievement. Grading is an issue in many classrooms throughout the school; students are graded on perceived effort and perceived ability rather than on the standards that the students should be mastering. Students—special and general education—receive grades that do not indicate mastery or ability. There are various reasons why teachers do not grade consistently: differences in teacher grading standards, district grading policies, student behavior, teacher stereotypes, teacher quality, and

curriculum adherence (Rauschenberg, 2014). When these grading inconsistencies become systemic, student groups receive higher or lower grades than other students. Rauschenberg (2014) found that females, Limited English Proficient students, and 12th graders received higher grades than any other subgroup. The bias in grading is inherent with multiple teachers at the school and is defined as any difference in grading across groups of learners that is not due to the completeness or work quality on a task (Hardré, 2014). Bias is common in many classes throughout the school. According to the Student Evaluation Standards, grading should be "free from influence by factors unrelated to the purpose of the assessment" (Joint Committee on Standards for Educational Evaluation, 2003, p. 21). They are removing the bias, finding ways to ensure consistency when grading is a task that must be accomplished.

The southwest U.S. high school is rural based. Teachers and administrators at rural-based schools have a closer relationship with their students than their urban counterparts (Knutson et al., 2018). Teachers and administrators also expressed concern regarding strategies because they are often recommended to maintain accuracy, reliability, and validity. These are difficult for rural schools due to their smaller size and remoteness.

Professional development is the key to helping teachers overcome their biases. Training on sliding scales rubrics or using rubrics to understand where students are on the learning paradigm and what they can do to help them grow will help them overcome these biases. Professional development in the various types of co-teaching classes will also be crucial to increasing the self-efficacy of general education teachers at the school.

The research questions for this case study focus on general education teachers and their self-efficacy towards working with special education students. This research looked at narrowing the achievement gap between special education and general education students. The researcher investigated the perceptions of the general education teachers at the school and the strengths and weaknesses of the co-teaching process. The demographic questionnaire along with a focused interview on increasing the collective efficacy of the teaching staff to help narrow the achievement gap and answer the research questions. The interview questions focused on what the school leadership can do to improve their self-efficacy. The teachers at the school question the grading, the ability, and the work of their co-teachers. The professional development and recreation of the master schedule to eliminate some of the inequities and workload of the special education teachers, the number of classes they teach, and the number of teachers they work with will help increase the self-efficacy of general education teachers. Limiting this and increasing the collaboration and communication between the pairs will help to facilitate cooperation and partnerships in the co-taught classrooms.

Recommendations for Further Research

The area of research that needs to be evaluated further is the inequity of master schedules. The lack of research in this area was significant. Inequity in schools is a topic that has had overwhelming research conducted around it, yet the research around inequities in scheduling is small. Creating the schedule is a task that all secondary schools undertake, driven by student course requests. Special education students' requests come from their IEPs, and the schedule must coincide with fulfilling those requests. While fulfilling those requests, the schedule must also meet the requests of other students

and teachers at the school. Investigating how schools meet the needs of students and teachers and provide equity within their schedules and for the stakeholders will help other schools meet the needs of the learners.

An additional area of further research needs to revolve around grading. Grading of students takes place in nearly every classroom, yet the outcomes vary. Creating a unified grading system is an area that can be looked at in schools, departments, and areas of need. Learning is not dictated by a single grade, but by a continuum of products that are created revolving around standards. Grading does not have to determine an endpoint for learning, it should be a sign that learning was accomplished and how far along the student has come. Going deeper into this extended research is a look at equity in the grading process. Through the interviews that were conducted in conjunction with this study, it was shown that there is little equity in the grading process. Teachers grade on perceptions of what they believe the student has learned, not always, what the student has learned. As O'Connor and his colleagues (2018) assert, including student behavior in grades creates "an uncertain mix of achievement and behavior." Removing those biases, removing those inequities in the grading process is an area that must be researched further to determine the most effective ways to accurately determine the learning that has occurred within each student.

Another area of further research involves the inclusive classroom. Classrooms are considered inclusive when special needs students are placed within them, but rarely are the practices within the classroom changed (Nilholm, 2021). Simply creating a heterogeneous classroom is not going to change the outcomes for students, there must be a change in the way that the information is presented to the students, a change in the way

that the students interact with the information that is being presented to those students. Research investigating the most effective methods for creating inclusive classrooms with the most effective ways of ensuring that information is learned within that classroom will assist schools in creating effective classrooms that instill information within the students.

Concluding Statement

This research study has investigated the self-efficacy of general education teachers at a southwest U.S. high school and asked what the school can do to help increase that self-efficacy. The questionnaire that most teachers filled out helped the researcher gain a better understanding of the staff and see the differences in experience, training, and education. These insights will assist the researcher in differentiating training in place of having all staff participate in the same professional development that some of them may not need nor want.

The achievement gap prevalent between general and special education students at the school is standard across the state. These scores indicate that schools across the state struggle to get their special education students to do well on the ACT, but many schools have successful students on the ACT, something that the southwest U.S. high school does not. After one year of co-taught instruction and virtual learning, the school has started moving students from the emergent/developing category to the approaches standards category. Continuing to compare the results and track the changes from year to year will allow the researcher and school and district leadership to determine what is successful and what is not. Additional data points throughout the year, formative and summative data, will assist teachers in determining how students are performing, what standards they have mastered, and with which standards they are struggling.

The master schedule needs to be re-evaluated to ensure more equity of the human capital. The data presented in this paper, Table 4 and Table 5, will assist the leaders (school and department) in creating a schedule that is more accommodating to the human capital while also meeting the needs of the learners. Creating a schedule that ensures equity for the stakeholders and creates opportunities for collaboration and communication will raise the self-efficacy of the general education teachers and special education teachers.

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APPENDIX A

PVHS Self-Efficacy Research Project

PVHS Self-Efficacy Research Project

This form is NOT collecting emails and all responses are anonymous.

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1. How long have you worked in education? *

Mark only one oval.

- ◯ 0-3
- ◯ 4-7
- ◯ 8-10
- ◯ 11-15
- ◯ Greater than 15

2. Which department do you work in? *

Mark only one oval.

- ◯ English
- ◯ Math
- ◯ Science
- ◯ Social Studies
- ◯ Electives
- ◯ CTE

3. What is your Bachelors's Degree in? *

Mark only one oval.

- ◯ Education
- ◯ Special Education
- ◯ Core Area Other:
- ◯

4. Have you earned a Masters Degree? *

Mark only one oval.

- Yes
- No

4. If yes, what was the major of that degree? *

_____

_____

_____

_____

_____

_____

Check all that apply.

- Courses in undergrad
- Courses in grad school
- Professional development
- Advice/Guidance from colleagues

Other: _____

	1	2	3	4	5	6	7	8	9	10	
Extremely uncomfortable											Extremely comfor

Mark only one oval.

- Yes
- No

9. Does school accountability (NCLB/ESSA, evaluation) correlate to your comfort level? *

Mark only one oval.

- Yes
- No
- Unsure

10. We would need more "hands-on" training, and resources for extreme behavior. *

APPENDIX B

INTERVIEW QUESTIONS

1. What is your experience and education?
2. What are your impressions of special education: what do we do well, what we do poorly, or are you indifferent?
3. What do we do well in the classroom and what do we do what we can improve upon?
4. Do you think teachers are intimidated by special education students?
5. How do you think we could help better prepare people, teachers?
6. Do you believe that accountability measures—things such as the star ranking, graduation rates, F lists—have any bearing on teachers not wanting special education students in their classrooms?
7. What preparations can we do for you to help you work with special education students?

APPENDIX C

INSTITUTIONAL REVIEW BOARD (IRB) APPROVAL

Institutional Review Board
Certificate of Approval

IRB ID# Weaver_Jacobs092121
Principal Investigator (if faculty research):
Student Researcher: Kenneth Weaver II
Faculty Advisor: Dr Howard Jacobs
Department: SAL

Title: Determining the self-efficacy of general education teachers working with special education students.

Approved on: September 21, 2021

- ☐ Full Board Review
- X Expedited Review (US)
- ☐ Delegated Review (Can)
- ☐ Exempt (US)

CERTIFICATION

City University of Seattle has reviewed the above-named research project. The proposal was found to be acceptable on ethical grounds. The Faculty Advisor, Dr. Howard Jacobs, and the student researcher, Kenneth J. Weaver II, have the responsibility for any other administrative or regulatory approvals that may pertain to this research project, and for ensuring that the authorized research is carried out according to the conditions outlined in the original Ethical Review Protocol submitted for ethics review.
This ***Certificate of Approval*** is valid provided there is no change in experimental protocol, consent process, or documents. Any significant changes to your proposed method, or your consent and recruitment procedures are required to be reported to the Chair of the Institutional Review Board in advance of its implementation.

Chair, IRB City University of Seattle