THE IMPACT OF INCLUSIVE MIDDLE SCHOOL CLASSROOMS ON STUDENTS'

ACADEMIC SELF-EFFICACY DURING THE COVID-19 PANDEMIC

by

Ashley Barbara Reichert

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

Liberty University

2021

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ABSTRACT

The effects of the Coronavirus Disease (COVID-19) pandemic continue to be unveiled. The pressures and stipulations for inclusion can cause great stress for teachers and administrators to attempt ways to create a least restrictive environment (LRE) for students with Individualized Education Programs (IEPs), while maintaining rigor and safety for all students in the midst of changing policy and practice. Self-efficacy allows individuals to measure their beliefs in the ability to complete a task. The pandemic led to a need of examining students' self-efficacy within the inclusive environment. The purpose of the study was to examine the differences in academic self-efficacy scores based on students' classification as a student with and without a documented disability and gender among middle school students in an inclusive classroom. The research was conducted in this study through a casual comparative study to determine students' self-efficacy toward inclusion in in-person and remote classrooms. This study examined 222 students, while using 2 two-way analyses of variance in disability qualification, gender, and learning format. The instrument of measurement is the Patterns of Adaptive Learning Scales (PALS) created by Midgley et al. (2000) used to measure students' self-efficacy at the end of the 2020-2021 school year finding that having a documented disability had no significance on academic self-efficacy. Gender and learning format (in-person compared to virtual) did not have significant effect size within this study. There has been extensive research on the effects of inclusion; however, the measured self-efficacy of students throughout the pandemic experience needs continued development. Results indicate further research and intervention to improve academic self-efficacy of students.

Keywords: COVID-19, inclusion, general education, special education, pandemic, IEP, self-efficacy

Acknowledgments

This dissertation would not have been possible without Jesus Christ, my Lord and Savior. It is through Him that I was given a life that provided me with everything I could ever want. Despite the difficulties in this process, Christ showed me His unfailing love. I would like to give recognition to my husband, Chris. I never imagined writing and conducting a dissertation study during a pandemic, but I made it through with his love and support. Chris, I have no doubt that God has sewn our hearts together with the same string. The grace and patience you have given me throughout this doctoral process is nothing short of amazing. This finished dissertation is dedicated to the love I have found in the depths of your heart. I look forward as this being the first steppingstone to our new chapter together.

This would not have been possible without the guidance of Dr. Rebecca Lunde and Dr. Lucinda Spaulding. Dr. Lunde showed me grace and always pushed me to continue working. She encouraged me when times were difficult and deadlines approached. I am grateful for all the time and effort she dedicated to me. Dr. Spaulding helped me make my research better at every turn while thinking about the long-term results and impact in education. The professors at Liberty University allowed me to learn and grow through their knowledge during the doctoral process.

I would also like to thank the school that participated in my study. The teachers were so accommodating and understanding. Some days were full of several emails, schedule changes, and pivots. Despite the difficulties the pandemic caused in the field of education, the professionals involved in my study are people I would be honored to have as my own children's teachers. I am also grateful to the families who participated in my study and gave me encouragement during the process.

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List of Abbreviations

Analysis of Variance (ANOVA)

Centers for Disease Control and Prevention (CDC)

Colorado Department of Education (CDE)

Coronavirus Disease (COVID-19)

Free and Appropriate Public Education (FAPE)

Individualized Education Program (IEP)

Individuals with Disabilities Education Act (IDEA)

Institutional Review Board (IRB)

Least Restrictive Environment (LRE)

National School Lunch Program (NSLP)

Patterns of Adaptive Learning Scales (PALS)

CHAPTER ONE: INTRODUCTION

Overview

The purpose of the study was to examine the differences in academic self-efficacy scores based on students' with and without a documented disability, learning format, and gender among middle school students in an inclusive classroom during the Coronavirus Disease (COVID-19) pandemic. This chapter reviews the impacts of school environments during a pandemic as well as mandates of inclusion implementation within a public-school setting. There is an introduction of background information on the effects of the COVID-19 pandemic and the potential impact on teachers and students in an inclusive setting. The theoretical framework within the study was Bandura's (1997) social cognitive theory of self-efficacy. The background follows a review of the significance of the study and research questions. The concluding section reviews key terms and definitions. This chapter introduces content within the study to assist in the developing ideas of seeking a student perspective through academic self-efficacy in an inclusive format of learning during a pandemic. There is a review of the purpose of the study followed by the significance. The chapter concludes with a summary and definitions of key terms.

Background

The spring of 2020 held vast changes for students and teachers with a pandemic sweeping the United States. The COVID-19 spreads quickly creating serious health implications for some, particularly for those with underlying health conditions and the elderly (Centers for Disease Control and Prevention [CDC], 2020a). The prevention of the spread caused many schools to cancel or retreat to virtual learning for the remainder of the academic school year through non-pharmaceutical practices (Rainey et al., 2016). The drastic nature of change from learning at schools to learning entirely online created unknown consequences for the system of education.

Prior to the COVID-19 pandemic, students with disabilities have shown to improve their academic progress within virtual learning but struggle with maintaining their growth over a length of time (Bouck et al., 2018). In comparing traditional in-person education to online classes within a high school setting, grades were found to be higher for those attending online; however, persistence was lower (Hart et al., 2019).

The aftermath of forced virtual learning has left many districts picking up the pieces and starting over in their planned services to ensure safety of students and staff (Faherty et al., 2019). The stipulations of education in the spring and fall of 2020 were at the discretion of the state and district leaders. Students previously serviced through inclusive co-taught settings in a public setting had to adjust to meet in-person safety precautions or learning entirely online. The effects of virtual learning and change in services due to the COVID-19 pandemic continue to emerge.

The adaptations left difficult decisions for families, students, staff, and communities. Among the concerns of reopening schools was providing individualized education services to students with disabilities. Prior to the passing of the Individuals with Disabilities Education Improvement Act (Individuals with Disability Education Act [IDEA], 2004) students with disabilities were often segregated from their same-aged peers without disabilities. The term inclusion refers to students of all ability levels being educated and socializing within the same environment (Knight et al., 2018). Students are placed in their least restrictive environment (LRE) according to their needs. Students with significant needs might have more time with a teacher receiving direct instruction, while students with minor needs may occasionally receive support in or outside of the general education classes (O'Laughlin & Lindle, 2015). Pullout practice involves a special education teacher taking a student from a class to support them in improving achievement in a specific area (Rea et al., 2002).

Pullout can still be inclusive if students with disabilities are in a general education setting for a majority of their day with limited time in restrictive settings (Knight et al., 2018). This practice is not preferred due to lower achievement and employment rates in comparison to those taught content with their general education peers; however, pullout can still integrate inclusion if students are attending general education classes with their non-disabled peers (Rea et al., 2002). The pullout method of instruction for students with disabilities happens when there is a large discrepancy between a student's ability level and grade level content (Knight et al., 2018). While the research in inclusion has increased, there are limited studies that examine the effects of inclusion from a student perspective (Vizenor & Matuska, 2018). While maintaining hygienic practices during the COVID-19 pandemic, pullout instruction or co-teaching in small cohorts was preferred in some schools due to smaller class sizes to lessen the spread with students remaining in an inclusive setting as much as possible (Dorn et al., 2020).

Self-efficacy is the belief that an individual has on what they are capable of accomplishing within a certain setting (Bandura, 1997). Various pieces of self-efficacy contribute to an individual's overall belief in ability. Personal efficacy, vicarious feelings, and collectivist behaviors are factors that contribute to an individual's sense of self-efficacy. When students have a self-efficacy measurement, it should be comprehensive through the whole person without intention to generalize across settings (Bandura, 2012). Self-efficacy can change from factors such as gender (Bussey & Bandura, 1999; Hampton & Mason, 2003). This study examines self-efficacy within the context of an inclusive classroom. Students' self-efficacy has been found to be lower in female students in comparison to males (Ekmekci et al., 2015). Academic self-efficacy is a strong predicting factor of student success (Bandura, 1997). There have been minimal efforts to pursue effects of inclusion within students' academic self-efficacy

(Vizenor & Matuska, 2019). The legal mandates of including students with disabilities in the general education setting have made inclusive practices a target in educational research; however, there continues to be a lack of input from students within the field, particularly those without disabilities (King-Sears & Strogilos, 2020). There is a need for continued research on student insight through the lens of academic self-efficacy (King-Sears & Strogilos, 2020). The studies that have examined the influence of these environments from a student perspective have had limited sample sizes and have centered on populations of high school students (King-Sears & Strogilos, 2020; King-Sears et al., 2014). The change of virtual to hybrid settings creates an added layer to the inclusive setting that requires additional research for future practice.

Huang et al. (2019) conducted qualitative interviews with students in middle school on math self-efficacy. Findings indicated that students that were below grade level had a lower sense of self-efficacy, while students that were high achievers had high self-efficacy (Huang et al., 2019). Alternately, in a quantitative study of a sixth-grade literacy classroom including students with and without disabilities, students expressed a higher sense of self-efficacy due to the support and encouragement they received from their teachers that were aligned with high expectations for all students (Vizenor & Matuska, 2018). Similarly, King-Sears and Strogilos (2020) studied a sixth-grade classroom and found a high sense of self-efficacy, particularly in subsections focusing on belongingness when having students complete a self-efficacy and belonging measure independently based on self-perception.

The inclusive virtual environment has developed along with technology, spring boarded by the sudden change to virtual learning as a non-pharmaceutical measure taken in the spring of 2020. Students who transitioned from brick-and-mortar charter schools to online charter schools from parental choice found long-lasting significant negative effects on math and literacy

achievement (Fitzpatrick et al., 2020). The effects of online learning have been found to persist over time with students more likely to struggle with attainment of new skills when transitioning to an established online educational setting (Bouck et al., 2019). Students with effective virtual teachers have been found to achieve the same amount as students who learn in-person (Cavanaugh et al., 2004).

The qualitative nature along with the small sample size of the participants involved in Huang et al.'s (2019) study makes the results inappropriate to generalize. Vizenor and Matuska (2018) and King-Sears and Strogilos (2020) measured self-efficacy in a quantitative fashion utilizing small sample sizes of one classroom each. Along with small sample sizes, these studies did not subcategorize the results of self-efficacy for gender that have proven to influence self-efficacy levels (Bussey & Bandura, 1999; Hampton & Mason, 2003).

Fitzpatrick et al. (2020) studied the transition from in-person to online charter schools finding significant results of negative effects resulting in long-lasting regression over time. There is importance in recognizing that many studies that examine the effects of virtual and hybrid learning were prepared for the transition including prompting for students, prior communication, and professional development for staff (Bouck et al., 2019).

Various factors also played a role in the approach to opening schools among the COVID-19 pandemic. Marshall and Bradley-Dorsey (2020) found that large school districts in the United States who served mostly students that were non-White and living in higher degrees of poverty seemed more likely in the fall of 2020 to open through a remote or hybrid option. Similarly, on a systematic level COVID-19 has been shown to disproportionately impact those economically disadvantaged and individuals that are Black or African American, especially in big cities such as Chicago (Kim & Bostwick, 2020).

Problem Statement

The COVID-19 closures and school reopenings centered on ensuring students were safe and on containing the spread with limited forewarning and preparation (Stage et al., 2020). There are limited studies that examine the effects of students' academic self-efficacy within inclusive classroom settings (Vizenor & Matuska, 2018). Gender has historically impacted students' self-efficacy, but this has not been studied within an inclusive setting during the changes of virtual and hybrid learning environments (Hampton & Mason, 2003). Transitioning from in-person to virtual learning has proven to impact students, but it is still unclear if gender and disability qualification are impacting variables (Fitzpatrick et al., 2020). The problem was that the literature does not fully address students' self-efficacy in an inclusive classroom during a pandemic based specifically on gender, disability qualification, and learning format.

Purpose Statement

The purpose of this quantitative, causal-comparative study was to examine the differences in academic self-efficacy scores based on students' classification as a student with and without a documented disability and gender among middle school students in an inclusive classroom. The investigation of this study occurred through a student response measure of academic self-efficacy within an inclusive setting. The independent variables included the disability status, format of learning (virtual or hybrid), and the gender of students. The dependent variable was the self-efficacy measure found through the Patterns of Adaptive Learning Scales (PALS) (Midgley et al., 2000). Disability status referred to whether students qualified for an Individualized Education Program (IEP), being eligible to receive special education services under IDEA's (2004) 13 disability categories. The format of learning was hybrid or remote. Hybrid was the in-person option with two days a week being face-to-face and three days a week

being online. Remote learning was entirely online working from home. Gender within this study refers to male or female.

The classrooms included sixth-, seventh-, and eighth-grade English Language Arts and mathematics classes. Students with disabilities utilized a pullout model or co-taught model in a small classroom setting. The pullout model involved a special education teacher removing them to work individually or with a small group to provide individualized services in a more restrictive setting. The co-taught model involved both teachers actively participating in assisting students in the classroom. Pullout practice typically occurred during their science, social studies, or elective classes, while co-teaching was more common amongst math and literacy classes. General education teachers were highly qualified in their respective fields, while the special education teachers were highly qualified with a licensed endorsement to work with students who had a need for intervention.

The students attended school two days a week in-person and three days a week online if they were hybrid. Virtual students were entirely online for instruction, including their direct services with a special education teacher and other support specialists. Hybrid students with the last name starting with A through K went to school in person on Monday and Wednesday. Hybrid students with the last name starting with L through Z attended in-person school on Tuesday and Thursday. All students attended school virtually on Friday in an asynchronous format including office hours for general education and special education teachers. If there was an outbreak of COVID-19, students and staff may quarantine and work remotely to ensure proper cleaning and mitigating the spread. The study took place in an urban setting near Denver, Colorado. Roughly one third of students in this study had a disability. Students in the study were

put in groups of male and female with two thirds of students learning in the hybrid setting, and one third of students learning entirely online.

Significance of the Study

A comprehensive measure of self-efficacy of the whole person in a contextualized understanding is the strongest predicting factor for student success (Bandura, 1997). There have been mixed findings with small sample sizes when measuring self-efficacy in an inclusive setting through past research (King-Sears, & Strogilos, 2020; Usher, 2009; Vizenor & Matuska, 2018). Pressure has increased to examine what components integrated in the classroom create student success, including environmental components (Ciampa & Gallagher, 2016). This study aims to examine the inclusive setting from a student perspective through academic self-efficacy measures with a large sample size to allow improved practice within inclusive settings during a pandemic. Conducting this study during a pandemic allows researchers and professionals in the field to understand the effects a pandemic has on students' self-efficacy within different learning formats, disability diagnoses, and gender. Understanding the effects that the COVID-19 pandemic has on students' self-efficacy can better equip decision makers in ensuring student success for future practice in the face of an emergency.

There is speculation about how to best serve students with and without disabilities in an inclusive setting with limited student self-scoring data on the resulting decisions (Brendle et al., 2017; Klassen & Lynch, 2007). Assessing students' self-efficacy after being in a pullout environment allows educators, administrators, and policymakers to examine best practice in the classroom. Schools that previously utilized an entirely co-taught model of instruction transitioned to pullout in some situations to ensure that social distancing guidelines were followed limiting the number of people and exposure while attending school in-person (Aiello et

al., 2010). Students assisted discretely have steady self-efficacy scores, while students called out have a lower sense of self-efficacy (Klassen & Lynch, 2007). The stigma of special education through a pullout practice increases discouragement in students leading to lower achievement compared to that of a co-teaching model (Rea et al., 2002). The changes during the COVID-19 school re-opening have reimagined school practices to prioritize safety (CDC, 2020c).

Research Questions

RQ1: Is there a difference among the *academic self-efficacy* scores based on a student's classification as *a student with or without a documented disability* and *gender* among middle school students in an inclusive classroom during a pandemic?

RQ2: Is there a difference among the *academic self-efficacy* scores based on a student's *learning format* (online or in-person hybrid) and *gender* among middle school students in an inclusive classroom during a pandemic?

Definitions

1. *Co-teaching* – Co-teaching is the practice of two or more teachers in one classroom supporting students at various levels with grade level content, typically involving one special education teacher and one general education teacher (Cook & Friend, 1995).

2. *Cohort* – A cohort is a grouping of students that are kept within those groups to avoid exposure and increased spread of illness (Uscher-Pines et al., 2018).

3. *Coronavirus Disease (COVID-19)* – The COVID-19 is a respiratory virus spread through bodily secretion that is easily spread (CDC, 2020a).

4. *Inclusion* – Inclusion is a learning space that includes students with and without disabilities that focus on need rather than special education eligibility (Shogren, McCart, et al., 2015).

5. *Hybrid* – Hybrid are students learning with a mixture of online and in-person instruction and activities (Dziuban et al., 2004).

6. *Individualized Education Program (IEP)* – An IEP is a legal document reviewing a student's qualification for special education services, goals, accommodations, least restrictive environment, and other factors to ensure student success and scaffolding increased independence (McCarthy, 1998).

7. *Least Restrictive Environment (LRE)* – A LRE is a placement decision of where a student will learn and when depending on student needs, acting as a spectrum with full integration in the general education setting as the goal (Lipsky & Gartner, 1996).

8. *Pullout*- Pullout is when a special education teacher removes a child with an IEP from their class to give them direct instruction in a small group or individualized setting (Rea et al., 2002).

9. *One teach, one assist* – One teach, one assist is when one teacher, typically the general education teacher, leads the lesson while the other, typically the special education teacher, circulates the room to ensure understanding and manage behaviors (Scruggs et al., 2007).

10. *Self-efficacy* – Belief that an individual holds on what they can accomplish within a particular setting (Bandura, 1997).

11. *Social Cognitive Theory* – Social cognitive theory is the personal development, adaptations, and change in culture leading to an individual's influence and control on their own behaviors (Bandura, 1989).

12. *Virtual* – Virtual is when education occurs entirely online (Hall & Trespalacicos, 2019).

CHAPTER TWO: LITERATURE REVIEW

Overview

The purpose of this literature review is to present the elements of inclusion within a public school, the changes within the COVID-19 pandemic, and the effects on academic self-efficacy on students in an inclusive setting. The chapter opens with the theoretical framework. This study is grounded first in Bandura's (1989) social cognitive theory, leading into self-efficacy. An extensive review of the literature pertinent to understanding students with disabilities in public school, implications the pandemic had on learning, and perspectives of students and teachers completes the chapter with a summary.

Theoretical Framework

Bandura (1989) disregarded fellow theorists' beliefs that human behavior occurred through input and output, the environment and human behaviors, respectively. Bandura disagreed with this model and believed that individuals had influence and control on their own behaviors and were not merely behaving through machine processes. People must believe that they can produce desired outcomes through their actions, or they will not have incentive to put actions into thought (Bandura, 1997). He argued that although there have been significant changes in humans over the years that is not explicable in terms of input and output. Humans create meaning through their experiences, which shape decisions and motivation for the individual (Bandura, 1997).

Social Cognitive Theory

Bandura (2002) created social cognitive theory to address personal development, adaptations, and the change in culture. The most significant cultural evolution came through learning to be flexible and diverse in behaviors and habitats (Bandura, 2002). The vast changes

throughout the years with the development of technology and diversity have caused adaptation to occur on an individual level (Bandura, 2001). Therefore, social cognitive theory examines the personal, behavioral, and contextual factors on motivation and behavior (Bandura, 1997).

Bandura (1986, 1997) used the social cognitive theory to explain that part of learning comes from the observation of others and experiences, which leads to new knowledge. Factors that affect each other include people, behaviors, and environment (Bandura, 1986). Humans can watch others' experiences and learn vicariously, or they can experience it themselves to increase their adaptation of their environment. The new knowledge and experiences acquired by individuals are used in future decision making when paired with environmental factors (Bandura, 1989). Decisions come from intentionality, self-reflection, and self-efficacy (Bandura, 2001). This is an active process for the individual. Intentionality involves conscious decision making, self-reflection occurs after an event to determine the significance, and self-efficacy is the individual's belief in what can be accomplished in a future task within a setting (Bandura, 2001).

Students enter the classroom with diverse experiences, especially during crises such as a pandemic (Almutairi et al., 2015). These experiences allow them to shape what they believe is obtainable socially and academically. Students create their own interpretations of actions within the classroom. Humans change cognitively and neurologically when going from an individualistic setting to a group setting (Bandura, 2001). Students who may have learned previously in separate classrooms are able to watch other students and teachers to learn from that environment and those individuals' behaviors while making sense of what the actions mean to them on a personal level. Student environmental observations and experiences become common practice.

Outcomes of the social cognitive theory in various studies for people with and without disabilities have had mixed results. A review by Osterman (2000) that examines social cognitive theory on student motivation found that students that have a sense of belonging do better behaviorally and academically in school. This connection of belonging is found in inclusive settings where students with diverse experiences and backgrounds are working together simultaneously (King-Sears & Strogilos, 2020). When students are in a supportive, caring environment that focuses on effort and improvement, students are more likely to improve their affect, cognition, and behavior (Roeser et al., 1996). The environment and processes that students experience within the classroom affect their social cognitive development.

Self-efficacy

Bandura (1997) described self-efficacy as the belief that a person can accomplish what he or she sets out to do. It is the belief that one holds about their capabilities to plan and put action to a goal. When examining and measuring self-efficacy, it is important that the participant be within the setting sought to measure and the measure is specifically comprehensive. The settings measure cannot be generalized (Bandura, 1997). There should never be a single measure; rather, it should examine the whole person in a comprehensive fashion (Bandura, 2012). An appropriate measure of self-efficacy can be the biggest predictive factor to success when given contextual understanding (Bandura, 2012).

Self-efficacy refers to aspects of vicarious experience, verbal persuasion, physiological arousal, and mastery experiences (Bandura, 1997). Mastery of experience is an individual's level of predictability that can determine how prepared and adaptable they can be within the situation. The more success an individual experiences, the higher self-efficacy they will obtain (Bandura, 1997). The older a child gets, the more they can recognize needs to complete a task through

demands and skills in addition to their ability to accomplish a task (Bandura, 1997).

Additionally, parental involvement through taking care of physical needs can help children

correlate actions of those around them to their physical and verbal behavior. The more

responsive to a child's needs a parent is, the more a child experiences an accelerated social life,

freedom to explore, and varied mastery of experiences (Bandura, 1997).

Self-efficacy predicts success by examining motivation and performance level through

affective processes through perception of an activity. These processes also provide meaning for

the individual experiencing them in their capabilities to complete the task through physiological

arousal (Bandura, 1989). Peers within a social setting provide social learning with the selection

of friends to promote self-efficacy while developing cognitive competencies and acquiring

knowledge and problem-solving (Bandura, 1997). Vicarious experience in self-efficacy refers to

witnessing others complete a task and determining through their experience if it is possible,

typically associating to peers of similar levels (Bandura, 1997). However, Usher (2009) found

qualitative results of students with low levels of math abilities expressing recognized gaps

between their same-aged peers, while students identified as above grade level recognized they

were further in their understanding. In this study, they were identifying their own self-efficacy as

low.

Two additional factors within self-efficacy include the gender of the individual and the

time spent on an activity. Females are typically more prone to low levels of self-efficacy leading

to increased levels of depression compared to males (Bussey & Bandura, 1999). These results are

not solely found in school-aged children. Ekmekci et al. (2015) found that when assessing

teachers in urban schools within the field of mathematics, female adults typically express lower

levels of self-efficacy than males. They also found that when an individual spends a longer

amount of time on a task, their self-efficacy increases as a result. Although, the gender gap continues if males work the same amount of time on a task as females (Ekmekci et al., 2015).

Similarly, Bergey et al. (2015) found that middle school girls had lower self-efficacy scores than their male counterparts when assessed through a scientific computer game pre and posttest, which could extend to online learning. Students assessed in transitionary periods (elementary to middle school and middle to high school) were found to have lower self-efficacy if they had an identified ethnicity of Hispanic as well as being female (Lofgran et al., 2015). Students that took a pretest to determine their self-efficacy in virtual science learning had higher results in the final assessments correlating to high self-efficacy scores. Male students also scored higher in this study on self-efficacy (Bergey et al., 2015). Bandura (1997) said that findings indicate that females see themselves less efficacious for scientific jobs but have the same efficacy when examining sole tasks of scientists away from the scientific field.

Personal efficacy experienced in students with contribution from members of a group involving the intrinsic conditioning that has resulted in beliefs of capabilities of the individual. If the individual has experienced success with a certain task or setting, they likely have a high sense of personal efficacy when faced with a task in that setting. Similarly, if the individual has experienced failure it leads to a low sense of personal efficacy (Bandura, 2002). A public-school environment has many complexities, including vicarious feelings of accomplishment when peers in the class experience accomplishment (Bandura, 2002). The communal environment of an inclusive classroom contributes to collectivist behavior (Bandura, 2002). The impacts that this communal environment have on learning entirely online regarding students' self-efficacy is still unknown (Bao et al., 2020; Bergey et al., 2015). Patterns of efficacy are found to correlate with future success in careers and further education for students (Bandura, 1997).

Assessing the self-efficacy of teachers, team characteristics played more of a role in self-efficacy of teachers than individual characteristics when measured using a multiple linear regression of 80 teachers (Krammer et al., 2018). Many studies on student scored self-efficacy draw from high school students that are primarily White, demonstrating an increased need in student self-efficacy measures in middle schools with diverse populations, particularly within non-traditional settings (Hampton & Mason, 2003). Bandura's (2002) social cognitive theory demonstrates students regulating and recognizing their own perceived learning and academic coursework through a collectivistic community in an inclusive co-taught environment. Students in an inclusive environment create their own constructs through reflectiveness, intentionality, and forethought that create their perception of self-efficacy (Bandura, 1989).

Related Literature

The development of inclusion has created a way for students of all ability levels to integrate with their same-aged peers while continuing to receive supports necessary for growth in an environment that is non-restrictive. The passing of the Individuals with Disabilities Education Act created an environment in which legal mandates require involvement of students with disabilities in the general education setting as much as possible (IDEA, 2004).

While co-teaching is one of the most preferred methods of inclusive instruction due to the instruction occurring in the general education setting (Cook & Friend, 1995), that is not always possible during a pandemic due to the necessary small class sizes and cohorts of students (Stage et al., 2020). There is limited research tying student self-efficacy within the inclusive setting, particularly with increasing changes in the school structure itself attempting to ensure school safety. Student self-efficacy requires further examination to understand improvement and future inclusion research and practices (Vizenor & Matuska, 2018).

Coronavirus Disease (COVID-19) Pandemic

The coronavirus has many different strands (Sauer, 2020). The United States was impacted by the SARS-CoV2 or COVID-19 strand in the spring of 2020 (CDC, 2020a). The respiratory virus can be mild, similar to a cold, or severe, possibly leading to death, particularly for those with underlying health conditions or the elderly. The spread of COVID-19 comes through droplets in the air, diagnosed through a laboratory test and requires a 14-day incubation period. There is currently no treatment for COVID-19 (Sauer, 2020). Starting in December of 2020, people in the United States received vaccinations to aid in the body's production of COVID-19 antibodies in attempts to create herd immunity (Sallam, 2021).

In an effort to prevent the spread of COVID-19, schools closed their buildings and began teaching virtually in the spring of 2020. This accompanied statewide shut down of non-essential businesses. Previous studies indicate results of school closure during the H1N1 influenza spread; however, this closure was extreme due to the virtual nature and the duration lasting the remainder of the academic school year (Barrios et al., 2012; Gift et al., 2010; Heymann et al., 2009; Markel et al., 2007; Navarro et al., 2016). The H1N1 unplanned closing lasted for one week in many schools with students not receiving educational services at that time (Epson et al., 2015; Heymann et al., 2009). The intention of the H1N1 closures was to prevent the spread of the illness while responding to the absenteeism; however, older students did not isolate from their peers as frequently when schools were cancelled (Barrios et al., 2012; Miller et al., 2010). It is unclear at this time how the school closures of COVID-19 influenced student socialization, academics, and students' self-efficacy. These closures came with limited professional development and preparation for staff, students, and families.

While students did not attend school in person, many districts expected students to participate online. This was a drastic transition that requires further research. In-person and online learning, also known as hybrid learning, are comparable in achievement when teachers are highly effective in both settings with time and resources to prepare for instruction and activities when compared in a meta-analysis for kindergarten through twelfth grade (Cavanaugh et al., 2004).

The transition of in-person to virtual learning has found to have negative, lasting effects on student academic achievement in situations where educators are not highly effective when examining third- through eighth-grade students over a 7-year period (Fitzpatrick et al., 2020). Fitzpatrick et al. (2020) referred to virtual learning as "inherently limiting" in comparison to brick-and-mortar schools (p. 173). Virtual learning in math can assist in immediate understanding for students with mild intellectual learning disabilities but creates difficulty in retention and application (Bouck et al., 2019). The effects of the COVID-19 closures and transition to virtual learning continue as a gap in the literature.

Prior to virtual learning in the spring of 2020, Michigan enacted policy, allowing students to have the option of learning virtually for the same credit as they would in person. The qualitative study by Archambault et al. (2016) recommends that those implementing virtual learning instill clear communication of expectations, consistency and value of student support, specific guidelines for teachers, creating systems for updated data and course offerings, alignment of course syllabus, and a review process for each course. These suggestions are believed to integrate realistic measures to promote student success in an accessible setting of virtual learning with standards (Archambault et al., 2016).

Teachers who have education within technology and how to teach it have found to express stronger self-efficacy when they are expected to implement that knowledge within their curriculum. Nordlöf et al. (2019) ran a qualitative study at a Swedish compulsory school that reviewed 10 teachers' perspectives on their attitude framework on self-efficacy, finding that teachers that have less education or feel they have less resources result in negative amounts of self-efficacy. This is potentially a reflection upon the drastic nature of remote learning for many teachers across the United States expected to teach virtually.

Students in Finland, ages 12 to 22, demonstrated a higher sense of self-efficacy in comparison to their actual performance, particularly in males, preventing them from being able to access resources online that could benefit them in their schoolwork (Kaarakainen et al., 2018). These findings indicate that there should be more formalized education in technology within the academic setting to uphold high standards (Kaarakainen et al., 2018). Additionally, the increase in technological resources connecting students to social media poses a threat to the mental health of young men and women. A study conducted in China by Hou et al. (2020) found that adult women have had higher anxiety and depression during the COVID-19 pandemic when utilizing social media in comparison to their male counterparts.

Schools and districts were responsible for ensuring that all students had technology to participate equitably in public education during the pandemic (Demanet & Van Houtte, 2019). Students within the low socioeconomic range have been found to have low achievement due to opportunity in appropriate virtual learning, in addition to the lack of support at home. There is a strong correlation in a longitudinal study between low socioeconomic status and low achievement for students that are Black and Hispanic in in-person learning (Hanushek et al., 2020). The impact of students' socioeconomic status grows until the age of 14 where it levels off

until 17 years old (Hanushek et al., 2020). Students that live in neighborhoods that are primarily individuals bringing in a small income are more likely to qualify for special education to assist them in accessing content at their learning level (Gorard & Siddiqui, 2019). This economic deprivation decreases students' academic self-efficacy, which can lead to making autonomous virtual learning increasingly difficult for students that have been historically marginalized (Demanet & Van Houtte, 2019).

Return to In-Person Learning

Prior to returning to school in the fall, teachers had varying amounts of professional development to prepare curriculum and protect themselves and their students, including new methods of instruction, additional responsibilities such as non-pharmaceutical strategies, and alternating the content to be engaging for students (Watson, 2008). Due to the diverse nature of hybrid and virtual learning, there have been studies that show teacher growth through summer elective courses that provide individualized feedback for teachers working in these settings with strong encouragement from the school districts (Hall & Trespalacicos, 2019).

Teachers found that their perception of the skill to teach in hybrid and remote settings, along with their self-efficacy, increased with specific feedback and professional development (Hall & Trespalacicos, 2019). Teachers in Ontario, Canada examined major challenges of returning to in-person learning as accessing effective online support, professional development for online learning, converting face-to-face learning to virtual settings, and recognizing the experiences of student teachers (van Nuland et al., 2020).

The CDC (2020b) encouraged teachers and school administrators to reinforce and educate themselves and their subordinates on hygiene and distancing themselves to prevent transmission of the virus. Students attending in-person school had cohorts and decreased class

sizes, limiting the exposure they receive, often resulting in alternating schedules (CDC, 2020b).

School districts handled positive cases at their discretion, often including periods of sanitization

of entire buildings, quarantining of students and staff, and communications when there was a

positive case in the building of COVID-19 and how that impacted the person receiving the

communication (Sallam, 2021).

The CDC (2020c) emphasized the importance of returning to school in person while

maintaining proper sanitary precautions, referred to as non-pharmaceutical strategies not

requiring a vaccine or medication. These include encouraging students to wash their hands

frequently, having access to alcohol-based hand sanitizer, wearing face coverings, and

maintaining at least six feet of distance when possible (Qualls et al., 2017). When students

returned to in-person learning in the fall, there were no options for a vaccine or medication to

assist in remedying the COVID-19.

Students with underlying health conditions or those with families who have decided to

remain virtual in learning should have that option to continue to receive an appropriate public

education (CDC, 2020c). Turk et al. (2020) found that individuals ranging 0 to 17 years old with

intellectual and developmental disabilities are more likely to have complications if contracting

COVID-19 due to underlying health issues. There is limited research demonstrating the impact

that COVID-19 has on all children through current and longitudinal studies.

The online learning allows students to continue to receive education in a free and

appropriate setting when offered by schools (IDEA, 2004). The hybrid (also referred to as

blended learning) option involves a converging of online and face-to-face learning previously

utilized in universities and colleges (Watson, 2008). The goal of hybrid learning is to make

curriculum more student centered, increase interaction, and integrate assessments across virtual

and in-person settings (Dziuban et al., 2004). There is a gap in research on hybrid and online learning in an inclusive environment.

Parental choice was offered for many school districts. One school district in Texas held a study with caregivers providing feedback (Limbers, 2020). In this study, Limbers (2020) found that 52% of elementary school students' caregivers prefer an entirely face-to-face traditional format but found that caregivers of middle and high school students were more likely to select virtual or hybrid learning. Caregivers to students that were in elementary school preferred a format that was solely face-to-face. The health and safety of their children was the driving force that led to the decision of learning format. The learning environment of in-person or virtual learning was at the guardians' discretion.

The cohort or grouping that occurred in some schools throughout the fall of 2020 was feared to reflect tracking. Tracking involves grouping students based on teacher decision through ability level, which has led to reduced educational and career opportunities for students that underperform and retention or dropout for those with an overestimation of performance (De Boer et al., 2010; Schalke et al., 2013). Ethnic minorities and students living in a household with a low socioeconomic status are more likely to be at risk of academic failure when tracking takes place (Pit-ten Cate et al., 2016). Many districts placed students in cohorts according to the first letter of their last name to avoid tracking students, keeping education as equitable as possible while keeping family members in the same cohort. There are no current studies that demonstrate the impact of student grouping on academic, social, or emotional impact.

There are limited studies examining the differences of hybrid, virtual, and in-person education. A study by Son (2016) found that students that were able to learn online with labs and opportunities to ask questions in person had the highest student scores in comparison of those

who learned entirely online including labs and asking questions. Online resources within an in-person learning in middle school were found to have positive influence on students' attitudes and their perceptions of learning within mathematics when assessed through a mixed methods study (Earle & Fraser, 2017). Bao et al. (2020) examined a longitudinal study to predict the impact of kindergarten and first-grade students' reading growth and found that growth decreased by 66% with the largest decrease in students that are not regularly read to at home. This format of online and in-person learning has been commonly referred to as hybrid and virtual learning during the COVID-19 pandemic (CDC, 2020c).

A vaccine was created in December 2020, and it was offered to school personnel in the spring 2021, but it was not accessible to students at that time (CDC, 2020b). When teachers had the opportunity to receive vaccinations in the spring of 2021, many schools started transitioning to increased in-person learning (Sallam, 2021). Guardians of middle and high school students in Texas were more supportive of hybrid or virtual learning in comparison to elementary school parents in a study, conducted at the start of the 2020-2021 school year, consisting of 4,436 children and teenage guardians in kindergarten through high school (Limbers, 2020). Similarly, a survey conducted with parents across the United States that totaled in 1,743 adults found that the spring 2020 experience was mostly positive with the most positive parents being those whose children attended private or charter schools. A small percentage said that they would homeschool in the fall of 2020 and over one third of the sample said their child would be attending virtual school due to concerns about health (Lewis-Kipkulei et al., (2021).

Examining if virtual learning can replace face-to-face instruction in Israel, findings indicate that teachers believe learning virtually is not an alternative for traditional education (Amram & Davidovitch, 2021). While there are new improvements from learning virtually, the

advantages for face-to-face learning outweigh. There were expressed benefits in virtual competencies improved for teachers and students (Amram & Davidovitch, 2021). The CDC (2020c) also encouraged schools return to in-person learning to the maximum extent possible for students. There are no current studies reviewing parental or school input on returning to school in-person full time.

There continues to be unknown results regarding students' mental health during the shifting of learning formats within the COVID-19 pandemic. A study conducted with 266 students, prior to the pandemic, by Nowland and Qualter (2020), found that during times of transition and change for students going from elementary to middle school that students that were more socially anxious and fearful of peer judgement experienced more distress. The higher students' emotional self-efficacy was the more confident they were in the transition process. These findings have potential to relate to the COVID-19 pandemic, because students with higher self-efficacy and less anxious may find more success within the transitions of online and in-person learning.

Inclusion

Shogren, McCart et al. (2015) defined inclusion as "multiple learning spaces for students based on student need, rather than disability label or special education eligibility" (p. 180). Inclusion is not a room; rather, it is a service that involves multiple parties working together to meet the needs of the student (Lopes et al., 2004). There are mandates to ensure that individuals of all ability levels are included in a classroom to the maximum extent appropriate for that individual. This service has not always been present within the public-school system. There have been schools and past legislature preventing children with disabilities from being with their same-aged peers.

The passing of policies has prevented the exclusion of students with disabilities from continuing to the maximum extent appropriate on a legal level. The least restrictive environment (LRE) involves a team of people who work with the student to evaluate and integrate the student within the general education population to the maximum extent appropriate (IDEA, 2004). Active involvement for students of all ability levels to interact is federally required in the United States of America (IDEA, 2004). There should be an attempt made for every student to be included in their general education setting to the maximum extent possible (McCarthy, 1998). The field of special education has the fastest growing school law cases, with more burden put upon those pushing for a more restrictive environment trying to separate the student from their same-aged peers.

Academics are not the only area of benefit when examining the inclusive setting for students (*Sacramento City Unified School District v. Rachel Holland*, 1994). Successful inclusion benefits everyone and is a legal right, not a privilege (*Greer v. Rome City School District*, 1991). There has been pressure for further research to study the impact of inclusion with pullout practice (Miller et al., 2010). Students within the LRE scale have different placement locations. The most restrictive placement would be a hospital or instruction from the student's home. The LRE would be full integration within the general education setting (IDEA, 2004). A student's full integration in their least restrictive general education setting does demonstrate less individuality compared to alternate environments (Shogren et al., 2015). There are also inconclusive results within academic results of students in a more restrictive environment in comparison to students in a less restrictive environment (Tabassam & Grainger, 2002).

Pullout refers to students being removed for specialized services and returning to the general education environment upon completion of work (Rea et al., 2002). Findings from

Smogorzewska et al. (2019) found that students who are in an inclusive environment demonstrated understanding of others' mental states, perspectives, and beliefs (theory of mind) quicker than students did in a non-inclusive environment. These factors, along with the transitions of virtual learning to hybrid learning during the COVID-19 pandemic, create an emphasis in the importance regarding future research (Rainey et al., 2016).

Individuals with Disabilities Education Act

Prior to the 1975, children with disabilities did not attend public school with their same-aged peers. The work of parent and teacher advocacy led to the Individuals with Disabilities Education Act (IDEA) in 1975. Since 1975, there have been amendments to ensure that students with disabilities have updated rights within the public-school setting in their LRE (IDEA, 2004). This was a turning point for children with disabilities, their families, and the public-school system after a hard-fought battle to ensure the voices of students with disabilities and presume competence of students, reflecting within their rights. The IDEA was the first integration opportunity for children with disabilities to attend public school with their same-aged peers rather than an alternative school that only allowed students with disabilities. Within the IDEA mandate, law required that all children, regardless of ability level, have access to free and appropriate public education in their LRE (IDEA, 2004).

Least Restrictive Environment

The students' LRE changes depending on the student and the student's needs, with the focus on getting the student in the general education environment as much as possible (IDEA, 2004). Learning spaces should focus on student need over disability label or eligibility (Shogren et al., 2015). The LRE's purpose is to integrate all students in the general education environment to the maximum extent possible (Crockett & Kauffman, 2013). The more intensive services

provided leads to a more restrictive environment; when possible, those services should be within a setting that does not restrict the student from their same-aged peers' experiences (Lipsky & Gartner, 1996).

Children with disabilities of all levels benefit from a high-quality learning environment with structured expectations to meet success criteria (Crockett & Kauffman, 2013). Middle school students who were in an inclusive setting performed higher in comparison to their segregated same-aged peers that learned solely within a resources room with other individuals with disabilities due to the higher expectations placed on them (Kurth & Mastergeorge, 2010). The goal of the LRE is to prepare students for an integrated world after high school graduation, fostering independence. This is not possible in a more restrictive environment (Lipsky & Gartner, 1996).

The placement decision is a continuum of services that varies depending on the individual's needs. Schools are responsible for ensuring that each student has access to a LRE through services provided to the student in addition to placement. Services can be in the form of homebound, institutional, or instruction from the hospital, self-contained classrooms (only students with IEPs), residential schools, pullout instruction, co-taught classrooms, and full inclusion with built-in services. While there are many active policies and laws that promote the inclusion of students at all ability levels, separate placement still exists based on the team's decision at the meeting discussing the IEP (McCarthy, 1998).

Individualized Education Programs

The determination of a student's LRE comes from a team of individuals who know the student across the settings, including the student's parent, general education teachers, special education teachers, a school representative, and additional support providers. The team meets to

determine services, goals, accommodations, placement, and other factors ensuring the student's success toward independence and academic achievement (McCarthy, 1998). The meeting accompanies paperwork called an Individualized Education Program (IEP) that follows the student and is reviewed annually with a reevaluation every three years (IDEA, 2004).

The IEP involves the students' present levels of academic achievement and functional performance, impact of their disabilities, goals, accommodations, testing and modifications, related services and how the services with be presented within the learning environment (IDEA, 2004). The intention of the IEP is to guide instructional practice for students with disabilities to meet their needs and increase their success in the general education environment in a clear, structured way. However, this does not always occur in practice. The IEP usage has revolved around the avoidance of student failure with general education teachers expressing comfortability when consulting with the special education teacher rather than interpreting instructional decisions using the IEP itself (Bray & Russell, 2018).

A longitudinal study of third-grade students that were studied through fifth grade found that boys have a greater likelihood of receiving an IEP and are more likely to demonstrate Attention Deficit Hyperactivity Disorder within the academic setting (Kvande et al., 2018). Students residing in low levels of socioeconomic status were also found to be more likely to receive special education services when they had poor performance in math in third grade, and their teachers reported a feeling of helplessness in supporting them filling the gap of lack of instruction at home (Kvande et al., 2018). Additionally, minorities, special education services, and students that are migrants in Oregon found to have high rates of free or reduced lunch (Domina et al., 2018).

Success in Inclusive Practices

The gap of achievement between students with IEPs does not widen as quickly when exposed to the general education environment and curriculum on a regular basis (Deno et al., 1990). Overall achievement improved in an inclusive setting (Baker et al., 1994). For this gap to close, the goals around the IEP should be additives to the general education curriculum (DeMartino & Specht, 2018). Students with behavior or learning difficulty can learn from observation of others (Bandura, 1997). The stigma around special education decreases from the environment when students of all abilities are involved in the same setting (Chandler-Olcott & Hinchman, 2015).

Teachers have found increase in effectiveness when given tools that support them through a co-taught setting in an encouraging environment with appropriate resources (Stefanidis et al., 2019). This is due to the perceived self-efficacy from environmental factors that build on confidence from life circumstance (Bandura, 2002). Meaning from the individual stems from endurance and internalized (Bandura, 2001).

Overall, students in inclusive settings benefit academically, have a less widening achievement gap from their peers, and increase in acceptance of classmates, and the school benefits from cost effectiveness (Lipsky & Gartner, 1996). Students in a co-taught setting enter the classroom with a multitude of experiences that have shaped their meaning and their self-efficacy within the classroom environment. The confidence from teachers builds on the self-efficacy of the students. Students can benefit from an environment with co-teaching due to the support they receive from their surrounding peers and their teachers (Stefanidis et al., 2019).

Co-teaching

Co-teaching is a practice involving two or more teachers in the classroom. The service of co-teaching is less restrictive on the continuum of services due to lack of separating the student

from their grade level, general education instruction (Cook & Friend, 1995). Typically, this includes one general education teacher and one special education teacher (Chandler-Olcott & Hinchman, 2015), but occasionally the additional teachers can represent different subject matter (Ciampa & Gallagher, 2016). The goal is to build a trusting environment for all students in which it is acceptable and welcome to make an effort even if that accompanies mistakes, while continuing to grow in the general education curriculum with active support from the co-teachers to meet learning standards and IEP goals.

This practice is growing, particularly in secondary schools (King-Sears et al., 2014; Nissim & Naifeld, 2018) and has expanded to include literacy, math, science, and social studies (Forbes & Billet, 2012). While the intention of a co-taught environment is on students with disabilities, there are shared responsibilities for students without disabilities as well to ensure they are receiving core instruction with opportunities for additional help when necessary (Ghanaat-Pisheh et al., 2017). Models of co-teaching define the practices within the classrooms based on the teacher configuration (Cook & Friend, 1995).

Co-teaching typically involves one general education teacher with expertise in the grade-level content and one special education teacher with expertise in differentiation and accommodating and modifying content to meet the needs of the students they work with in accordance to their IEP (Cook & Friend, 1995). Co-teaching methods are in all grade levels throughout the United States, while growing in various other countries as well (Ghanaat-Pisheh et al., 2017).

There are definable approaches to co-teaching that includes one teach, one assist, station teaching, parallel teaching, alternative teaching, and team teaching (Cook & Friend, 1995). Station teaching is similar to a rotation in which students move around the room and work with

different teachers while having opportunity for independent work. Parallel teaching involves one

lesson on one side of the room while another is going on the other side. Alternative teaching is

pulling a small group of students during a larger group lesson to approach the learning in a

different way or re-teaching (Cook & Friend, 1995). Co-teachers can also use small group

pullout for remediation of students struggling with a concept (Brendle et al., 2017). Team

teaching includes both teachers teaching the class simultaneously as a whole requiring planning

and cohesion among the co-teachers (Cook & Friend, 1995). Team teaching is the most

encouraged and effective but the least utilized due to the time it takes to plan and collaborate

(Solis et al., 2012).

The practice of co-teaching within schools is a way for students to receive instruction in

their LRE while continuing support as prescribed by the student's IEP by executing the goals and

services (Scruggs et al., 2007). Roles within this environment are intended to complement each

other (Strogilos et al., 2016). This exposure to general education environments and content, with

increased support required through their IEP, has led to increased learning for students at the

middle school level (DeMartino & Specht, 2018).

Most co-taught classrooms utilize the one teach, one assist model (Scruggs et al., 2007).

This demonstrates through one teacher (typically the general education teacher) leading the class,

while the other teacher circulates the room to ensure students are staying on task and assisting if

they have a question or need to be taught a skill using a different approach (DeMartino & Specht,

2018). Co-teaching puts increased stress on the general education teacher through the

responsibility of executing lessons and planning that can cause burnout and frustration,

particularly if the co-teachers are utilizing the one teach, one assist model (Brendle et al., 2017;

King-Sears et al., 2014). Some findings indicate the most experienced teacher as the "lead"

within this model regardless of their role as a special education teacher or a general education

teacher (Nissim & Naifeld, 2018). One teach, one assist demonstrates low levels of collaboration

(Nissim & Naifeld, 2018).

One teacher leading can lead to a discrediting view for students about the assisting

teacher. When students within the classroom view the assisting teacher as an extra, they view

students that receive support from the teacher as "other", which can cause a divide in the

collective efficacy and decrease beliefs in ability levels for students creating the same outcomes

in a segregated learning setting (Embury & Kroeger, 2012). Co-teaching has shown to improve

students with learning disabilities ability to read and write with increase attendance as well, in

comparison to a solo-taught special education class led by a special education teacher (Tremblay,

2013).

Educators should have time to adjust content when practicing in an inclusive environment

(Jurkowski & Müller, 2018). Negativity around inclusion can be from growing pains for

beginning practitioners and have shown to improve over time (Carty & Farrell, 2018; Lopes et

al., 2004). Training educators in co-teaching areas, such as the common goal of inclusion, direct

instruction, and curriculum-based assessment, and peer instruction and tutoring, has proven to

improve classroom skills and performance (Ghanaat-Pisheh et al., 2017). Despite teachers'

obstacles with inclusion, there is a consistent belief that all students have the right to effective

teaching in an inclusive environment (Lopes et al., 2004).

Teacher Findings and Perspectives

Teachers find co-teaching beneficial overall due to students being able to work together

toward a common goal with support (Wexler et al., 2018). Many teachers felt they are able to

provide more support when compared to working independently in separate rooms (DeMartino

& Specht, 2018). General education teachers are more reluctant in the inclusive co-teaching model, particularly with students who have a learning disability or behavior disorder (Lopes et al., 2004). The special education teacher is seen as more of an expert in managing accommodations, implementing IEP goals, and managing behaviors and behavior plans (Brendle et al., 2017). A sample of teachers in Italy found there were increased negative attitudes around male students, students with behavioral problems, and students with intellectual disabilities (Ginevra et al., 2021). Teacher and peer acceptance can be key contributors to success in middle school classrooms behaving as the model for acceptance within the classroom setting (Osterman, 2000).

As the content experts, general education teachers hold most responsibility regarding content and curriculum taught within the classroom (Brendle et al., 2017). Special education teachers hone on gaps in student learning to meet their individualized needs and that of their core content (Carty & Farrell, 2018). Eighty teachers measured their self-efficacy within the inclusive environment, both individually and collectively. Krammer et al. (2018) found that classroom characteristics of students did not affect self-efficacy of teachers. Findings from the study indicate that group factors within the inclusive setting are more telling of teachers' self-efficacy than individual characteristics of the teachers themselves (Krammer et al., 2018). Similarly, teachers who consistently differentiate within the classroom have been found to hold higher beliefs in their students' competency and ability. However, they also feel less connected to fellow teachers that do not differentiate (Timmermans & Rubie-Davies, 2018).

In addition to the considerations of inclusive environment, the addition of virtual and hybrid learning emphasizes the importance of teacher self-efficacy in the field of technology. A study by Joo et al. (2018) at a Korean school of education found that students that were explicitly

taught about technology pedagogy and content knowledge in the field of technology within the classroom had higher self-efficacy and found that utilizing it within content was easier. This also raised the teachers' self-efficacies as well.

Students Findings and Perspectives

Social inclusion for students is never stagnant and must involve monitoring student growth and development, even during hybrid or remote learning (Hart et al., 2019). Usher (2009) interviewed students with a variety of abilities in math and found that students with higher math skills recognized their advancements, while students that struggled in math noticed they perform below grade level expectation creating a lower sense of self-efficacy. Although no students identified as having an IEP, the eight participants gauged their own self-efficacy on the achievement of others (Usher, 2009). This could create the same gap in self-efficacy for students that have had exposure to technology prior to the shutdown of their school building in comparison to their peers who have economic disadvantage. Students with limited exposure to technology or access to an adult who can assist them may have less equity in ensuring their success leading to lower levels of self-efficacy (Hanushek et al., 2020).

Students who feel accepted are more likely to support others within the school setting boosting their own self-efficacy and that of others (Osterman, 2000). Vizenor and Matuska (2018) found positive results when having students complete a questionnaire in a sixth-grade in-person literacy classroom, including students with and without disabilities, to determine the students' thoughts on the inclusive practice of co-teaching with a limited survey size of 19 students. The students shared they felt a high sense of efficacy due to the support and encouragement they received from both teachers setting high expectations for all students (Vizenor & Matuska, 2018). Students who have demonstrated increases in self-regulated

learning have a strong correlation with self-efficacy as examined in a middle school setting (Cleary & Kitsantas, 2017).

When examining students with learning disabilities, Klassen and Lynch (2007) found students were overconfident in their abilities relaying their failures to lack of effort and comparing themselves to their peers without learning disabilities who were seen as trying harder and doing better as a result. Students that have disabilities and are part of an ethnic minority group within a co-taught setting have expressed levels of higher accountability and increased attention to support their learning needs perceived as a positive attribute to students within the study (Darling-Hammond, 2015).

There have been findings of students appreciating the access to learning in a co-taught classroom in the form of belonging, success for all students, and needs met by having more than one teacher to support (Carty & Farrell, 2018; Shogren et al., 2015). A group of 10 sixth-grade students with and without disabilities within a co-taught classroom that utilized one teach, one assist frequently shared that they typically go to the general education teacher, while students with disabilities felt more comfortable approaching the special education teacher. Students within this study expressed a high sense of belongingness with two readily available teachers for them within the co-taught setting demonstrating a high sense of self-efficacy (King-Sears & Strogilos, 2020). Students at the elementary level without disabilities had positive attitudes, higher levels of social contact, and more community participation after having students with disabilities join them in an inclusive setting for academic content (Lipsky & Gartner, 1996; Vizenor & Matuska, 2018).

Pullout Model

A study conducted by Lopes et al. (2004) sampled 430 special and general education teachers who worked with students in first to ninth grade. Findings demonstrated that the older students got, the more teachers felt they were unable to support them within the co-taught setting due to the amount of intervention and support required to assist the students in meeting their IEP and grade-level expectations. Many of these teachers felt a clear division in their ability level and felt they would be better supported in a resource or segregated classroom, such as a pullout model. The pullout model of teaching is not supportive of inclusion, because the only students being pulled out of class are those with disabilities.

Similarly, a meta-analysis found that students are less likely to feel a sense of high self-efficacy when in an inclusive setting due to feeling as if their learning disability is on display while asking for help in a setting with peers not identified with a disability (Klassen & Lynch, 2007). Teachers shared feelings of less self-efficacy when working with a co-teacher for older students, particularly when they demonstrate behavior problems (Lopes et al., 2004). These attitudes and beliefs at low levels meeting students' needs often determine their perceived self-efficacy while working with students that have cognitive disabilities as well (Wilson et al., 2016).

Klassen and Lynch (2007) interviewed students in eighth and ninth grades, finding preference of discrete assistance, such as pullout, to prevent hindrance of their self-efficacy through embarrassment and fear of appearing incompetent to peers. Students that were pulled out for instruction had lower levels of self-efficacy in comparison to those assisted in class through a co-taught setting (Klassen & Lynch, 2007). Students with learning disabilities in a study

conducted by Hampton and Mason (2003) within a high school science class found no direct effect on students' academic self-efficacy.

Students receiving IEP services may need foundational pieces of curriculum that are most appropriately taught in a segregated room during pullout instruction, increasing academic achievement for students (Szumski et al., 2017). This could create a school environment that is less enjoyable for peers, leading to increased absences while embarrassing students on an IEP. The fundamental lessons can create increased absenteeism for students with and without disabilities in inclusive settings (Egalite, 2019).

A comparative study in Belgium found first- and second-grade students with and without disabilities had greater improvement in literacy through a co-taught setting and had the same levels of growth in math in comparison to a pullout model of instruction (Tremblay, 2013). Students in third through sixth grade with and without disabilities in Australia had their academic self-efficacy examined. Students with learning disabilities and Attention Deficit Hyperactivity Disorder were found to have significantly lower sublevels of academic self-efficacy when their core content was presented in a pullout setting with a special education teacher in comparison to their same-aged peers, stemming from stigma accompanying the removal (Tabassam & Grainger, 2002).

Conversely, Pintrich and Garcia (1994) assessed students with and without learning disabilities to examine their self-efficacy toward motivation within reading. The students with disabilities learned in a segregated literacy class taught by a special education teacher for one to two hours a day. Findings indicate that these students saw their failures as opportunities to learn, giving them the same level of self-efficacy as their peers without an identified learning disability.

They were able to get specific feedback about failure in a setting that was non-threatening encouraging them to attempt without fear of failure (Pintrich & Garcia, 1994).

Students who require increased instructional or behavioral needs may require a more restrictive setting to fill the gap between their current level of performance and grade level expectancy. The IEP team determines this and should always have the best interest of the student in mind before, during, and after the meeting to decide these factors. If the student is 13 years or older, they will have a transition IEP that examines the student's life after they graduate from high school (IDEA, 2004). The student is encouraged to play an active role in their beliefs on services during the transition IEP (McCarthy, 1998). The student should always attempt to be included in IEP meetings. An important consideration when deciding the student's LRE is that if there are concerns for the safety and welfare of the student and their peers, then a more restrictive environment may be more appropriate (McCarthy, 1998).

While there are mixed reviews about pullout instruction to meet the needs of students with IEP services, the non-pharmaceutical practices that were encouraged by the CDC (2020c), including social distancing and decreasing class sizes, resulted in some schools and districts having to make the transition to pullout instruction. Students within the hybrid or virtual setting were still legally required to receive education with or without disabilities (IDEA, 2004). A qualitative study conducted by Ewing and Cooper (2021) examined the perspectives of teachers, parents, and students. Teachers' top concern was student engagement while students felt less personalized and engaged with teachers. Meanwhile, students were concerned about their peer engagement (Ewing & Cooper, 2021).

Gaps in the Literature

In a literature review by King (2003), findings indicate positive interpersonal relationships and class climate are the most predictive factors for student success. The higher expectations within the study are a result of modeling from students without IEPs for students who may demonstrate learning gaps or behavior disorders (Bandura, 1986). Many studies on the impacts of inclusive settings focus on the teachers' beliefs on practices while avoiding the thoughts of students, particularly those without IEP services that are educated in the same setting (Strogilos & Stefanidis, 2015). Students in general education and those considered gifted in math demonstrated lower levels of self-efficacy at the end of the year, not including students with disabilities (Pajares & Graham, 1999).

Inclusion applies to all members within the classroom, not just the educators (Embury & Kroeger, 2012). Students are the primary stakeholders within an inclusive environment, allowing them to have unique insights to their own learning (Shogren et al., 2015). There continues to be a gap in literature of a large sample size from inclusive practices with pullout intervention in middle school on how the environment affects students' perceived self-efficacy (Chandler-Olcott & Hinchman, 2015; Kurth & Mastergeorge, 2010; Shogren et al., 2015).

A study by Lee et al. (2016) focused on middle school students' intrinsic motivation (including self-efficacy), engagement, and achievement. The results indicate that intrinsic motivation leads to engagement. Students that are engaged are more likely to achieve. While teachers in a prior study have expressed females are more motivated, there is no significant difference in final grades when examining for bias. Additionally, parental involvement in school has been positively correlated to increasing students' academic self-efficacy, which has led to

positive achievement (Affuso et al., 2017). There has been limited studies relating to student self-efficacy in the fully virtual or hybrid settings.

The COVID-19 pandemic in the spring of 2020 caused students to transition from in-person learning to entirely online, which has shown negative, long-lasting impacts in the past under less drastic circumstances such as a pandemic creating forced closures for students and staff safety (Hart et al., 2019). Learning virtually is more effective when designed for a universal audience of differentiated learners (Burgstahler, 2015), but it is unclear if the setting and environment allotted for universal designed learning to improve student self-efficacy. Additionally, it is unclear the extent of virtual competencies for students and subgroups of students such as those qualifying for disabilities or not (Amram & Davidovitch, 2021).

The impacts of the virus and shutdown of communities to mitigate the spread is unknown at this time (Dorn et al., 2020). The spring of 2021 had an increase in vaccinations for community members throughout the country. There is limited information about how the closure of schools in the spring and re-opening with guidelines in the fall have affected students and teachers alike (van Nuland et al., 2020). The impacts that the transition from virtual to hybrid or in-person learning had on students and families is still unknown (Sallam, 2021). The long-lasting impacts of the COVID-19 pandemic also require additional research looking at student perspectives of those with and without disabilities (Hanushek et al., 2020).

Summary

Students with disabilities have the right to a free and appropriate public education in their LRE (O'Laughlin & Lindle, 2015). The IEPs allow accommodations and support services in addition to general education curriculum as determined by members of the team working with the student (Winterman & Rosas, 2014). Inclusive practices are not only encouraged, but also

legally mandated to the maximum extent appropriate based on the individual child and their needs (IDEA, 2004). Pullout instruction is a way for special education teachers to monitor students with IEPs. This should be done with a minimal amount of removal from the general education setting during instruction to avoid further gaps from growing between the student's present levels and grade level expectation. An integration of accommodations for students struggling to learn some concepts can be found through a multitier system of supports with the top tier being special education services (Averill et al., 2011).

Co-teaching provides students with immediate assistance in the classroom by having two adults present working with students (Scruggs et al., 2007). However, co-teaching changed to pullout instruction in some districts due to the COVID-19 mandates to ensure safety through non-pharmaceutical practices (CDC, 2020c; Uscher-Pines et al., 2018).

Students have found benefit from inclusion due to increased support and high expectations (DeMartino & Specht, 2018). While there is a plethora of research on the perspectives of teachers, the research on student perspective, particularly within the realm of self-efficacy is limited (Vizenor & Matuska, 2019). Student perspective is an untapped resource with the potential to predict outcomes of future success in inclusion with pullout services particularly during such monumental times. Student perceptions and insights can indicate effectiveness (King, 2003). Bradley and Fisher (1995) said, "Peers are a powerful and plentiful resource which can contribute to successful inclusion" (p. 9). There needs to be further research relating to the impact that inclusive environments have on students' levels of self-efficacy after a pandemic.

The effects of the COVID-19 pandemic are still being uncovered (Amram & Davidovitch, 2021). While the field of education starts to transition back to full time in-person

learning due to the vaccinations being offered since December 2020, there are still many stones that must be turned (Sallam, 2021). The importance that self-efficacy plays in predicting student success matched with the influence that guardians have on students' self-efficacy make it appropriate to study further relating to the COVID-19 pandemic (Bandura, 1997). Gender roles within self-efficacy may present themselves through virtual and hybrid learning just as they do throughout the fields of math and science (Bandura, 1997). Increasing research in the field of education during and after the COVID-19 pandemic while accounting for the perspectives and insight of individuals that experienced virtual learning and the transition to choice of virtual or hybrid can help in the understanding of next steps (van Nuland et al., 2020).

CHAPTER THREE: METHODS

Overview

The purpose of the study was to examine the differences in academic self-efficacy scores based on students' classification as a student with or without a documented disability, learning format, and gender among middle school students in an inclusive classroom through a quantitative casual comparative study. This study utilized a two-way analysis of variance (ANOVA) to compare the independent groups based on the independent variable scores through academic self-efficacy. The chapter begins by introducing the design of the study, including full definitions of all variables. The research questions and null hypotheses follow. The participants and setting, instrumentation, procedures, and data analysis is presented.

Design

This study used a quantitative, causal-comparative research design based on student response surveys for data. A causal-comparative study examined the cause-and-effect relationship through the independent variables' relationship with the dependent variable while being inexpensive to conduct in the natural environment (Gall et al., 2007). This study was appropriate for this methodology due to the relationship the independent variables have on the dependent variable within the naturally occurring, inclusive setting. The groups within this study were factors that were determined prior to the start of this study (Gall et al., 2007).

This design was appropriate because there is no influencing treatment that students are involved in throughout the study. Non-experimental, causal-comparative studies are less expensive to conduct within a naturally occurring setting (Gall et al., 2007). Involvement in the study was a random sample within naturally predetermined classroom scheduling and placement by the administrators at the school. They were in an environment that is naturally set through

school enrollment and delivery of services based upon parental choice (Mertler, 2018). The study

did not include any intervention or influencing factors. The sole purpose was to determine the

effects on the students within the natural setting through a self-efficacy measure. The causal-

comparative design allowed the data to examine the differences in gender, disability status, and

learning format among the self-efficacy scores of students. The popularity of inclusion made the

results generalizable to a broader population in addition to a large sample size. The unique nature

of the study occurring during a pandemic gave insight to the effects of online and hybrid learning

with non-pharmaceutical rules within the in-person environments, and the effect of virtual

learning for students in middle school.

The study assessed the impact of students with and without disabilities taught in an

inclusive environment in a middle school during the COVID-19 pandemic. In Research Question

One (RQ1), the independent variables in this study are disability status and gender. The

dependent variable is students' academic self-efficacy. The independent variable of disability

status is defined as students with an identified disability receiving special education services and

students without an identified disability. Students qualified for a disability if they have an

identified IEP due to being eligible (IDEA, 2004). When a student qualified as having a

disability, this means they need varying levels of support and assistance through additional

instruction to access their general education curriculum (DeMartino & Specht, 2016). Students

who do not qualify for an IEP or those whose parents have refused consent are not considered to

have a disability. This study included students with learning disabilities. This study did not

include students that qualify with an intellectual disability. An independent variable within this

study was gender. Students were identified as male or female through their school enrollment

completed by their parents. Learning format options included hybrid learning, which is a mix of

in-person and online learning, and virtual learning, which is entirely online. Students learning online were expected to attend eight hours of schooling through virtual meetings at their allotted class times. Students that were in-person were expected to attend eight hours of schooling through face-to-face meetings at their allotted class times. Hybrid students attended two days of school in-person and three days of school online per week until April of 2021 when hybrid students learned face-to-face four days a week with one day of online learning. Virtual students attended five days of school online per week.

In Research Question 2 (RQ2), the independent variables in this study are learning format and gender. The dependent variable was students' academic self-efficacy scores. The independent variable of learning format is defined as hybrid learning and virtual learning. Hybrid learning consists of students working in-person at school and online (Dziuban et al., 2004). This was the only in-person option for the district within this study during the spring 2021 semester. Virtual learning involved students not coming to the physical school, but continuing education from their homes through the Internet (Hall & Trespalacios, 2019). Some students learned in the fall semester in a hybrid setting, while others learned entirely online. This was a family decision. The comparisons made within the study included that of student scores from those with and without disabilities, gender, and learning format (virtual or hybrid). The independent variable of gender was defined as male or female as determined by the students' school registrations. The dependent variable within this study for RQ1 and RQ2 is the academic self-efficacy scores as measured by the Patterns of Adaptive Learning Scales (PALS) (Midgley et al., 2000). Students self-assessed on the PALS assessment. Self-efficacy is the belief that a person holds about what they can accomplish (Bandura, 1997). This study examined students' self-efficacy within the academic school setting through the PALS, which has students rate themselves on their personal

goals and achievements, perception of teacher goals, and perception of home life in relation to school (Midgley et al., 2000). Self-efficacy has predicted success through perception of personal abilities and motivation (Bandura, 1989).

Research Questions

RQ1: Is there a difference among the *academic self-efficacy* scores based on a student's classification as *a student with or without a documented disability* and *gender* among middle school students in an inclusive classroom during a pandemic?

RQ2: Is there a difference among the *academic self-efficacy* scores based on a student's *learning format* (online or in-person hybrid) and *gender* among middle school students in an inclusive classroom during a pandemic?

Hypotheses

The null hypotheses for this study are:

$H_0 1$: There is no significant difference among middle school students' *academic self-efficacy* based on a students' classification as a *student with or without a documented disability* in an inclusive classroom during a pandemic.

$H_0 2$: There is no significant difference among middle school students' *academic self-efficacy* between *males and females* in an inclusive classroom during a pandemic.

$H_0 3$: There is no significant difference among middle school students' *academic self-efficacy scores* between *males and females* and classification as a *student with or without a documented disability* in an inclusive classroom.

$H_0 4$: There is no significant difference among middle school students' *academic self-efficacy* based on *hybrid or remote learning format* in an inclusive classroom during a pandemic.

H₀5: There is no significant difference among middle school students' *academic self-efficacy* between *males and females* and *hybrid or remote learning format* in an inclusive classroom during a pandemic.

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Participants and Setting

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This study took place in the spring of 2021 within a middle school setting in Colorado. This middle school consisted of sixth, seventh, and eighth graders who were in an inclusive setting. The participants provided consent through district level, teacher and parental consent, and student assent to participate. During this time, there were two formats of learning including hybrid and virtual settings. The following sections give an overview of the population of students and the setting in which the study takes place.

Population

The population of this study included middle school students from a large school district in Colorado during the spring semester of the 2020-2021 school year. The district demographics from 2020 consisted of 11% of students qualifying as having a disability. In the 2019-2020 school year, 31% of students within the district and 40% of students within the state of Colorado qualified for free and reduced lunch (Colorado Department of Education [CDE], 2020). The National School Lunch Program (NSLP) is a federal program that provides financial assistance for families to fight hunger and obesity (Joyce et al., 2018). Students' eligibility for free or reduced lunch came from the number of individuals in the household and the annual income based on federal guidelines updated annually based on poverty levels. For example, those with a household of five people earning $57,424 have access to a reduced lunch option for their children but receives free lunch if it is $40,352 or less (Federal Register, 2021).

Ethnicities within the district consisted of less than 1% Native American, 3% Asian, 1% Black or African American, 24% Latino or Hispanic, 67% White, less than 1% Native Hawaiian or other Pacific Islander, and 4% two or more races. There were 12.9% of students considered English language learners (CDE, 2020).

This study occurred one year after the start of the COVID-19 pandemic, which created virtual learning and hybrid learning environments for students to ensure safety. In the fall of 2020, students' families chose a hybrid or virtual learning environment that dictated their school experience. Administrators from the district asked that families continue their format (hybrid or virtual) in the spring; however, some families changed formats. The grades within the school selected include sixth, seventh, and eighth grades. The school district was urban middle-to-lower income level outside of Denver.

Participants

The participants for the study were drawn from a convenience sample of middle school students. Data collection occurred in May of 2021. The Institutional Review Board (IRB) approval led to school district approval (see Appendices F), building level approval, teacher approval, parental consent, and student assent (see Appendices B, C, and H). To satisfy RQ1, the sample size required a minimum of 126 students with even distribution among groups (Gall et al., 2007). To ensure there was enough data in case of incomplete student response, the minimum amount was 130 surveys conducted with students. In order to meet the requirements of equal distribution within these groups, there had to be at least 26 students identifying within each subgroup with each gender, students with or without an IEP, and learning format (virtual or hybrid) assuming a medium effect size with statistical power of .7 at .05 alpha level (Gall et al., 2007).

The sampling procedure involves receiving permission from teachers who utilize co-teaching practices within their classrooms, followed by requesting parental consent from students within those classrooms. The sample decreased further to students that provide assent. There was an assumption of a medium effect size based on a sample prediction of students with an alpha level of .05 including students learning online and through the hybrid environment. The sample involved eight teachers' literacy classes and nine teachers' math classes. Seventeen teachers provided consent to take place within their classrooms, virtually or in person through the hybrid setting. Students ranged from 10 to 14 years old.

Disability Group Demographics

According to the CDE (2020), 11.8% of students in Colorado's public schools have a disability including those with significant needs. This number has decreased since 2019 (CDE, 2020), where 11% of students within the district in 2019 qualified as having a disability including those with significant needs. Table 1 displays demographics of the student sample including disability qualification. There are 46 students that qualify for a disability and 176 students that do not qualify as having a disability with a total of 222 students. Within the total, 19 females qualify for a disability under IDEA (2004) and 93 females do not qualify with a disability. There are 27 male students who qualify for a disability and 83 male students who do not qualify with a disability.

Gender Group Demographics

The district statistics showed that 48.9% of students were females and 51.1% of students were males during the 2016-2017 school year (CDE, 2017). These statistics show less than 1% of male and female students as Native Indian or Alaskan Native; 3.4% of females and 2.8% of males that are Asian; 1.1% of females and 1.2% of males identifying as Black or African

American; 24.8% of females and 24.1% of males identified as Hispanic or Latino; 66.1% of

females and 67.3% of males identified as white; less than 1% of males and females identified as

Hawaiian Native or Pacific Islander; and, 3.7% of females and 3.7% of males identified as

having two or more races (CDE, 2017).

Students within this study had a federal designation upon registering for school. This

designation shared the ethnicity to which they identify. This study consisted of 2.3% of

participants that were Asian, 5% Black or African American, 40.9% Hispanic or Latino, 46.8%

White, less than 1% Native Hawaiian or Pacific Islander, and 3.6% two or more races. The

participants included students in sixth, seventh, and eighth grade. There were 95 sixth graders, 57

seventh graders, and 67 eighth graders that participated in this study. Tables 1 and 2 show

demographics of gender consisting of male and female. There are 112 students in the study

identified as being female, and 100 students identified as being male. There are a total 222

students.

Learning Environment Group Demographics

The fall of the 2020-2021 school year led to many large Colorado districts decreasing in

enrollment. The district within this study had a 4.7% decrease in enrollment (CDE, 2020). In

comparison to the fall of 2019 in the state of Colorado, 1,628 students that qualified for an IEP

unenrolled in public school (CDE, 2020). Inclusive environments also account for students

considered English language learners and students that are identified as gifted and talented.

According to the CDE (2020), 12.9% of students in Colorado are English language learners and

7.4% of students are gifted and talented. Table 2 also shows demographics of the student sample

within learning environments. The learning environment is divided into virtual learners and

hybrid learners. The table shows 33 students are virtual learners and 199 students are hybrid

learners. Within those groups, 12 are female virtual learners and 100 are female hybrid learners. There are 21 male virtual learners and 99 male hybrid learners.

Table 1

Composition of Groups: Gender and Disability Status

Gender	Disability	No Disability	Total
Male	27	83	110
Female	19	93	112
Total	46	176	222

Table 2

Composition of Groups: Gender and Learning Format

Gender	Virtual Learning	Hybrid Learning	Total
Male	21	99	110
Female	12	100	112
Total	33	199	222

Setting

All the classes in the sample will include students with and without disabilities. Hybrid learning consists of students learning both online and face-to-face. Hybrid students were online two days a week and face-to-face two days a week for synchronous learning until March of 2021. Starting in March of 2021, learners that were hybrid transitioned to four days a week of in-person learning with one day a week being virtual. Although hybrid learners were scheduled to be in-person, there were still precautions such as quarantine when students tested positive for COVID-19 or exhibited symptoms. This study refers to hybrid learners as those that had learning

in-person. Virtual learning consisted of students having class entirely online four days a week through synchronous learning. The entire school was virtual one day a week for asynchronous learning.

The inclusive setting involved one general education teacher and one special education teacher to provide additional support for students that qualify for special education services (Lipsky & Gartner, 1996). The role of the general education teacher was to provide grade level instruction through state standards, while the role of the special education teacher was to accommodate and support students with disabilities in additional instruction and alternate learning strategies (Chandler-Olcott & Hinchman, 2015). This study does not include students identified as having significant needs based on Colorado state standards of qualifying for Extended Evidence Outcomes on state testing requiring a more restrictive environment over 80% of the time. Students without disabilities were placed in classes due to scheduling resulting from computer input, parental choice in learning environment (virtual or hybrid), and generating a schedule by chance and availability with electives, support classes, and core classes to meet the required district expectations of grouping students in cohorts appropriately. The school participating in this study had over 30% of students with and without disabilities receiving at least one failing grade in the fall of 2020 during virtual and hybrid learning at the end of the semester.

Instrumentation

Gender

This study defined gender as male or female. Students were identified as male or female based on their registration for school. This information was accessible to the researcher after parental consent and student assent was received.

Disability Status

Student qualification for a disability occurs through an identified need, parental consent, and an IEP (IDEA, 2004). This study included students with a specific learning disability. If a guardian denies permission to evaluate or proceed with an IEP, the student was not identified as having a disability. Students with significant needs as defined by Colorado state standards were not included in this study (Thurlow et al., 2017). Student disability qualification was identified through school registration and was accessible to the researcher after parental consent was received.

Learning Format

There were two options that families had in the 2020-2021 school year, including hybrid and remote learning. After the guardian selected the format the student would learn in during the 2020-2021 school year, their school profile reflected the format through their schedule. Hybrid learners had a regular block schedule, while virtual learners had a block schedule with the label "RL" (remote learning). Hybrid learners at the time of this study were learning four days a week in-person, while virtual learners were entirely online. This information was accessible to the researcher through parental consent following district and teacher consent.

Ethnicity

Families within the district select one or more ethnicities when enrolling to the school district. Options that could be chosen include: Native American, Asian, Black or African American, Latino or Hispanic, White, Native Hawaiian or other Pacific Islander, or two or more races.

Grade Level

Grade level refers to students' age and progress. While in rare circumstance there is

retention of students, typically students in sixth grade are between 11 and 12 years old. Students in seventh grade are 12 to 13 years old. Students in eighth grade are 13 to 14 years old.

Patterns of Adaptive Learning Scales

Participants' self-efficacy was determined using the Academic Self-Efficacy subscale of the Patterns of Adaptive Learning Scales (PALS) (see Appendix A). The purpose of PALS is to measure students' perceptions of their academic self-efficacy through a Likert scale rating response based on student perception of academic influences through personal achievement goal orientations, perceptions of teacher's goals, perception of the goal structures in the classroom, achievement-related beliefs, attitudes, and strategies, and perceptions of parents and home life (Midgley et al., 2000). Midgley et al. (2000) created this tool for researchers to have public access while working at the University of Michigan. This was Version 12 of the instrument with the previous version published in 1997 (Midgley et al., 2000). The PALS (2000) examines students in middle school through goals and objectives within content areas. The tool was utilized in midwestern states with 55% of the participants being part of a minority group and all students falling in the middle to low income categories (Midgley et al., 2000).

This tool has been utilized in numerous studies to uncover students' self-efficacy (Alivernini et al., 2018; Elliot & Murayama, 2008; Park et al., 2016; Ruzek et al., 2016). The PALS examines confidence levels students hold to meet the academic challenges faced by students in elementary and middle school (Midgley et al., 2000). Validity was established through Midgley et al. (1998) through convergent, construct, and discriminant validity from confirmatory factor analysis showing stability over time with good consistency. Convergent validity is found when different measures of a construct have results that are similar, shown by evidence. Construct validity is the degree goal orientation scales associate with other constructs.

Discriminant validity is found when there is evidence of differentiation from other constructs (Midgley et al., 1998).

There were introductory statements that divide the scales into subcategories of (a) personal achievement goal orientation, (b) perception of teacher's goals, (c) perception of goal structure within the classroom, (d) achievement-related beliefs, attitudes, and strategies, and (e) perception of parents and home life (Midgley et al, 2000). There are 94 statements within the instrument. The subcategory numbered questions can be found in Table 3. There are 19 statements for personal achievement goal orientation, 5 statements for perception of teacher's goals, 14 statements for perception of goal structure within the classroom, 44 statements on achievement-related beliefs, attitudes, and strategies, and 22 statements on perception of parents and home life (Midgley et al., 2000).

Table 3

Constructs by Item Number

Construct	Item Number
Personal achievement goal orientation	1, 2, 3, 4, 5, 6, 8, 9, 25, 26, 29, 33, 38, 41, 45, 48, 49, 51, and 55
Perception of teacher's goals	1, 2, 3, 4, and 5
Perception of goal structure within the classroom	59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, and 72
Achievement-related beliefs, attitudes, and strategies	1, 2, 4, 5, 6, 7, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27, 28, 30, 31, 32, 34, 35, 36, 37, 39, 40, 42, 43, 44, 46, 47, 50, 52, 53, 54, 56, 57, and 58
Perception of parents and home life	73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, and 94

The students responded to each statement with a scale: 1 (*not at all true*), 3 (*somewhat true*), or 5 (*very true*) (Midgley et al., 2000). Therefore, the lowest possible score a student could receive was 94, and the highest was 470 depending on self-scoring web-based measures. The instrument was administered to students within their class. Students had the opportunity to have questions read to them within the study, aligning with how the instrument was administered in 1997 (Midgley et al., 1997). The researcher script can be found in Appendix D.

The intended creation of PALS was for students in elementary and middle school students with no mention of the approximate time to complete the instrument within the report within the version published in 2000 (Midgley et al., 2000). The PALS created in 1997 by Kaplan and Midgley (which was later adapted in 2000) took students 40 minutes to complete in class and consisted of 128 items (Kaplan & Midgley, 1997). The PALS (2000) has 94 statements that students respond to regarding their academic self-efficacy. This instrument will be administered during students' English Language Arts or math class. They will have an opportunity for extra time if it takes them longer to complete.

The instrument was scored by the researchers who collected the data. There is no mention of rater training (Midgley et al., 2000). Data collected during the study was secured to protect participant confidentiality. Task goal orientation had Cronbach's alpha between .70 and .80 with sixth grade being .73 and eighth grade being over .81. Ability approach goal orientation was greater than .60 with sixth grade being .62 and eighth grade being .84. The task goal scales have an alpha of .83 (Midgley et al., 1998). Instrument permission was sent home through email and paper version (see Appendix E). The creators of the tool were contacted for permission and consent was given (see Appendix G). One of the creators stated that the instrument is public access, and therefore does not require permission to utilize in this study.

Procedures

Prior to beginning the study, there was approval from the Institutional Review Board (IRB) to ensure students' benefits and research discoveries outweigh the risks to students and their families (Gall et al., 2007). After the IRB approval from the university, the researcher sought approval from the board of external research within the school district, demonstrating the perceived risks and benefits to students, teachers, administrators, and policymakers within the school. The university's IRB approval is in Appendix F. The school district required a gatekeeper who monitors the research in real time, working at the school while study takes place. The gatekeeper assisted the researcher in approaching the teachers who have classes that qualify for the study and ensure that proper administrative procedures were followed according to the approval given by the IRB. The gatekeeper for this study was also an acting assistant principal.

The purpose of the study was to examine the differences in academic self-efficacy scores based on students' classification as a student with or without a documented disability, learning format, and gender among middle school students in an inclusive classroom. The added layer of new discovery comes with the study taking place during a pandemic. To be applicable, teachers must be qualified in their field when teaching general education. The teachers conducting pullout and co-taught services with students that qualify are special education teachers in charge of writing and carrying out students' IEPs.

Teacher recruitment came through an introduction during a staff meeting followed by individual conversations with each potential participant answering questions or clarifying aspects of the study. The script for the staff meeting recruitment presentation can be found in Appendix K. Teachers received a gift card compensation in the amount of $10 for their involvement in the study due to the time taken out of instruction and adaptions made to scheduling to ensure the

study's completion. The teacher consent form can be in Appendix B. The compensation was requested donations from local businesses supporting through gift card donations in addition to purchases made by the lead researcher, which resulted in discounted prices for some gift cards. The letter that was sent to businesses can be found on Appendix I. Two teachers elected not to participate in the study, eliminating their students as potential participants.

After classroom teachers approved, parental consent was requested. The recruitment process first included a statement included in the weekly newsletter sent by the school followed by an email home to each family with the parental consent form and student assent form attached. The statement of recruitment is included in Appendix L. If parents did not respond, there was a telephone follow-up to review the study for a response. The emails, addresses, and phone numbers were provided from the classroom teacher. Students in the class were given a consent form with an explanation of the study, or they had the form directly emailed to their families. Students were aware that the study would measure their self-efficacy and were provided a definition of self-efficacy. Attached to the consent form was a paper with all statements included on the PALS (Midgley et al., 2000). Over half of the parents contacted did not respond. Several parents responded saying they would like for their child not to participate. Student reminders involved a statement that they could withdraw from the study at any time.

The consent form was sent through a paper copy and emailed to parents based on students' learning preferences. Students that were hybrid learners were given a paper copy, followed by an email, and if there was still no response, a phone call. Students that were virtual learners had an email sent to the parents or guardians, followed by a paper copy sent home, and if there was still no response, a telephone communication was made by the researcher. Parents signed the consent form with approval or denial and returned it to the researcher, along with their

child's signature or they emailed their consent and had their child sign the form at school. A follow-up phone communication occurred to parents who had not responded to the study, but the permission to participate must be documented. The student assent and parent consent forms are in Appendices C and H. Five students refused assent and 18 students were absent at the time of the instrument administration.

The consent form was signed by parents (parental consent) and students (assent) if the student chose to take part in the study (see Appendices C and H). Parents' and students' refusal to take part in the study and their responses from the study did not contribute to their grade within the course. They did not miss any academic learning if they refused to participate. The parental consent gave permission to have students respond to the instrument at the end of the semester as well as permission to access their students' IEP (if applicable), learning format elected (virtual or hybrid), ethnicity, grade level, gender, and reading level as determined by the district standardized assessment taken every 3 months. The explanation of the usage of information includes IEP goals to determine if the student's disability affects the assessed subject, identification if the student attended hybrid or online learning the semester of fall 2020, and reading level to determine if the student needed to have the assessment read to them. If the student read below a fourth-grade reading level, they had headphones that read the questions and response choices to them on the assessment if they chose. Students who read below the fourth-grade level who are virtual learners had access to a toolbar that read the questions and prompts to them if they chose.

The causal-comparative study took place through a web-based survey with direct administration from the researcher to ensure consistent distribution for students learning in the hybrid setting. Students who learned in the virtual setting expected to get on the class meeting

and complete the tool with the teacher supervising through a screen-monitoring device. Students were unable to respond to the survey at the same time, rather taken within the same week. The responses were taken during their regularly scheduled class with the intention to minimize disruptions to the school day.

Due to the large number of students, classrooms, and grade levels within the study, the completion of the study took two weeks in its entirety. The researcher explained that the responses to the tool were anonymous, which is why they did not need to put their name on their responses. The responses did not affect their grade or perception of their role as a student. Students were reminded that they could leave the study at any time. Once students' grade level, learning format, disability status, ethnicity, and gender were identified with correlating responses, all other identifiable information was stripped form the data.

The researcher proctored the assessment. The script that the researcher read is found in Appendix D. Students, if they were hybrid learners, who did not provide consent and assent for the study entered a designated location with the teacher who regularly taught in the classroom. Students that did not participate that were hybrid learners were given an alternate assignment. Students that did not provide consent and assent for the study that were virtual were provided with an alternate assignment. Those participating in the study were exempt from the additional assignment. The tool completion was through Google Forms with the questions and answer selections. Students logged in to their student accounts to complete the forms. All the questions were presented on four slides to ensure that students could change their answers throughout the session. The forms required completion to submit. All students had access to extended time in case there was a need for a break. No students that participated in the study utilized the entire 90 minutes; rather, many finished within the first 40 minutes.

The form responses had security through a password in which the researcher is the only individual with access prior to data analysis. Students took the assessment at the end of May, after district and state testing had occurred. Students could not join the study after they or their parents had already refused consent. Disability status, learning format, grade level, ethnicity, and gender were factors that have historically contributed to self-efficacy, which are analyzed within this study (Darling-Hammond, 2015; Lofgran et al., 2015; Usher, 2009). This study examined disability status based on whether a student qualified for an IEP, which can be identified through their registration portal without full access to the details of the student's full IEP documentation. This was part of the parental consent form (see Appendix C). The learning format was disclosed through a student learning in the hybrid or virtual setting. Gender was based on the categories of male or female as found on the student's registration profile for the school. Ethnicity was determined through federal designation on students' school registration. Grade level was listed under students' school profiles. All these factors are disclosed when the parent or guardian gives consent to participate (found in Appendix C).

Gender

This study defined gender as male or female. The parental consent form can be found in Appendix C. The parental gave permission to access the identified gender through school registration. The gender identified during registration determines if the student was a male or female.

Disability Status

Students with disabilities within this study included students that qualified for an IEP. Students that qualified for an IEP have one or more present level(s) of performance two or more grade levels below expectation (IDEA, 2004). Their guardians had provided consent for them to

be evaluated and for them to receive additional service to meet their needs according to their IEP. If the guardian denied for an IEP to be implemented, the student was not identified as a student with a disability (IDEA, 2004). This study did not include students identified as having significant needs based on Colorado state standards of qualifying for Extended Evidence Outcomes on state testing requiring a more restrictive environment over 80% of the time as determined by the data collection process and the members of the IEP team (IDEA, 2004). If a student was not two or more grade levels below performance expectation or their parents or guardians have refused consent for an IEP, they are considered a student without a disability in this study. Permission to access confirmation of students with disabilities is included on the parental consent form in Appendix C.

Learning Format

In the spring of 2021, there were two options of learning for students within the district the study took place. Hybrid learning involved students learning face-to-face two days a week and learning virtually three days a week. Hybrid learners returned to four days a week of in-person learning in March; therefore, they were all learning in-person a majority of the time during this study. Virtual learning included students that learn on the Internet with teachers five days a week. The choice of learning format was chosen by parents or guardians. Permission to access a student's learning format was included in the parental consent form in Appendix C. Students had an alert on their profile created when registering for school; permission to access knowledge if the student has an IEP gave the researcher consent to view the alert. Both formats within this study had inclusive settings involving students with and without disabilities, general education, and special education teachers.

Ethnicity

Families within the district select one or more ethnicities when enrolling to the school district. This was based on a federal and state form that is completed at the time of registration. Options that could be chosen include: Native American, Asian, Black or African American, Latino or Hispanic, White, Native Hawaiian or other Pacific Islander, or two or more races.

Grade Level

Grade level referred to students' age and progress. While in rare circumstance there was retention of students, typically students in sixth grade are between 11 and 12 years old. Students in seventh grade are 12 to 13 years old. Students in eighth grade are 13 to 14 years old.

Data Analysis

The data analysis required 2 two-way ANOVA tests, one for each set of null hypotheses. The dependent variable was students' academic self-efficacy scores. The independent variables were gender (male and female), learning format (virtual and hybrid), and students with or without a documented disability.

This study utilized the International Business Machine's program titled Statistical Package of Social Science (SPSS) Standard Version to analyze information collected through Google Forms. The two-way ANOVA is used when there are two categorically-measured independent variables and a dependent variable that is measured on a continuous scale that is normally distributed (Warner, 2013). There were two independent variables compared in analysis making the two-way ANOVA appropriate with two or more group memberships having the potential to predict the outcome (Warner, 2013). The independent variables were not reliant on each other. The purpose of a two-way ANOVA is to determine the relationship of two independent variables, independently and in combination, on the dependent variable. The

ANOVA determines the effect of interaction of the two independent variables and the main effect of each independent variable through a normal distribution.

The two-way ANOVA examines the statistical significance of the independent variables to the dependent variable (Gall et al., 2007). The variables of gender, disability qualification, and learning format were not dependent on one another. Factor analysis was simultaneous and in interaction with one another. The two-way ANOVA was conducted due to the conditions of the study being natural with no imposed outside influence on responses, making the study parametric (Warner, 2013). The results aided in the understanding of gender, disability qualification, and learning format on students' self-efficacy within an inclusive learning environment during a pandemic.

The two-way ANOVA design has several assumptions that must be met to proceed with analysis. The first assumption is the dependent variable must be an interval or ratio. The PALS utilizes an interval rating for each prompt meeting this criterion in a quantitative form. Data screening will include visual screening of the data set to check for missing data points and inaccuracies. Box and whisker plots were used to check for extreme outliers. The assumption of normality was tested using Shapiro Wilk.

The final assumption is the distribution of population having the same variance analyzed by the Levene's Test for Equality of Error Variance. Partial eta squared was conducted as a post hoc test if significant results are found (Warner, 2013). For the two-way ANOVA to be successful, there must be a population with a normal distribution with a continuous independent variable (Warner, 2013).

To limit Type I error, a Bonferroni correction was used since there are two tests of significance being conducted (Warner, 2013). The calculation for Bonferroni correction typically

uses alpha level of .05 and then divides by the number of significance tests run. For that reason, the alpha level for this study was calculated thus: .05/2 = .025 rounded to .03. Therefore, alpha level is set at $p < .03$.

After ensuring all assumptions were met, a two-way ANOVA was conducted for each research question. The quantitative scale utilized in the Patterns of Adaptive Learning Scales provides a magnitude of measurement for differences between participants and subcategories dividing the overall score for further analysis (Midgley et al, 2000; Warner, 2013). Effect size was reported using partial eta squared as a post hoc Tukey test (Gall et al., 2007). Small effect size was .010, medium effect size ranges from .022 to .059, large effect size is .083 to .138, and very large effect size is .168 (Warner, 2013).

CHAPTER FOUR: FINDINGS

Overview

The current study investigated the differences among academic self-efficacy in students in sixth, seventh, and eighth grade with and without a documented disability, male and female students, and learning virtually or in in-person hybrid settings. This chapter contains the research questions, null hypotheses, and the data analysis results pertaining to the study.

Research Questions

RQ1: Is there a difference among the *academic self-efficacy* scores based on a student's classification as *a student with or without a documented disability* and *gender* among middle school students in an inclusive classroom during a pandemic?

RQ2: Is there a difference among the *academic self-efficacy* scores based on a student's *learning format* (online or in-person hybrid) and *gender* among middle school students in an inclusive classroom during a pandemic?

Null Hypotheses

H$_0$1: There is no significant difference among middle school students' *academic self-efficacy* based on a students' classification as a *student with or without a documented disability* in an inclusive classroom during a pandemic.

H$_0$2: There is no significant difference among middle school students' *academic self-efficacy* between *males and females* in an inclusive classroom during a pandemic.

H$_0$3: There is no significant difference among middle school students' *academic self-efficacy scores* between *males and females* and classification as a *student with or without a documented disability* in an inclusive classroom during a pandemic.

H₀4: There is no significant difference among middle school students' *academic self-efficacy* based on *hybrid or remote learning format* in an inclusive classroom during a pandemic.

H₀5: There is no significant difference among middle school students' *academic self-efficacy* between *males and females* and *hybrid or remote learning format* in an inclusive classroom during a pandemic.

Descriptive Statistics

For the purposes of this study, students with a documented disability were those who qualified for an IEP through Colorado state standards who did not have a cognitive disability which would create a more restrictive, less inclusive environment. Students with an IEP who did not have a cognitive disability were categorized as students with a documented disability ($n = 46$). Students without a documented disability are students who do not have an IEP at the time of the study ($n = 176$). Gender was identified through school enrollment of male ($n = 110$) and female ($n = 112$). Participants who were hybrid learning at the time of the study qualified as students learning in-person four days a week with one day of online learning, while virtual learners had five days a week of online learning. The breakdown of gender and students with and without a documented disability is in Table 1.

The first research question corresponding with the first null hypothesis compared students' academic self-efficacy based on students with and without a documented disability and gender. There were 222 total participants who completed the survey ($n = 222$). Demographic data within the sample that was collected showed 21% ($n = 47$) of participants had a documented disability through an IEP and 79% ($n = 175$) of participants did not have a documented disability. Students learning in the hybrid in-person format consisted of 90% ($n = 200$) of participants, with 10% ($n = 22$) of participants learning entirely online. There is a breakdown of

these groups in Table 2. Students' academic self-efficacy was measured through the PALS by Migley et al. (2000).

PALS uses a 5-point Likert scale to measure self-efficacy with 1 being the lowest (not at all true) and 5 being the highest (very true). The highest score students can receive is 470 with the lowest option being 94 points (Midgley et al., 2000). The mean of self-efficacy score for students with a documented disability ($M = 259.5$, $SD = 33.244$) and the mean self-efficacy score for students without a documented disability ($M = 263.6$, $SD = 29.577$). Female students with a documented disability had a mean score of 251.8 ($M = 251.8$, $SD = 38.581$), and those without a documented disability had a mean score of 262.2 ($M = 262.2$, $SD = 28.799$). Male students with a documented disability had a mean score of 264.9 ($M = 264.9$, $SD = 31.663$), while those without a documented disability had a mean score of 265.4 ($M = 265.4$, $SD = 30.598$). All scores are provided in Table 4.

The second research question and corresponding null hypotheses compared students' academic self-efficacy scores of students learning in the hybrid and remote formats based on student gender. The total participants who completed the survey was 222 ($n = 222$) with 49.5% of participants being male ($n = 110$) and 50.5% of participants being female ($n = 112$). The group breakdowns can be found in Tables 1 and 2. The PALS was used to measure academic self-efficacy scores of the participants. The mean self-efficacy score for female hybrid students ($M = 257.2$, $SD = 30.260$) and the mean self-efficacy score for male hybrid students ($M = 270.6$, $SD = 32.485$) are provided in Table 4. The mean self-efficacy score for female virtual students ($M = 257.9$, $SD = 23.554$) and the mean self-efficacy score for male virtual students ($M = 256.5$, $SD = 19.293$) are provided in Table 4.

In the 2018-2019 school year, the research site had 42% of students that were White,

43% of students that were Hispanic or Latino, 6% of students that were two or more races, 3.5%

of students that were Asian, 2.8% of students that were Black or African American, 1% that were

Native American or Alaska Native, and 0.6% Native Hawaiian or other Pacific Islander. The

participants in this study consisted of 2.3% of students that were Asian, 5% Black or African

American, 41% Hispanic or Latino, 46.8% White, 0.005% Native American, and 0.03% students

with two or more races.

Table 4

Descriptive Statistics for Mean of Self-Efficacy Scores

Gender	Learning Format	Disability Status	Mean	Standard Deviation	N
Male	Hybrid	IEP	277.6	32.9	21
		No IEP	263.6	31.9	72
	Virtual	IEP	248.7	10.0	6
		No IEP	264.2	21.3	11
Female	Hybrid	IEP	248.2	34.7	16
		No IEP	266.2	28.7	84
	Virtual	IEP	270.3	9.9	3
		No IEP	245.4	23.8	9

Results

This section reviews the results by examining the null hypotheses through data screening,

assumptions, and results. A review of the null hypotheses was explained along with descriptive

statistics.

Null Hypothesis One

The first null hypothesis for this research study stated there is no statistically significant difference in middle school students' academic self-efficacy based on a students' classification as a student with or without a documented disability in an inclusive classroom during a pandemic. Students with a documented disability were those who received services through an Individualized Education Program (IEP) in addition to general education services, while those that did not have a documented disability received solely general education services.

Data Screening

The data was downloaded from Google Forms and stored in a password-protected Microsoft Excel spreadsheet for data screening to begin. Upon examination, no duplicates were identified. The sample size for this study exceeded the minimum required sample size of 126 for a two-way ANOVA, assuming a medium effect size at a statistical power of 0.7 at the 0.05 level (Gall et al., 2007). One student completed one out of the four forms, so their responses were excluded from data analysis. There were 222 students who participated in this research study, exceeding the minimum requirement. There were no extreme outliers that needed to be removed during the analysis.

The data was screened for outliers, inconsistencies, and normality. First, the scores were inspected the scores to ensure they were between 94 and 470 points cumulatively per participant and the scores for each rating ranged 1 to 5. A box-and-whisker plot was used to detect outliers. No outliers were found for students with a documented disability (having or not having an IEP) as found in Figure 1.

Figure 1

Box-and-whisker Plot for Self-efficacy Scores on Students with and without IEPs
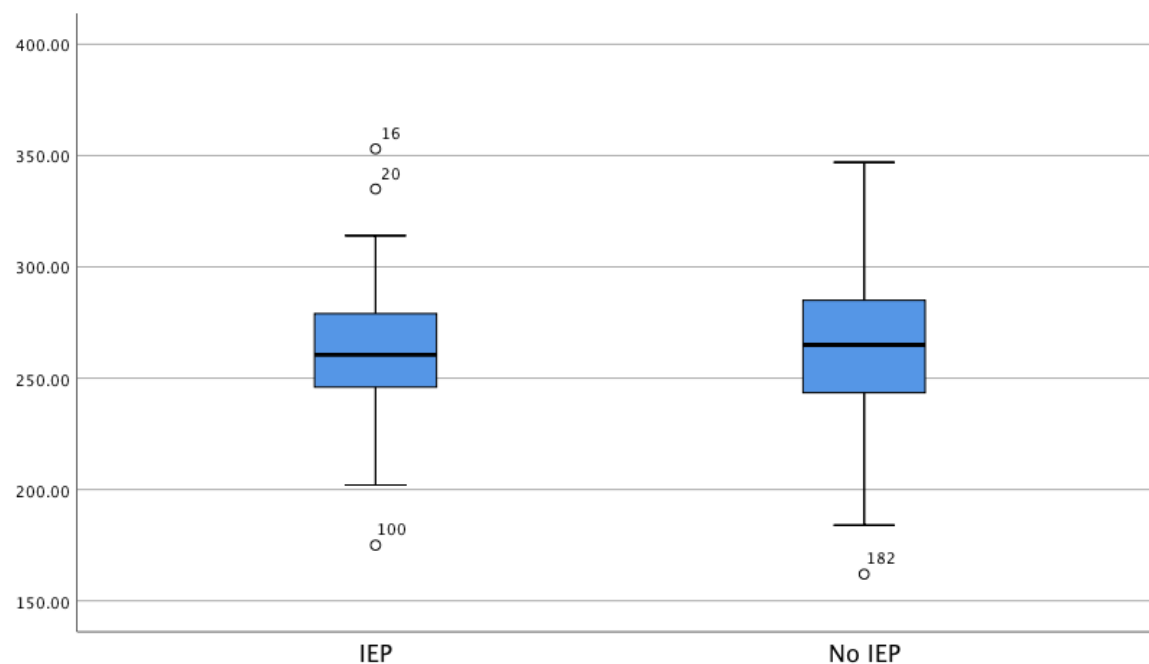
Assumption Tests

There are several assumptions that must be met for a two-way ANOVA to evaluate a null hypothesis. The Sharpiro Wilk *p* value rejects the null if $p < 0.05$ (Gall et al., 2007). In this case, Sharpiro Wilk would not reject the null because the *p* value is greater than 0.05. The *p* value for participants with or without a documented disability is .845 ($p = .845$), which can be found in Table 7. Table 5 shows the normality testing results.

Table 5

Shapiro Wilk Test of Normality on Students' Documented Disabilities

Mode Type	Statistic	Df	Sig.
Disability	0.983	46	0.750
No Disability	0.992	176	0.469

The next assumption tested was the assumption of homogeneity of variance found in Table 8. Levene's test of equality of variance was examined, and no violation was found $F(7,214) = 1.266$, $p = 0.269$ (see Table 6). This indicates that Levene's test is not statistically significant indicating equal variance (Gall et al., 2007).

Table 6

Levene's Test of Equality of Error Variances

	F	df1	df2	Sig.
Academic Self-efficacy	1.266	7	214	.269

Results

A two-way ANOVA was used to analyze null hypothesis one at the alpha $p < 0.05$ level. The effect size was $\eta^2 = 0.038$, which indicated a medium effect when interpreted in terms of Cohen's d (Warner, 2013). The analysis found no significant difference, $F(1, 214) = .038$, $p = .845$, partial $\eta^2 = 34.069$. Approximately 3.8% of the variance in the dependent variable, student classification with or without a documented disability, can be attributed to the presence of the independent variable, academic self-efficacy. See Table 7 results of the ANOVA. The first null hypothesis was not rejected. The first null hypothesis stated there is no significant difference

among middle school students' *academic self-efficacy* based on a students' classification as a

student with or without a documented disability in an inclusive classroom during a pandemic.

Table 7

Test of Between-Subject Effects: Academic Self-Efficacy

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	12896.412	7	1842.345	2.076	.047
Intercept	5183929.29	1	5183929.29	5840.313	.000
Gender	680.958	1	680.958	.767	.382
Disability Status	34.069	1	34.069	.038	.845
Format	865.002	1	865.001	.975	.325
Gender * Disability Status	85.266	1	85.266	.096	.757
Gender * Format	1055.944	1	1055.944	1.190	.277
Disability Status * Format	214.433	1	214.433	.242	.624
Error	189948.871	214	887.612		
Total	15648441.0	222			
Corrected Total	202845.284	221			

Null Hypothesis Two

The second null hypothesis for this research study indicated no statistical significance

among students' academic self-efficacy scores between males and females in an inclusive

classroom during a pandemic. The male or female classification came through federal

designation during students' enrollment. This was accessed through their main profile within the

school's Infinite Campus system.

Data Screening

The data was screened for outliers, inconsistencies, and normality. The researcher first inspected the scores to ensure they were between 94 and 470 points cumulatively per participant and the scores for each rating ranged 1 to 5. A box-and-whisker plot was used to detect outliers. No outliers were found for students' gender (male or female) as found in Figure 2.

Figure 2

Box-and-whisker Plot for Self-efficacy Scores on Males and Females
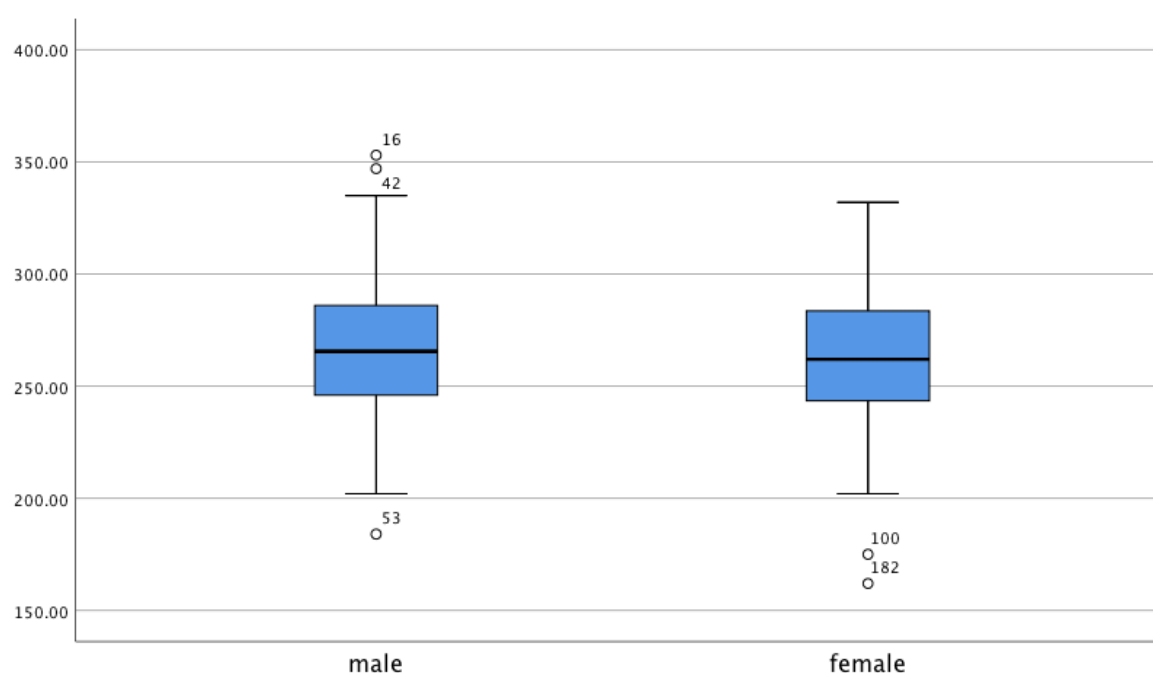
Assumption Tests

There are several assumptions that must be met for a two-way ANOVA to evaluate a null hypothesis. Normality of distributions for the dependent variables was examined using the Sharpiro Wilk (Gall et al., 2007; Warner, 2008). Sharpiro Wilk would not reject the null because the p value is greater than 0.05. The p value for participants' gender is .382 ($p = .382$), which can be found in Table 7. Table 8 shows the normal distribution of gender using Sharpiro Wilk Test of Normality.

Table 8

Shapiro Wilk Test of Normality on Students' Gender

Gender	Sharpiro Wilk		
	Statistic	Df	Sig.
Male	0.988	110	0.470
Female	0.985	112	0.248

The next assumption tested was the assumption of homogeneity of variance found in Table 8. Levene's test of equality of variance was examined, and no violation was found $F(7,214) = 1.266$, p = 0.269 (see Table 6). This suggests that Levene's test is not statistically significant, indicating equal variance (Gall et al., 2007).

Results

The second null hypothesis states that there is no statistical significance in regards to students' academic self-efficacy based on gender in an inclusive classroom during a pandemic in this study. The analysis found no significant difference, $F(1, 214) = .767$, $p = .382$, partial $\eta^2 = 680.958$. A two-way ANOVA was used to analyze this hypothesis at the alpha $p < 0.05$ level. The result of the ANOVA analysis was not significant, $F(1, 222) = 680.958$, $p = 0.767$). See Table 7 results of the ANOVA. Null hypothesis two was not rejected.

Null Hypothesis Three

The third null hypothesis stated there is no significant difference among middle school students' academic self-efficacy scores between males and females and classification as a student with or without a documented disability in an inclusive classroom. Gender was determined through student enrollment, while students with a documented disability were served through having IEP while those without did not have an IEP.

Data Screening

Participants' gender and disability status did not have any significant outliers as seen in Figures 1 and 2. There were no repeated responses to the instrument. The minimum requirement for participants was met and one incomplete response was removed from the dataset. Therefore, there were no outliers within the dataset for gender and disability status.

Assumption Tests

There are several assumptions that must be tested for a two-way ANOVA to evaluate a null hypothesis. Normality of distributions for the dependent variables was examined using the Sharpiro Wilk (Gall et al., 2007; Warner, 2008). Sharpiro Wilk would not reject the null because the p value is greater than 0.05. The p value for participants' gender and disability qualification is .757 ($p = .757$), which can be found in Table 7.

Levene's test of equality of variance was examined, and no violation was found, $F(1,214) = 1.266$, $p = 0.269$ (see Table 6). This suggests that Levene's test is not statistically significant, indicating equal variance (Gall et al., 2007).

Results

The third null hypothesis examined stated that gender and disability status do not have statistical significance on students' academic self-efficacy. The analysis found significant difference, $F(1, 214) = .096$, $p = .757$, partial $\eta^2 = 85.266$. A two-way ANOVA was used to analyze this hypothesis at the alpha $p < 0.05$ level. The result of the ANOVA analysis was not significant, $F(1, 222) = 85.266$, $p = 0.096$. See Table 9 results of the ANOVA. Null hypothesis three was not rejected.

Null Hypothesis Four

The fourth null hypothesis stated there is no statistically significant difference among middle school students' academic self-efficacy based on hybrid or remote learning format in an inclusive classroom during a pandemic. Remote learning is students learning entirely online with no face-to-face instruction. Hybrid learning format involved students learning face-to-face a majority of their week with some online learning as well.

Data Screening

There were no repeated responses given by participants. One set of data was removed due to an incomplete response. A box-and-whisker plot was used to detect outliers. No outliers were found for students' learning format (hybrid or remote) as found in Figure 3.

Figure 3

Box-and-whisker Plot for Self-efficacy Scores on Hybrid and Remote
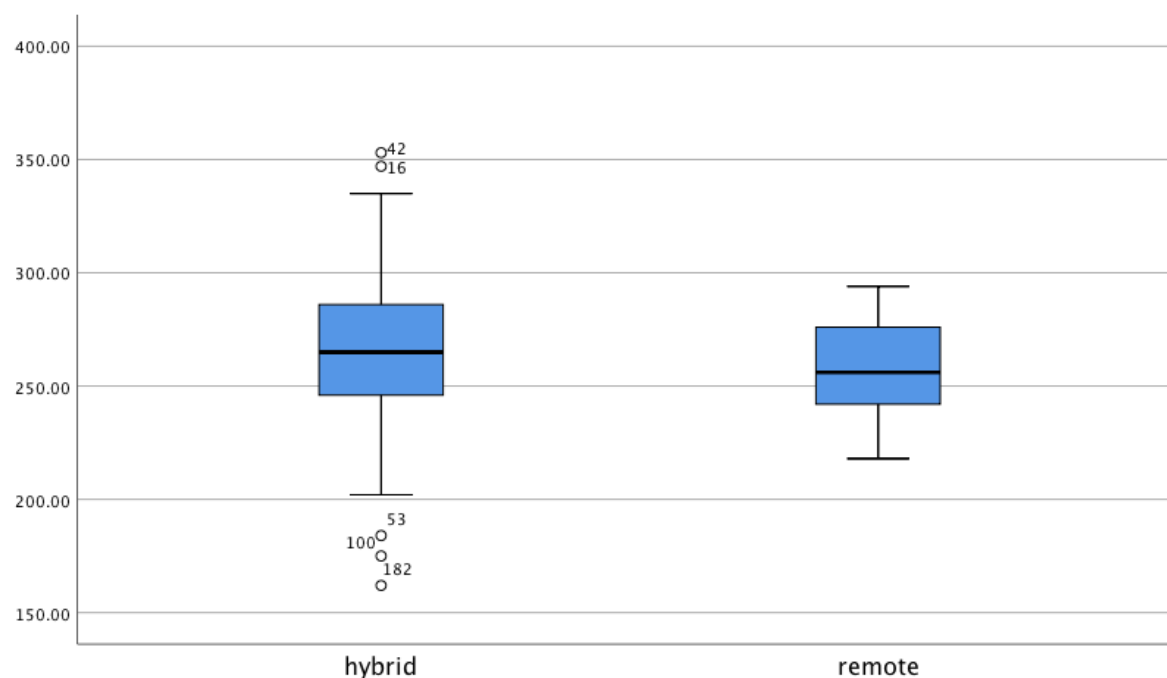
Assumption Tests

There are several assumptions that must be tested for a two-way ANOVA to evaluate a null hypothesis. Normality of distributions for the dependent variables was examined using the Sharpiro Wilk (Gall et al., 2007; Warner, 2008). Sharpiro Wilk would not reject the null because the *p* value is greater than 0.05. The *p* value for learning format (hybrid or virtual) is .325 (*p* = .325), which can be found in Table 7. The assumption of normality of distributions was confirmed in Table 9.

Table 9

Shapiro Wilk Test of Normality on Students' Learning Format

Learning Format	Statistic	Df	Sig.
Hybrid	0.993	193	0.556
Virtual	0.962	29	0.364

The next assumption tested was the assumption of homogeneity of variance. Levene's test of equality of variance was examined, and no violation was found, $F(7,214) = 1.266$, $p = 0.269$ (see Table 6). This suggests that Levene's test is not statistically significant, indicating equal variance (Gall et al., 2008).

Results

The fourth null hypothesis examined if there is statistical significance in students' learning format (hybrid or virtual) within an inclusive setting during a pandemic. The analysis found no significant difference, $F(1, 214) = .325$, $p = .975$, partial $\eta^2 = 865.001$. Utilizing a two-way ANOVA at the alpha $p < 0.05$, the results demonstrate a lack of significance, $F(1, 222) = 865.001$, $p = 0.975$. The null hypothesis was not rejected.

Null Hypothesis Five

The last null hypothesis stated that there was no significant difference among middle school students' academic self-efficacy between males and females and hybrid or remote learning format in an inclusive classroom during a pandemic. Gender is defined through students' enrollment from the school. Learning format within this study consisted of students learning entirely online five days a week if they were virtual or learning five days a week face-to-face with one day of online learning if they were hybrid.

Data Screening

Data screening sought outliers within the data through a box and whisker plot. The box and whisker plot with learning format and gender did not identify any outliers. These are found in Figures 2 and 4. There were no repeated responses. One incomplete response was removed, and there was still a viable amount of responses to the instrument, totaling 222 completed responses.

Assumption Tests

Normality of distributions for the dependent variables was examined using the Sharpiro Wilk (Gall et al., 2007; Warner, 2008). Sharpiro Wilk would not reject the null because the *p* value is greater than 0.05. The *p* value for learning format (hybrid or virtual) and gender (male or female) is .277 ($p = .277$), which can be found in Table 7. The Shapiro Wilk test for gender is found on Tables 8 and 9.

The next assumption tested was the assumption of homogeneity of variance. Levene's test of equality of variance was examined, and no violation was found, $F(7,214) = 1.266$, $p = 0.269$ (see Table 6). This suggests that Levene's test is not statistically significant, indicating equal variance (Gall et al., 2007).

Results

The final null hypothesis stated that there is no significant difference among middle school students' academic self-efficacy between males and females and hybrid or remote learning format in an inclusive classroom during a pandemic. The analysis did not find a significant difference, $F(1, 214) = .277$, $p = 1.190$, partial $\eta^2 = 1055.944$. A two-way ANOVA at alpha $p < 0.05$ demonstrates a lack of significance, $F(1, 222) = 1055.944$, $p = 1.190$. The null hypothesis was not rejected.

In summary, there was no statistical significance among students' gender and disability status in combination or in isolation. Gender did have statistical significance within this study on students' academic self-efficacy. Students learning in hybrid and remote settings did not have a statistical significance.

CHAPTER FIVE: CONCLUSIONS

Overview

This chapter contains a summary of the research conducted to compare differences in students' academic self-efficacy based on gender, learning format, and whether or not students have a documented disability. This chapter provides a discussion of the research questions, the findings of the analysis, and how they relate to the review of literature. Additionally, the implications of this study, its limitations, and recommendations for future research are also presented.

Discussion

The purpose of this quantitative, causal-comparative study was to determine if there was significance among students' gender, learning format, and disability qualification status within the inclusive environment during a pandemic. The current study was intended to build upon the literature that already exists regarding inclusion while adding to student voices (King-Sears & Strogilos, 2020). There is also intentionality in adding to the limited research regarding the impact of the COVID-19 pandemic has had on education (Ma et al., 2021).

Students with and without a Documented Disability

The first null hypothesis examined if there was statistical significance on students' academic self-efficacy, as measured by the PALS completed by students, on students with and without a documented disability. To measure academic self-efficacy, students in sixth through eighth grade were given a survey to complete in a Colorado middle school with a Likert scale of 1 through 5. A two-way ANOVA was conducted at an alpha level of $p < 0.05$. The analysis results indicate that there was statistical significance at a 95% confidence level, causing the researcher to reject the null hypothesis. The effect size for this was medium. Results indicate that

having a documented disability, gender and learning format did not have a significant effect on students' academic self-efficacy.

These findings add to the field through previous mixed findings of students' academic self-efficacy scores in relation to their relation to a documented disability. Los and Schweinle (2019) found that students who experienced failing grades at schools have a low self-efficacy, while those with good grades find themselves with higher scores. Klassen and Lynch (2007) found that students with learning disabilities had lower self-efficacy than their same-aged peers without an IEP. Alternatively, students that may struggle with academic content have been found to have higher self-efficacy than their actual performance (Kaarakainen et al., 2018). Students with documented disabilities in seventh and eighth grades were also found to have a higher self-efficacy in co-teaching inclusive environments, very similar to their same-aged peers' responses (King-Sears & Strogilos, 2020).

The findings in this study indicate there is no significant difference between students with or without a documented disabilities' academic self-efficacy. This supports some previous studies, while contradicting others. While these results look similar to that of Kaarakainen et al. (2018), Klassen and Lynch (2007) and Los and Schweinle (2019), none of these studies occurred during the pandemic. The effects of the COVID-19 pandemic within the realm of education require further investigation. A study in China during the pandemic found that there was an increase of post-traumatic stress disorder and depression in children in elementary school. That number significantly increased for students in middle school (Ma et al., 2021). The pandemic also played a negative role in adult women self-efficacy scores resulting in increased depression due to social media comparisons increasing compared to male counterparts (Hou et al. 2020).

Gender

The second null hypothesis of this study examined the significance of gender within students' academic self-efficacy scores. These findings indicate no statistical significant difference among males and females, which support and contradict past studies examining gender within the educational setting. Harvey et al. (2016) conducted a study with middle school students examining gender and income. Their findings indicate that income had statistical significance, but gender did not (Harvey et al., 2016). Gender also was found not to have a direct effect on qualification for special education services in students in third through fifth grade (Kvande et al., 2018). Examining performance based tests and utilizing a habitat questionnaire there were no findings that self-efficacy differed among genders in 12 to 22-year-old Finnish students (Kaarakainen et al., 2018). Krammer et al. (2018) found that collective self-efficacy in inclusive environments was more of a telling factor relating to success in students than factors such as race, gender, and years of experience by the teacher.

Alternatively, Bussey and Bandura (1999) found that gender heavily played into self-efficacy. They expressed that much of society is gender-typing, creating a high cultural differentiation between male and female expectations. According to Bussey and Bandura (1999), many females feel inferior to males and constantly must re-define their role within society when going outside of the female traditional expectations. This finding counteracts the findings of this study, which could be a result of the age difference of middle school in comparison to adult women as well as the increased involvement of women within the science, technology, engineering and math fields (Quigley & Herro, 2016). A study that examined gender roles within levels of depression during the COVID-19 pandemic found that women are more susceptible to depression due to increased time on social media, when compared to their male counterparts (Hou et al., 2020).

Gender and Disability

The third null hypothesis examined the effects of gender and disability status on students'

academic self-efficacy in an inclusive middle school environment. The findings indicate that

gender and disability status are not significant indicators of high or low self-efficacy. The

combination of the two variables was closer to significance than gender alone. These findings are

similar to that of Hampton and Mason's (2003) examination of high school students who took a

self-efficacy measure and found no direct effect on students with or without learning disabilities

or gender. These services were entirely pull out which lacked inclusion, but involved students

with learning disabilities, which is like the present study.

Learning Format

The fourth null hypothesis examined the significance of virtual and in-person hybrid

learning within an inclusive setting. It should be noted that there was a significant difference in

sample sizes between these two groups. Ultimately, it was found that there was no significance

among the two groups comparing the responses that were received. Students who have more

support learning virtually in their home environment are found to have higher academic

achievement in reading starting in kindergarten (Bao et al., 2020). It should also be noted that

Limbers (2020) found that middle and high school parents in Texas were more supportive of the

in-person hybrid option compared to the virtual learning. Virtual students are less likely to

persist in comparison to those that are learning in-person hybrid, which could have various

implications for students and families (Hart et al., 2019).

Learning Format and Gender

The last null hypothesis examined the significance of students' gender and learning

format on students' academic self-efficacy. There was no statistical significance found; however,

this could be due to the low sample size of students learning from a virtual format. There is limited research relating to the COVID-19 pandemic's vast change of learning environment and its effects on students with and without disabilities. Past studies, such as Fitzpatrick et al. (2020), that compared virtual to in-person learning found that there are negative, large, long lasting effects on mathematics and English Language Arts that occurs over time. A similar study that involved students with and without a documented disability found that students with documented disabilities required additional virtual sessions to understand the content (Bouck et al., 2019).

Historically, it has been suggested that virtual options of learning should be considered when there is a public health concern (Qualls et al., 2017). This was also suggested by the CDC (2020a) during the COVID-19 pandemic due to the uncertainties of long-term effects. However, it is unclear how virtual and hybrid in-person learning impact students' academic self-efficacy with or without a documented disability and gender.

Implications

There is limited research around the effects of the COVID-19 pandemic on education. This research contributes a small piece of the puzzle to help education improve for the better in the future. Recognizing that there is a significant difference in students with and without a documented disability in academic self-efficacy can assist teachers, administrators, and other individuals that make decisions for schools be intentional about ways to increase academic self-efficacy. Self-efficacy examines various aspects such as vicarious experience, verbal persuasion, physiological arousal, and mastery experience (Bandura, 1997). These factors could have been influenced within the transitions that the pandemic brought impacting students with documented disabilities more than those without.

Those that have spent more time delving into their content during a traditional year have been found to have a higher self-efficacy, which could contribute to growth in these gaps (Gibson & Dembo, 1984). Additionally, self-efficacy has been found to be a strong predictor of controllability (Sheeran et al., 2002). The spring of 2020 to the spring of 2021 lacked controllability due to the COVID-19 pandemic could have some populations struggling with the instability that was a result of the public health crisis (Hou et al., 2020).

Parental involvement is found to be a factor within self-efficacy. The more parental involvement a student experiences within the school setting, the higher their self-efficacy (Affuso et al., 2017). Socioeconomic status has been found to impact students' academic achievement as well (Domina et al., 2018). However, during the COVID-19 pandemic unemployment rose to 14.7% impacting many families with school aged children and making it impossible for them to help within the educational setting (Matthay et al., 2021). Parents of children attending public school heavily increased their time spent at home engaging in learning activities while resources such as food and internet access were scarce. This was especially hard on individuals with less than a high school degree who had 23.3% more unemployment than those with a high school degree or higher and spent more time engaged in academic content to help their children (Bansak & Starr, 2021). Future studies should examine the correlation between parents' education as it pertains to students with and without disabilities.

While examining the impact in significance of students' academic self-efficacy during the COVID-19 pandemic it is essential to recognize the factors relating to school at that time. The rise in unemployment, increase in changed structures, and shift to virtual learning even during the face-to-face school day have multiple layers. This study sheds light on the importance of providing students with a documented disability additional support to increase academic self-

efficacy such as opportunities for more direct instruction on content area (Gibson & Dembo, 1984). The gap in students' perceived academic self-efficacy from this study emphasizes the need for continued intervention for students with documented disabilities within content knowledge, classroom support, as well as home and community environments. Students should be given opportunities in which they feel in control of the outcome (Sheeran et al., 2002).

In times of uncertainty, supports and options should increase for students with documented disabilities to not hinder their growth within academic self-efficacy. Lastly, families must be provided with resources to support in accessing educational content through the internet, a stable food source, and opportunities to get involved within school activities (Matthay et al., 2021). The PALS had students respond to their home and school environments, rating themselves on their perceived self-efficacy to determine the overall score. Students living in stable environments with ample opportunity for intervention and support have the ability to increase engagement in school (Sheeran et al., 2002). Students with a documented disability require additional levels of support as demonstrated through this study.

Limitations

This study is non-experimental and therefore has weak internal validity from the inability to draw direct connections to the variables; rather, it is an observation. However, due to the study taking place in the field, the natural occurrences of events and behaviors can strengthen the internal validity (Warner, 2013). Students in this study were identified as qualifying for a disability, but their categorized disability was not specified to protect their identity. In the future, studies may want to examine self-efficacy within a co-taught classroom for students with various disabilities such as specific learning disability. Specifying the disability would increase the external validity for those wanting to apply the study's results to their own population.

Another limitation was parental consent and student assent limiting the involvement of students within the study. Some parents expressed concerns with this study occurring after district and state testing and refused participation for that reason. The 663 families that were invited to participate in this study provided parental consent to 222 students. Over half of the parents and guardians who received communication to participate did not respond to the request. The study is considered low risk; therefore, it would have been possible to seek IRB approval for students' involvement without parental consent and assent (Gall et al., 2007). This would increase the study's internal validity in the form of increasing the sample size and showing the true diversity of the participants and how that affects their self-efficacy. The school district required parental consent and student assent for family protection rather than electing for families to opt out if they did not want to participate.

There was less participation from students who were entirely virtual than those who were learning in the hybrid in-person setting. This limits the results because it is unclear of the effects of student self-efficacy on students that are learning entirely online during the pandemic. This study did not uncover the effects that virtual learning has in comparison to in-person learning, but this could be something that future research explores in depth. Alternatively, there were more students that participated in this study that had documented disabilities, which could be a result of the lead researcher having a relationship with the families of students with a documented disability.

The last limitation within the study considers the status of the United States at the time of the study. The COVID-19 outbreak occurred one year before data collection took place. Many students attended school remotely for short of one semester with slow integration in the fall. The study occurred in May 2021 when hybrid learning translated to four days a week of in-person

learning with one day of online learning, while virtual learners continued to be online five days a week. This could affect the results in that students that previously would have had an entire semester of a co-taught environment did not have that due to the integration of back to school after virtual learning. While some schools attended the entire 2020-2021 school year in-person, others did not attend in person at all. There could be benefit in pursing information comparing the learning formats within the school year. The pandemic could also have influenced the results of students' self-efficacy. The impact of virtual learning during COVID-19 are still being uncovered on an academic, social, and emotional level.

Recommendations for Future Research

Future research can start by categorizing students with disability by their disability category. There may need to be an increase in sample size to do this without identifying participants' identities. These categories can demonstrate differences among self-efficacy within specific disability type as well as the influence that race and ethnicity play on those disabilities. As more information about the COVID-19 pandemic unfolds there may be correlation with certain groups and increased risk for the virus. The impact of students that learned remotely during the pandemic is still unknown due to the small sample size of students that were learning remotely.

Gender is not the only factor that impacts students within an inclusive world. Socioeconomic status, which is often determined through qualification for free or reduced lunch prices, has shown to impact students' academic achievement as well (Domina et al., 2018). Henry et al. (2020) found that not only is socioeconomic status a factor in student achievement, but race is as well. A longitudinal study of a group of students that began in kindergarten and ended when they were in eighth grade found that even when students that are Black and White

were in the same socioeconomic group, those that were Black under-performed in comparison to their White peers. Students that were from low socioeconomic groups in addition to being students that were Black were the lowest performing (Henry et al., 2020). This study suggests that there needs to be additional research not only for students' socioeconomic status and race, but also taking into account the role that gender plays as well.

The limited responses from students learning in a virtual format makes the results unclear. This study also focused solely on academic self-efficacy, but future studies could examine the academic achievement of students learning from the virtual format. Bouck et al. (2018) found that students that learn in a virtual environment can learn the information but lack the ability to retain it over time. Due to the vast nature of virtual learning and lack of structure, that may have impact on students and teacher as well (Archambault et al., 2016).

A meta-analysis of 101 studies focusing on socioeconomic status for children in elementary and middle school conducted by Dietrichson et al. (2017) found that students that are considered in the low range of socioeconomic status performed worse on standardized testing in math and literacy. Despite growing in the two content areas with interventions conducted by the school, the growth did not compensate for the gaps in achievement in comparison to students in the middle or high socioeconomic class (Dietrichson et al., 2017). Future studies should examine the impact that low socioeconomic status has on student self-efficacy, particularly in relation to the pandemic as families that qualify free or reduced lunch typically have an increased fight against hunger and obesity (Joyce et al, 2018). Students that receive financial assistance for lunch programs also found to have an increased correlation with identifying as a student with a disability through an IEP (Domina et al., 2018). Some students asked for clarification around questions regarding living conditions, potentially indicating that there could be clarification

around that subarea. This study was unable to access the impact that free or reduced lunch prices play in students' academic self-efficacy.

Another consideration for future research could involve examining the practices of co-teaching at different levels and the effects of student academic self-efficacy. Co-teaching is commonly used at the secondary level making high school an appropriate next step for a study followed by elementary schools (DeMartino, & Specht, 2018). Along with a different level, conducting this study at a different time may yield different results. The transition from traditional schooling to virtual schooling and back to traditional schooling has created an environment that has unknown impacts on students at this point. This study also occurred at the end of the year with district and state testing occurring within the same month. This study can be repeated after the effects of the COVID-19 pandemic have stabilized students' academic, social, and emotional needs.

This study examined the effects of academic self-efficacy of students learning within an inclusive environment during a pandemic. The areas of potential influence that were examined included students with and without a documented disability, gender, and learning format. The only statistically significant findings on academic self-efficacy was having a documented disability, which found to negatively impact students' academic self-efficacy. This is contrary to findings which have previously indicated that gender and learning format negatively impacts students' self-efficacy (Bandura, 1997; Fitzpatrick et al., 2020). The COVID-19 pandemic requires further research to uncover the effects on students, particularly students' academic self-efficacy when they have a documented disability to determine if this is generalizable across settings. Additionally, school personnel must examine ways in which they can improve students'

academic self-efficacy and support families through times of crisis, such as a pandemic, avoiding

growing gaps in the self-efficacy of students with disabilities in inclusive settings.

REFERENCES

Affuso, G., Bacchini, D., & Miranda, M. C. (2017). The contribution of school-related parental
monitoring, self-determination, and self-efficacy to academic achievement. *The Journal
of Educational Research, 110*(5), 565-574. doi:10.1080/00220671.2016.1149795

Aiello, A. E., Murray, G. F., Perez, V., Coulborn, R. M., Davis, B. M., Uddin, M., Shay, D. K.,
Waterman, S. H., & Monto, A. S. (2010). Mask use, hand hygiene, and seasonal
influenza-like illness among young adults: a randomized intervention trial. *The Journal of
Infectious Diseases, 201*(4), 491-498.

Alivernini, F., Manganelli, S., & Lucidi, F. (2018). Personal and classroom achievement goals:
Their structures and relationships. *Journal of Psychoeducational Assessment, 36*(4), 354-
365. doi:10.1177/0734282916679758

Almutairi, K. M., Al Helih, E. M., Moussa, M., Boshaiqah, A. E., Saleh Alajilan, A., Vinluan, J.
M., & Almutairi, A. (2015). Awareness, attitudes, and practices related to coronavirus
pandemic among public in Saudi Arabia. *Family & Community Health, 38*(4), 332-340.

Amram, M. B., & Davidovitch, N. (2021). Teachers' attitudes towards e-teaching during
COVID-19. *Laplage Em Revista, 7*(2), 13-32. doi:10.24115/S2446-6220202172678p.13-
32

Archambault, L., Kennedy, K., & Freidhoff, J. R. (2016). Accountability for students in K-12
online learning: Perspectives from Michigan stakeholders and beyond. *Online
Learning*, *20*(3), 126-139.

Averill, O. H., Rinaldi, C., & USEL Collaborative. (2011). Multi-tier system of supports
(MTSS). *District Administration*, *48*(8), 91-95.

Baker, E. T., Wang, M. C., & Walberg, H. J. (1994). The effects of inclusion on learning. *Educational Leadership*, *52*(4), 33-35.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory.* Prentice Hall.

Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist, 44*(9), 1175-1184. doi:10.1037/0003-066X.44.9.1175

Bandura, A. (1997). *Self-efficacy: The exercise of control.* Worth Publishers.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, *52*(1), 1-26. doi:10.1146/annurev.psych.52.1.1

Bandura, A. (2002). Social cognitive theory in cultural context. *Applied Psychology*, *51*(2), 269-290.

Bandura, A. (2012). On the functional properties of perceived self-efficacy revisited. *Journal of Management, 38*(1), 9-44. doi:10.1177/0149206311410606

Bansak, C., & Starr, M. (2021). Covid-19 shocks to education supply: How 200,000 U.S. households dealt with the sudden shift to distance learning. *Review of Economics of the Household, 19*(1), 1-90. https://doi.org/10.1007/s11150-020-09540-9

Barrios, L. C., Koonin, L. M., Kohl, K. S., & Cetron, M. (2012). Selecting nonpharmaceutical strategies to minimize influenza spread: the 2009 influenza A (H1N1) pandemic and beyond. *Public Health Reports, 127*(6), 565-571.

Bao, X., Qu, H., Zhang, R., & Hogan, T. P. (2020). Modeling reading ability gain in kindergarten children during COVID-19 school closures. *International Journal of Environmental Research and Public Health*, *17*(17), 6371.

Bergey, B. W., Ketelhut, D. J., Liang, S., Natarajan, U., & Karakus, M. (2015). Scientific inquiry self-efficacy and computer game self-efficacy as predictors and outcomes of middle school boys' and girls' performance in a science assessment in a virtual environment. *Journal of Science education and Technology*, *24*(5), 696-708.

Bouck, E. C., Park, J., Maher, C., Levy, K., & Cwiakala, K. (2019). Acquiring the skill of identifying fractions through the virtual-abstract framework. *Journal of Developmental and Physical Disabilities, 31(*4), 435-452.

Bouck, E. C., Park, J., Shurr, J., Bassette, L., & Whorley, A. (2018). Using the virtual–representational–abstract approach to support students with intellectual disability in mathematics. *Focus on Autism and Other Developmental Disabilities, 33*(4), 237-248.

Bradley, D. F., & Fisher, J. F. (1995). The inclusion process: Role changes at the middle level. *Middle School Journal*, *26*(3), 13-19.

Bray, L. E., & Russell, J. L. (2018). The dynamic interaction between institutional pressures and activity: An examination of the implementation of IEPs in secondary inclusive settings. *Educational Evaluation and Policy Analysis*, *40*(2), 243-266.

Brendle, J., Lock, R., & Piazza, K. (2017). A study of co-teaching identifying effective implementation strategies. *International Journal of Special Education*, *32*(3), 538-550.

Burgstahler, S. (2015). Opening doors or slamming them shut? Online learning practices and students with disabilities. *Social Inclusion*, *3*(6), 69-79.

Bussey, K., & Bandura, A. (1999). Social cognitive theory of gender development and differentiation. *Psychological Review*, *106*(4), 676.

Carty, A., & Farrell, A. M. (2018). Co-teaching in a mainstream post-primary mathematics classroom: An evaluation of models of co-teaching from the perspective of the teachers. *Support for Learning*, *33*(2), 101-121.

Cavanaugh, C., Gillan, K. J., Kromrey, J., Hess, M., & Blomeyer, R. (2004). *The effects of distance education on K-12 student outcomes: A meta-analysis.* Learning Point Associates. https://files.eric.ed.gov/fulltext/ED489533.pdf

Centers for Disease Control and Prevention. (2020a). *Cases in the U.S.* Retrieved August 15, 2020, from https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html

Centers for Disease Control and Prevention. (2020b). *Considerations for schools: Operating schools during COVID-19*. Retrieved May 19, 2020, from https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/schools.html

Centers for Disease Control and Prevention. (2020c). *Preparing K-12 school administrators for safe return to school in fall 2020*. Retrieved August 1, 2020, from https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/prepare-safe-return.html

Chandler-Olcott, K., & Hinchman, K. (2015). Literacy co-teaching with multi-level texts in an inclusive middle grade humanities class: A teacher-researcher collaboration. *Journal of Inquiry and Access in Education, 6(*3), 42-63. https://digitalcommons.buffalostate.edu/jiae/vol6/iss3/3

Ciampa, K., & Gallagher, T. (2016). Collaborative inquiry and vertical team teaching: Implications for literacy instruction. *Teacher Educator, 51*(2), 153–174. https://doi.org/10.1080/08878730.2016.1152156

Cleary, T. J., & Kitsantas, A. (2017). Motivation and self-regulated learning influences on middle school mathematics achievement. *School Psychology Review*, *46*(1), 88-107.

Colorado Department of Education. (2017). 2016-2017 Pupil membership: Preschool through 12th grade race/ethnicity and gender by district & county. https://www.cde.state.co.us/2017-18pupilmembership

Colorado Department of Education. (2020, December 15). *News release - Preliminary data shows 3.3% decrease in 2020 school enrollment with biggest drop in early grades*. https://www.cde.state.co.us/communications/newsrelease2020enrollment

Cook, L., & Friend, M. (1995). Co-teaching: Guidelines for effective practice. *Focus on Exceptional Children, 28*(2), 1-12

Crockett, J. B., & Kauffman, J. M. (2013). *The least restrictive environment: Its origins and interpretations in special education*. Routledge.

Darling-Hammond, L. (2015). *The flat world and education: How America's commitment to equity will determine our future*. Teachers College Press.

De Boer, H., Bosker, R. J., & van der Werf, M. P. (2010). Sustainability of teacher expectation bias effects on long-term student performance. *Journal of Educational Psychology, 102*(1), 168.

Dietrichson, J., Bøg, M., Filges, T., & Jørgensen, A. K. (2017). Academic interventions for elementary and middle school students with low socioeconomic status: A systematic review and meta-analysis. *Review of Educational Research, 87*(2), 243-282. https://doi.org/10.3102/0034654316687036

Demanet, J., & Van Houtte, M. (2019). Socioeconomic status, economic deprivation, and school misconduct: An inquiry into the role of academic self-efficacy in four European cities. *Social Psychology of Education, 22*(1), 1-22.

DeMartino, P., & Specht, P. (2018). Collaborative co-teaching models and specially designed instruction in secondary education: A new inclusive consultation model. *Preventing School Failure: Alternative Education for Children and Youth*, *62*(4), 266-278.

Deno, S., Murayama, G., Espin, C., & Cohen, C. (1990). Educating students with mild disabilities in general education classrooms: Minnesota alternatives. *Exceptional Children, 57,* 150-161.

Domina, T., Pharris-Ciurej, N., Penner, A. M., Penner, E. K., Brummet, Q., Porter, S. R., & Sanabria, T. (2018). Is free and reduced-price lunch a valid measure of educational disadvantage? *Educational Researcher, 47*(9), 539–555. https://doi.org/10.3102/0013189X18797609

Dorn, E., Hancock, B., Sarakatsannis, J., & Viruleg, E. (2020). *COVID-19 and student learning in the United States: The hurt could last a lifetime*. McKinsey & Company.

Dziuban, C. D., Hartman, J. L., & Moskal, P. D. (2004). Blended learning. *Educause Center for Applied Research Bulletin*, 2004(7).

Earle, J. E., & Fraser, B. J. (2017). Evaluating online resources in terms of learning environment and student attitudes in middle-grade mathematics classes. *Learning Environments Research*, *20*(3), 339-364.

Egalite, A. J. (2019). Peers with special educational needs and students' absences. *Educational Studies, 45(*2), 182-208.

Ekmekci, A., Corkin, D., & Papakonstantinou, A. (2015, April). Technology use of mathematics teachers at urban schools. In *The 2015 Annual Meeting of AERA*.

Embury, D. C., & Kroeger, S. D. (2012). Let's ask the kids: Consumer constructions of co-teaching. *International Journal of Special Education*, *27*(2), 102-112.

Epson, E. E., Zheteyeva, Y. A., Rainey, J. J., Gao, H., Shi, J., Uzicanin, A., & Miller, L. (2015). Evaluation of an unplanned school closure in a Colorado school district: implications for pandemic influenza preparedness. *Disaster Medicine and Public Health Preparedness, 9*(1), 4-8.

Elliot, A. J., & Murayama, K. (2008). On the measurement of achievement goals: Critique, illustration, and application. *Journal of Educational Psychology*, *100*(3), 613.

Ewing, L., & Cooper, H. B. (2021). Technology-enabled remote learning during COVID-19: Perspectives of Australian teachers, students and parents. *Technology, Pedagogy and Education,* 1-17. https://doi.org/10.1080/1475939X.2020.1868562

Faherty, L. J., Schwartz, H. L., Ahmed, F., Zheteyeva, Y., Uzicanin, A., & Uscher-Pines, L. (2019). School and preparedness officials' perspectives on social distancing practices to reduce influenza transmission during a pandemic: Considerations to guide future work. *Preventive Medicine Reports*, *14*, 100871.

Federal Register, Volume number 86 (March 4, 2021) (to be codified at F.R. No. 41).

Fitzpatrick, B. R., Berends, M., Ferrare, J. J., & Waddington, R. J. (2020). Virtual illusion: Comparing student achievement and teacher and classroom characteristics in online and brick-and-mortar charter schools. *Educational Researcher, 49*(3), 161-175.

Forbes, L., & Billet, S. (2012). Successful co-teaching in the science classroom. *Science Scope*, *36*(1), 61.

Gall, M. D., Gall, J. P., & Borg, W. R. (2007). *Educational research: An introduction* (8th ed.). Allyn & Bacon.

Ghanaat Pisheh, E. A., Sadeghpour, N., Nejatyjahromy, Y., & Mir Nasab, M. M. (2017). The effect of cooperative teaching on the development of reading skills among students with reading disorders. *Support for Learning*, *32*(3), 245-266. https://doi.org/10.1111/1467-9604.12168

Gibson, S., & Dembo, M. H. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology*, *76*(4), 569.

Gift, T. L., Palekar, R. S., Sodha, S. V., Kent, C. K., Fagan, R. P., Archer, W. R., Edelson, P. J., Marchbanks, T., Bhattarai, A., Swerdlow, D. L., Ostroff, S., Meltzer, M. I., & Pennsylvania H1N1 Working Group. (2010). Household effects of school closure during pandemic (H1N1) 2009, Pennsylvania, USA. *Emerging infectious diseases, 16*(8), 1315.

Ginevra, M. C., Di Maggio, I., Valbusa, I., Santilli, S., & Nota, L. (2021). Teachers' attitudes towards students with disabilities: The role of the type of information provided in the students' profiles of children with disabilities. *European Journal of Special Needs Education,* 1-14. https://doi.org/10.1080/08856257.2021.1878658

Gorard, S., & Siddiqui, N. (2019). How trajectories of disadvantage help explain school attainment. *SAGE Open*, *9*(1).

Greer v. Rome City School Dist., 950 F. 2d 688 (11th Cir. 1991).

Hall, A. B., & Trespalacios, J. (2019). Personalized professional learning and teacher self-efficacy for integrating technology in K-12 classrooms. *Journal of Digital Learning in Teacher Education*, *35*(4), 221-235.

Hampton, N. Z., & Mason, E. (2003). Learning disabilities, gender, sources of efficacy, self-efficacy beliefs, and academic achievement in high school students. *Journal of School Psychology*, *41*(2), 101-112.

Hanushek, E. A., Peterson, P. E., Talpey, L. M., & Woessmann, L. (2020). Long-run trends in the US SES-Achievement Gap (No. w26764). National Bureau of Economic Research.

Hart, C. M., Berger, D., Jacob, B., Loeb, S., & Hill, M. (2019). Online learning, offline outcomes: Online course taking and high school student performance. *AERA Open, 5*(1).

Harvey, K. E., Suizzo, M., & Jackson, K. M. (2016). Predicting the grades of low-income-ethnic-minority students from teacher-student discrepancies in reported motivation. *The Journal of Experimental Education, 84*(3), 510-528. doi:10.1080/00220973.2015.1054332

Henry, D. A., Betancur Cortés, L., & Votruba-Drzal, E. (2020). Black-white achievement gaps differ by family socioeconomic status from early childhood through early adolescence. *Journal of Educational Psychology, 112*(8), 1471-1489. https://doi.org/10.1037/edu0000439

Heymann, A. D., Hoch, I., Valinsky, L., Kokia, E., & Steinberg, D. M. (2009). School closure may be effective in reducing transmission of respiratory viruses in the community. *Epidemiology & Infection, 137*(10), 1369-1376.

Hou, F., Bi, F., Jiao, R., Luo, D., & Song, K. (2020). Gender differences of depression and anxiety among social media users during the COVID-19 outbreak in China: A cross-sectional study. *BMC Public Health, 20(*1), 1648-1648. doi:10.1186/s12889-020-09738-7

Huang, X., Zhang, J., & Hudson, L. (2019). Impact of math self-efficacy, math anxiety, and growth mindset on math and science career interest for middle school students: The gender moderating effect. *European Journal of Psychology of Education*, *34*(3), 621-640.

Individuals with Disabilities Education Act, Pub. L. No. 108-446, § 118 Stat. 2647 (2004).

Joo, Y. J., Park, S., & Lim, E. (2018). Factors influencing preservice teachers' intention to use technology: TPACK, teacher self-efficacy, and technology acceptance model. *Journal of Educational Technology & Society*, *21*(3), 48-59.

Joyce, J. M., Rosenkranz, R. R., & Rosenkranz, S. K. (2018). Variation in nutritional quality of school lunches with implementation of national school lunch program guidelines. *The Journal of School Health, 88*(9), 636-643. https://doi.org/10.1111/josh.12665

Jurkowski, S., & Müller, B. (2018). Co-teaching in inclusive classes: The development of multi-professional cooperation in teaching dyads. *Teaching and Teacher Education*, *75*, 224-231.

Kaarakainen, M. T., Kaarakainen, S. S., & Kivinen, A. (2018). Seeking adequate competencies for the future: Digital skills of Finnish upper secondary school students. *Nordic Journal of Science and Technology Studies*, *6*(1), 4-20.

Kaarakainen, M. T., Saikkonen, L., & Savela, J. (2018). Information skills of Finnish basic and secondary education students: The role of age, gender, education level, self-efficacy and technology usage. *Nordic Journal of Digital Literacy*, *13*(04), 56-72.

Kaplan, A., & Midgley, C. (1997). The effect of achievement goals: Does level of perceived academic competence make a difference? *Contemporary Educational Psychology*, *22*(4), 415-435.

Kim, S. J., & Bostwick, W. (2020). Social vulnerability and racial inequality in COVID-19 deaths in Chicago. *Health Education & Behavior, 47*(4), 509-513. https://doi.org/10.1177/1090198120929677

King, I. C. (2003). Examining middle school inclusion classrooms through the lens of learner-centered principles. *Theory into Practice*, *42*(2), 151-158.

King-Sears, M. E., Brawand, A. E., Jenkins, M. C., & Preston-Smith, S. (2014). Co-teaching perspectives from secondary science co-teachers and their students with disabilities. *Journal of Science Teacher Education*, *25*(6), 651-680.

King-Sears, M. E., & Strogilos, V. (2020). An exploratory study of self-efficacy, school belongingness, and co-teaching perspectives from middle school students and teachers in a mathematics co-taught classroom. *International Journal of Inclusive Education*, *24*(2), 162-180.

Klassen, R. M., & Lynch, S. L. (2007). Self-efficacy from the perspective of adolescents with LD and their specialist teachers. *Journal of Learning Disabilities*, *40*(6), 494-507.

Knight, W., Wessel, R. D., & Markle, L. (2018). Persistence to graduation for students with disabilities: Implications for performance-based outcomes. *Journal of College Student Retention: Research, Theory & Practice*, *19*(4), 362-380.

Krammer, M., Gastager, A., Lisa, P., Gasteiger-Klicpera, B., & Rossmann, P. (2018). *Collective self-efficacy expectations in co-teaching teams - what are the influencing factors?* Routledge. doi:10.1080/03055698.2017.1347489

Kurth, J. A., & Mastergeorge, A. M. (2010). Academic and cognitive profiles of students with autism: Implications for classroom practice and placement. *International Journal of Special Education*, *25*(2), 8-14.

Kvande, M. N., Belsky, J., & Wichstrøm, L. (2018). Selection for special education services: The role of gender and socio-economic status. *European Journal of Special Needs Education*, *33*(4), 510-524.

Lee, C. S., Hayes, K. N., Seitz, J., DiStefano, R., & O'Connor, D. (2016). Understanding motivational structures that differentially predict engagement and achievement in middle school science. *International Journal of Science Education, 38*(2), 192-215. doi:10.1080/09500693.2015.1136452

Lewis-Kipkulei, P., Dunn, L. S., & Carpenter, A. M. (2021). Implications for occupational therapy student stress, well-being, and coping: A scoping review. *Journal of Occupational Therapy Education*, *5*(1), 2.

Limbers, C. A. (2020). Factors associated with caregiver preferences for children's return to school during the COVID-19 pandemic. *Journal of School Health*, *91*(1), 3-8.

Lipsky, D. K., & Gartner, A. (1996). Inclusion, school restructuring, and the remaking of American society. *Harvard Educational Review*, *66*(4), 762-797.

Lofgran, B. B., Smith, L. K., & Whiting, E. F. (2015). Science self-efficacy and school transitions: Elementary school to middle school, middle school to high school: Science self-efficacy and school transitions. *School Science and Mathematics, 115*(7), 366-376. doi:10.1111/ssm.12139

Lopes, J. A., Montiero, I., Sil, V., & Quinn, M. M. (2004). Teachers' perceptions about teaching problem students in regular classrooms. *Education and Treatment of Children, 27*(3), 394-419.

Los, R., & Schweinle, A. (2019). The interaction between student motivation and the

    instructional environment on academic outcome: A hierarchical linear model. *Social*

    Psychology of Education, *22*(2), 471-500.

Ma, Z., Idris, S., Zhang, Y., Zewen, L., Wali, A., Ji, Y., Pan, Q., & Baloch, Z. (2021). The impact

    of COVID-19 pandemic outbreak on education and mental health of Chinese children

    aged 7-15 years: An online survey. *BMC Pediatrics 21*(95).

    https://doi.org/10.1186/s12887-021-02550-1

Markel, H., Lipman, H. B., Navarro, J. A., Sloan, A., Michalsen, J. R., Stern, A. M., & Cetron,

    M. S. (2007). Nonpharmaceutical interventions implemented by US cities during the

    1918-1919 influenza pandemic. *Jama, 298*(6), 644-654.

Marshall, D. T., & Bradley-Dorsey, M. (2020). Reopening America's schools: A descriptive look

    at how states and large school districts are navigating fall 2020. *Journal of School*

    Choice, 14(4), 534-566. https://doi.org/10.1080/15582159.2020.1822731

Matthay, E. C., Duchowny, K. A., Riley, A. R., & Galea, S. (2021). Projected all-cause deaths

    attributable to COVID-19-related unemployment in the United States. *American Journal*

    of Public Health, 111(4), 696-699. https://doi.org/10.2105/AJPH.2020.306095

McCarthy, M. M. (1998). Inclusion of children with disabilities: Seeking the appropriate

    balance. *Educational Horizons*, *76*(3), 116-119.

Mertler, C. A. (2018). *Introduction to educational research*. Sage Publications.

Midgley, C., Kaplan, A., Middleton, M., Maehr, M. L., Urdan, T., Anderman, L. H., Anderman,

    E., & Roeser, R. (1998). The development and validation of scales assessing students'

    achievement goal orientations. *Contemporary Educational Psychology*, *23*(2), 113-131.

Midgley, C., Maehr, M. L., Hruda, L. Z., Anderman, E., Anderman, L., Freeman, K. E., & Urdan, T. (2000). *Manual for the patterns of adaptive learning scales*. Ann Arbor: University of Michigan.

Miller, J. C., Danon, L., O'Hagan, J. J., Goldstein, E., Lajous, M., & Lipsitch, M. (2010). Student behavior during a school closure caused by pandemic influenza A/H1N1. *PloS one, 5*(5), e10425.

Navarro, J. A., Kohl, K. S., Cetron, M. S., & Markel, H. (2016). A tale of many cities: A contemporary historical study of the implementation of school closures during the 2009 pA (H1N1) influenza pandemic. *Journal of Health Politics, Policy and Law, 41*(3), 393-421.

Nissim, Y., & Naifeld, E. (2018). Co-teaching in the academy-class program: From theory to practical experience. *Journal of Education and Learning*, *7*(4), 79-91.

Nordlöf, C., Hallström, J., & Höst, G. E. (2019). Self-efficacy or context dependency?: Exploring teachers' perceptions of and attitudes towards technology education. *International Journal of Technology and Design Education*, *29*(1), 123-141.

Nowland, R., & Qualter, P. (2020). Influence of social anxiety and emotional self-efficacy on pre-transition concerns, social threat sensitivity, and social adaptation to secondary school. *British Journal of Educational Psychology*, *90*(1), 227-244.

O'Laughlin, L., & Lindle, J. C. (2015). Principals as political agents in the implementation of IDEA's least restrictive environment mandate. *Educational Policy, 29*(1), 140-161. doi:10.1177/0895904814563207

Osterman, K. F. (2000). Students' need for belonging in the school community. *Review of Educational Research*, *70*(3), 323-367.

Pajares, F., & Graham, L. (1999). Self-efficacy, motivation constructs, and mathematics performance of entering middle school students. *Contemporary Educational Psychology*, *24*(2), 124-139.

Park, D., Gunderson, E. A., Tsukayama, E., Levine, S. C., & Beilock, S. L. (2016). Young children's motivational frameworks and math achievement: Relation to teacher-reported instructional practices, but not teacher theory of intelligence. *Journal of Educational Psychology*, *108*(3), 300.

Pintrich, P. R., & Garcia, T. (1994). Self-regulated learning in college students: Knowledge, strategies, and motivation. *Student motivation, cognition, and learning: Essays in honor of Wilbert J. McKeachie*, 113-133.

Pit-ten Cate, I. M., Krolak-Schwerdt, S., & Glock, S. (2016). Accuracy of teachers' tracking decisions: Short-and long-term effects of accountability. *European Journal of Psychology of Education*, *31*(2), 225-243.

Qualls, N., Levitt, A., Kanade, N., Wright-Jegede, N., Dopson, S., Biggerstaff, M., Reed, C., & Uzicanin, A. (2017). Community mitigation guidelines to prevent pandemic influenza—United States, 2017. *MMWR Recommendations and Reports, 66*(1), 1.

Quigley, C. F., & Herro, D. (2016). "finding the joy in the unknown": Implementation of STEAM teaching practices in middle school science and math classrooms. *Journal of Science Education and Technology, 25*(3), 410-426. https://doi.org/10.1007/s10956-016-9602-z

Rainey, J. J., Kenney, J., Wilburn, B., Putman, A., Zheteyeva, Y., & O'Sullivan, M. (2016). Online work force analyzes social media to identify consequences of an unplanned school closure–Using technology to prepare for the next pandemic. *PLoS One, 11*(9), e0163207.

Rea, P. J., McLaughlin, V. L., & Walther-Thomas, C. (2002). Outcomes for students with learning disabilities in inclusive and pullout programs. *Exceptional Children, 68*(2), 203-222.

Roeser, R. W., Midgley, C., & Urdan, T. C. (1996). Perceptions of the school psychological environment and early adolescents' psychological and behavioral functioning in school: The mediating role of goals and belonging. *Journal of Educational Psychology*, *88*(3), 408-422.

Ruzek, E. A., Hafen, C. A., Allen, J. P., Gregory, A., Mikami, A. Y., & Pianta, R. C. (2016). How teacher emotional support motivates students: The mediating roles of perceived peer relatedness, autonomy support, and competence. *Learning and instruction*, *42*, 95-103.

Sacramento City Unified School District v. Rachel Holland No. 92-15608 (9th Cir. 1994). *The Salamanca statement and framework for action on special needs education: World conference on special needs education. Access and equality.* (1994). New York: UNESCO.

Sallam, M. (2021). COVID-19 vaccine hesitancy worldwide: A concise systematic review of vaccine acceptance rates. *Vaccines (Basel), 9*(2), 160. https://doi.org/10.3390/vaccines9020160

Sauer, L. M. (2020). *What is coronavirus?* Johns Hopkins Medicine. https://www.hopkinsmedicine.org/health/conditions-and-diseases/coronavirus

Schalke, D., Brunner, M., Geiser, C., Preckel, F., Keller, U., Spengler, M., & Martin, R. (2013). Stability and change in intelligence from age 12 to age 52: Results from the Luxembourg MAGRIP study. *Developmental Psychology, 49*, 1529-1543. doi:10.1037/a003

Scruggs, T. E., Mastropieri, M. A., & McDuffie, K. A. (2007). Co-teaching in inclusive

classrooms: A metasynthesis of qualitative research. *Exceptional Children, 73*(4), 393.

Sheeran, P., Trafimow, D., Finlay, K. A., & Norman, P. (2002). Evidence that the type of person affects the strength of the perceived behavioural control-intention relationship. *British Journal of Social Psychology*, *41*(2), 253-270.

Shogren, K. A., McCart, A. B., Lyon, K. J., & Sailor, W. S. (2015). All means all: Building knowledge for inclusive schoolwide transformation. *Research and Practice for Persons with Severe Disabilities*, *40*(3), 173-191. https://doi.org/10.1177/1540796915586191

Shogren, K. A., Gross, J. M., Forber-Pratt, A. J., Francis, G. L., Satter, A. L., Blue-Banning, M., & Hill, C. (2015). The perspectives of students with and without disabilities on inclusive schools. *Research and Practice for Persons with Severe Disabilities*, *40*(4), 243-260.

Smogorzewska, J., Szumski, G., & Grygiel, P. (2019). Theory of mind development in school environment: A case of children with mild intellectual disability learning in inclusive and special education classrooms. *Journal of Applied Research in Intellectual Disabilities, 32(*5), 1241-1254.

Solis, M., Vaughn, S., Swanson, E., & Mcculley, L. (2012). Collaborative models of instruction: The empirical foundations of inclusion and co-teaching. *Psychology in the Schools*, *49*(5), 498-510.

Son, J. Y. (2016). Comparing physical, virtual, and hybrid flipped labs for general education biology. *Online Learning*, *20*(3), 228-243.

Stage, H. B., Shingleton, J., Ghosh, S., Scarabel, F., Pellis, L., & Finnie, T. (2020). Shut and re-open: The role of schools in the spread of COVID-19 in Europe. *medRxiv.* https://doi.org/10.1101/2020.06.24.20139634

Stefanidis, A., King-Sears, M. E., & Brawand, A. (2019). Benefits for coteachers of students with disabilities: Do contextual factors matter? *Psychology in the Schools*, *56*(4), 539-553.

Strogillos, V., & Stefanidis, A. (2015). Contextual antecedents of co-teaching efficacy: Their influence on students with disabilities' learning progress, social participation and behaviour improvement. *Teaching and Teacher Education, 47*(1), 218-229.

Strogilos, V., Stefanidis, A., & Tragoulia, E. (2016). Co-teachers' attitudes towards planning and instructional activities for students with disabilities. *European Journal of Special Needs Education*, *31*(3), 344-359.

Szumski, G., Smogorzewska, J., & Karwowski, M. (2017). Academic achievement of students without special educational needs in inclusive classrooms: A meta-analysis. *Educational Research Review*, *21*, 33-54.

Tabassam, W., & Grainger, J. (2002). Self-concept, attributional style and self-efficacy beliefs of students with learning disabilities with and without attention deficit hyperactivity disorder. *Learning Disability Quarterly*, *25*(2), 141-151.

Thurlow, M. L., Lazarus, S. S., Larson, E. D., Albus, D. A., Liu, K. K., & Kwong, E. (2017). Alternate assessments for students with significant cognitive disabilities: Participation guidelines and definitions. NCEO Report 406. *National Center on Educational Outcomes*.

Timmermans, A. C., & Rubie-Davies, C. M. (2018). Do teachers differ in the level of expectations or in the extent to which they differentiate in expectations? Relations between teacher-level expectations, teacher background and beliefs, and subsequent student performance. *Educational Research and Evaluation, 24*(3-5), 241-263. doi:10.1080/13803611.2018.1550837

Tremblay, P. (2013). Comparative outcomes of two instructional models for students with

   learning disabilities: inclusion with co-teaching and solo-taught special education.

   Journal of Research in Special Educational Needs, *13*(4), 251-258.

Turk, M. A., Landes, S. D., Formica, M. K., & Goss, K. D. (2020). Intellectual and

   developmental disability and COVID-19 case-fatality trends: TriNetX analysis. *Disability

   and Health Journal*, *13*(3), 100942.

Uscher-Pines, L., Schwartz, H. L., Ahmed, F., Zheteyeva, Y., Meza, E., Baker, G., & Uzicanin,

   A. (2018). School practices to promote social distancing in K-12 schools: Review of

   influenza pandemic policies and practices. *BMC Public Health, 18*(1), 406.

Usher, E. L. (2009). Sources of middle school students' self-efficacy in mathematics: A

   qualitative investigation. *American Educational Research Journal*, *46*(1), 275-314.

Van Nuland, S., Mandzuk, D., Tucker Petrick, K., & Cooper, T. (2020). COVID-19 and its

   effects on teacher education in Ontario: A complex adaptive systems perspective. *Journal

   of Education for Teaching, 46*(4), 442-451.

   https://doi.org/10.1080/02607476.2020.1803050

Vizenor, A. S., & Matuska, J. (2018). Actualizing characteristics of successful schools for young

   adolescents through co-teaching. *Middle School Journal*, *49*(3), 17-25.

   https://doi.org/10.1080/00940771.2018.1439666

Warner, R. M. (2013). *Applied statistics: From bivariate through multivariate techniques*. Sage

   Publications.

Watson, J. (2008). *Blended learning: The convergence of online and face-to-face education.

   Promising practices in online learning.* North American Council for Online Learning.

Wexler, J., Kearns, D. M., Lemons, C. J., Mitchell, M., Clancy, E., Davidson, K. A., & Wei, Y. (2018). Reading comprehension and co-teaching practices in middle school English language arts classrooms. *Exceptional Children*, *84*(4), 384-402. https://doi.org/10.1177/0014402918771543

Wilson, C., Woolfson, L. M., Durkin, K., & Elliott, M. A. (2016). The impact of social cognitive and personality factors on teachers' reported inclusive behaviour. *British Journal of Educational Psychology, 86*(3), 461-480. doi:10.1111/bjep.12118

Winterman, K. G., & Rosas, C. E. (2014). *The IEP checklist: Your guide to creating meaningful and compliant IEPs*. Brookes Publishing.

APPENDIX A: PATTERNS OF ADAPTIVE LEARNING SCALES QUESTIONS

1. I am certain I can master the skills taught in class this year.

2. I would avoid participating in class if it meant that other students would think I know a lot.

3. It's important to me that I don't look stupid in class.

4. Even if I do well in school, it will not help me have the kind of life I want when I grow up.

5. If other students found out I did well on a test, I would tell them it was just luck even if that wasn't the case.

6. When I've figured out how to do a problem, my teacher gives me more challenging problems to think about.

7. I would prefer to do class work that is familiar to me, rather than work I would have to learn how to do.

8. It's important to me that other students in my class think I am good at my class work.

9. It's important to me that I learn a lot of new concepts this year.

10. My teacher presses me to do thoughtful work.

11. I'm certain I can figure out how to do the most difficult class work.

12. Some students fool around the night before a test. Then if they don't do well, they can say that is the reason. How true is this of you?

13. My chances of succeeding later in life don't depend on doing well in school.

14. I sometimes annoy my teacher during class.

15. My teacher asks me to explain how I get my answers.

16. Some students purposely get involved in lots of activities. Then if they don't do well on their class work, they can say it is because they were involved with other things. How true is this of you?

17. When I'm working out a problem, my teacher tells me to keep thinking until I really understand.

18. Some students look for reasons to keep them from studying (not feeling well, having to help their parents, taking care of a brother or sister, etc.). Then if they don't do well on their class work, they can say this is the reason. How true is this of you?

19. My teacher doesn't let me do just easy work, but makes me think.

20. I don't like to learn a lot of new concepts in class.

21. I wouldn't volunteer to answer a question in class if I thought other students would think I was smart.

22. I sometimes copy answers from other students during tests.

23. I prefer to do work as I have always done it, rather than trying something new.

24. If I did well on a school assignment, I wouldn't want other students to see my grade.

25. One of my goals in class is to learn as much as I can.

26. One of my goals is to show others that I'm good at my class work.

27. It's very important to me that I don't look smarter than others in class.

28. Doing well in school doesn't improve my chances of having a good life when I grow up.

29. One of my goals is to master a lot of new skills this year.

30. I sometimes get into trouble with my teacher during class.

31. I sometimes cheat on my class work.

32. Getting good grades in school won't guarantee that I will get a good job when I grow up.

33. One of my goals is to keep others from thinking I'm not smart in class.

34. I sometimes behave in a way during class that annoys my teacher.

35. I like academic concepts that are familiar to me, rather than those I haven't thought about before.

36. Even if I am successful in school, it won't help me fulfill my dreams.

37. If I were good at my class work, I would try to do my work in a way that didn't show it.

38. It's important to me that I thoroughly understand my class work.

39. I sometimes copy answers from other students when I do my class work.

40. I would choose class work I knew I could do, rather than work I haven't done before.

41. One of my goals is to show others that class work is easy for me.

42. Some students let their friends keep them from paying attention in class or from doing their homework. Then if they don't do well, they can say their friends kept them from working. How true is this of you?

43. Doing well in school won't help me have a satisfying career when I grow up.

44. Some students purposely don't try hard in class. Then if they don't do well, they can say it is because they didn't try. How true is this of you?

45. One of my goals is to look smart in comparison to the other students in my class.

46. One of my goals in class is to avoid looking smarter than other kids.

47. Some students put off doing their class work until the last minute. Then if they don't do well on their work, they can say that is the reason. How true is this of you?

48. It's important to me that I look smart compared to others in my class.

49. It's important to me that I improve my skills this year.

50. I sometimes don't follow my teacher's directions during class.

51. It's important to me that my teacher doesn't think that I know less than others in class.

52. I can do almost all the work in class if I don't give up.

53. My teacher makes sure that the work I do really makes me think.

54. I sometimes disturb the lesson that is going on in class.

55. One of my goals in class is to avoid looking like I have trouble doing the work.

56. Even if the work is hard, I can learn it.

57. My teacher accepts nothing less than my full effort.

58. I can do even the hardest work in this class if I try.

59. In our class, trying hard is very important.

60. In our class, showing others that you are not bad at class work is really important.

61. In our class, how much you improve is really important.

62. In our class, getting good grades is the main goal.

63. In our class, really understanding the material is the main goal.

64. In our class, getting right answers is very important.

65. In our class, it's important that you don't make mistakes in front of everyone.

66. In our class, it's important to understand the work, not just memorize it.

67. In our class, it's important not to do worse than other students.

68. In our class, learning new ideas and concepts is very important.

69. In our class, it's very important not to look dumb.

70. In our class, it's OK to make mistakes as long as you are learning.

71. In our class, it's important to get high scores on tests.

72. In our class, one of the main goals is to avoid looking like you can't do the work.

73. My parents don't like it when I make mistakes in my class work.

74. In my neighborhood, I have trouble finding safe places to hang out with my friends.

75. My parents want me to spend time thinking about concepts.

76. I don't like to have my parents come to school because their ideas are very different from my teachers' ideas.

77. After school, I find it difficult to find anything worthwhile to do in my neighborhood.

78. My parents would like it if I could show that I'm better at class work than other students in my class.

79. On the weekends, I can find good and useful things to do in my neighborhood.

80. My parents want my work to be challenging for me.

81. I feel uncomfortable when my parents come to school, because they are different from the parents of my classmates.

82. My parents would like me to do challenging class work, even if I make mistakes.

83. I feel troubled because my home life and my school life are like two different worlds.

84. After school, I can find many interesting and positive things to do in my neighborhood.

85. I am not comfortable talking to many of my classmates because my family is very different from theirs.

86. In my neighborhood, there are places I can go to play outdoors and have fun.

87. My parents want me to understand my class work, not just memorize how to do it.

88. I feel upset because my teacher and my parents have different ideas about what I should learn in school.

89. My parents want me to see how my class work relates to things outside of school.

90. My parents would like me to show others that I am good at class work.

91. My parents want me to understand concepts, not just do the work.

92. My parents think getting the right answers in class is very important.

93. In my neighborhood, there are no places I can go that are attractive and clean.

94. My parents would be pleased if I could show that class work is easy for me.

APPENDIX B: TEACHER CONSENT

Teacher Consent

Title of the Project: The Impact of Inclusive Middle School Classrooms On Students' Self-Efficacy During The COVID-19 Pandemic
Principal Investigator: Ashley Kramer, M.A.

Invitation to be Part of a Research Study

You are invited to participate in a research study. In order to participate, you must be a mathematics or English language arts teacher for 6th, 7th, and/or 8th grade students with or without disabilities, and/or teaching virtually or in the hybrid setting. Your part in this research project is voluntary. Participating or not participating will not affect your relationship with your school or school district. You may withdraw your participation at any time without penalty.

Please take time to read this entire form and ask questions before deciding whether to take part in this research project.

What is the study about and why is it being done?

The purpose of the study is to examine the differences in academic self-efficacy scores based on students' classification as a student with a disability or not and gender among middle school students in an inclusive classroom. This study examines students with and without IEPs, virtual and hybrid learners, and those of various genders. There will also be information gathered on students' ethnicity within student enrollment, and grade level. No data will be collected from you directly.

What will happen if you take part in this study?

If you agree to be in this study, I would ask you to do the following things:
1. You will meet with the research coordinator the end of April/beginning of May to discuss setting up the questionnaire for students. This will take one hour.
2. Students will have one to two full class periods to complete the self-efficacy tool. There are three parts to the tool. Students reading at or below a fourth grade-reading level will have access to text to speech to have the text read to them.
3. Students who refuse consent to participate in the study will need alternate work to complete while the study is being conducted.
4. You will provide the researcher with guardians' phone numbers, addresses, and email addresses.

How could you or others benefit from this study?

The direct benefits participants should expect to receive from taking part in this study are further overall knowledge about how students perceive their ability to complete task within variables such as: gender, qualification for an IEP, and learning format (virtual or hybrid), ethnicity, and grade level through viewing their Infinite Campus profiles.

Benefits to society include understanding in how the changing of the learning environment from COVID-19 has impacted students' self-efficacy.

What risks might you experience from being in this study?

The risk involved in this study includes students having one class period with no direct instruction within the area of study (math or literacy). The risks involved in this study are minimal. The researcher conducting this study is a mandatory reporter; however, the options for each questions involve a scale that would not disclose personal information that would require a report.

How will personal information be protected?

The records of this study will be kept private. Research records will be stored securely, and only the researcher will have access to the records.

- Participant responses will be kept anonymous through the use of codes eliminating student name or identifiable information once coded with their qualification for an IEP, learning format (virtual or hybrid), ethnicity, grade level, and gender.
- Data will be stored on a password-locked computer. After three years, all electronic records will be deleted.

How will you be compensated for being part of the study?

Participants will be compensated for participating in this study. Teacher participants will receive a $10 gift card for their time and planning with the researcher to conduct the research within their class. They will be compensated upon receiving students' responses in the study. There must be at least one consenting and assenting student in the class in order to receive compensation. You will not need to provide any personal information if you are involved in this study.

Does the researcher have any conflicts of interest?

The researcher serves as a teacher within the district. To limit potential or perceived conflicts the study will be anonymous, so the researcher will not know who participated. This disclosure is made so that you can decide if this relationship will affect your willingness to participate in this study. No action will be taken against an individual based on his or her decision to participate in this study.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Liberty University or the school district. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from your students be destroyed immediately and will not be included in this study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Ashley Kramer. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her. You may also contact the researcher's faculty sponsor, Dr. Rebecca Lunde.

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu

Your Consent

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. You will be given a copy of this document for your records. The researcher will keep a copy with the study records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

_____
Printed Subject Name

_____

_____
Signature & Date

APPENDIX C: PARENTAL CONSENT

Parental Consent

Title of the Project: The Impact of Inclusive Middle School Classrooms on Students' Academic Self-Efficacy during the COVID-19 Pandemic
Principal Investigator: Ashley Kramer, M.A.

Invitation to be Part of a Research Study

Your child is invited to participate in a research study. In order to participate, he/she must be a middle school student learning in the hybrid or remote setting in 6th, 7th, or 8th grade. Your child's part in this research project is voluntary. If you do not want them to be involved in this study, please disregard this email or letter.

Please take time to read this entire form and ask questions before deciding whether to allow your child to take part in this research project. This study will be utilized in a dissertation for the lead researcher (Ashley Kramer) and will be presented and published. This will be done at the aggregated level with no identifiable information.

What is the study about and why is it being done?

The purpose of the study is to examine the differences in academic self-efficacy scores among middle school students in an inclusive classroom during the pandemic based on whether students have a documented disability, their gender, their learning format, their reading level, their ethnicity, and their grade level. This information will be found through the Patterns of Adaptive Learning Scales (Midgley et al., 2000) which can be found in an attachment to this letter. This information will be analyzed to explore how students in inclusive environments are impacted through academic self-efficacy within the variables of gender, learning format, format, ethnicity, and grade level. Responses from each student will be confidential.

What will happen if you take part in this study?

If you agree to allow your child to be in this study, I will ask your student to do the following:
1. Complete this consent form including disclosed information regarding your child's documented disability (or lack thereof), gender, learning format, reading level, ethnicity and grade level. Your consent will provide the researcher with your child's infinite Campus profile page.
2. Students will complete an online survey that should take up to 90 minutes (one class period).

**You will need to agree to allow the school to release information regarding your child's documented disability (or lack thereof), gender, learning format, reading level, ethnicity, and grade level to Ashley Kramer (the lead researcher).

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society include understanding how the changes in the learning environment from COVID-19 have impacted students' self-efficacy.

What risks might you experience from being in this study?

The risks involved in this study are minimal, which means they are equal to the risks your child would encounter in everyday life.

How will personal information be protected?

The records of this study will be kept private. Research records will be stored securely, and only the researcher will have access to the records.

- Your child's student identification number will be required on the survey so that I can obtain his or her IEP, learning format (virtual or hybrid), gender, and reading level, grade level, and ethnicity from the school. His or her name will then be removed and replaced by a code to protect his or her confidentiality.
- Data will be stored on a password-locked computer. After three years, all electronic records will be deleted.

Does the researcher have any conflicts of interest?

The researcher serves as a teacher at the school district. This disclosure is made so that you can decide if this relationship will affect your willingness to allow your child to participate in this study. No action will be taken against an individual based on his or her decision to allow his or her child to participate in this study.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to allow your child to participate will not affect your/his or her current or future relations with Liberty University or the school district. If you decide to allow your child to participate, he or she is free to not answer any question or withdraw at any time without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw your child/your child chooses to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw/your child choose to withdraw, data collected from your student be destroyed immediately and will not be included in this study. Participation or non-participation will not affect your child's direct instruction within the classroom.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Ashley Kramer. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her. You may also contact the researcher's faculty sponsor, Dr. Rebecca Lunde.

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu

Your Consent

_____ (initial) By signing below, I confirm that the researcher in this study has permission to access my child's reading level, gender, access to knowledge of an Individualized Education Programs (if applicable), learning format (hybrid or virtual), ethnicity and grade level through their Infinite Campus profile.

By signing this document, you are agreeing to allow your child to be in this study. Make sure you understand what the study is about before you sign. A copy of the attached survey can be found with this document. The researcher will keep a copy with the study records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

I have read and understood the above information. I have asked questions and have received answers. I consent to allow my child to participate in the study.

_____
Printed Child's/Student's Name

_____
Parent's Signature   Date

APPENDIX D: SCRIPT FOR STUDENTS PRIOR TO QUESTIONNAIRE

Hello, my name is Miss Kramer. I am going to be helping you complete a survey today. Some of you may know me already, but today I am a researcher not your teacher. The responses that you give on the survey will not be viewed by your teacher or affect your grade at all. You won't even put your name on your responses. The results of your responses are going to help teachers, administrators, and people who make decisions for schools understand how we can better support you. You have the right to leave the study at any time.

I will give you the link to click on, which will take you to the survey. Please let me know if the link does not load properly. The survey is not meant to see what you know about the words. It is meant to understand what you believe you are able to do in the classroom. There is no right or wrong answer. You can begin once you have copied the link successfully. Please raise your hand if you have any questions.

(The following section is for students who will have the assessments read to them). You will have a toolbar at the top of your screen that will read the questions and answers to you, if you choose. You can have it re-read any statements to you as many times as you'd like. This is not a test for your reading skills. It is to help us understand what you believe you can do in the classroom.

APPENDIX E: REQUEST FOR PERMISSION TO PUBLISH

Request for permission to include in a publication

July 25th, 2020

Ashley Kramer

University of Michigan
1400D School of Education
Ann Arbor, MI 48109

Dear University of Michigan:

I am currently putting together a study proposal for my dissertation research. I would like your permission to use and include the following material with this publication:

Midgley, C., Maehr, M. L., Hruda, L. Z., Anderman, E., Anderman, L., Freeman, K. E., & Urdan, T. (2000). Manual for the patterns of adaptive learning scales. *Ann Arbor: University of Michigan*.

Student Scales (p. 39-49)

The publication information is as follows:

The Impact of Inclusive Middle School Classrooms on Students' Self-Efficacy During a Pandemic
Dissertation
Liberty University
Educational Research

I am requesting a non-exclusive license for North American rights in English for a term of five years.

If you do not control the copyright on all of the above mentioned material, I would appreciate any contact information you can give me regarding the proper rights holder(s), including current address(es).

Please indicate your consent by signing the enclosed copy of this letter and returning it to me in the enclosed envelope. If you need any additional information, please feel free to contact me.

Sincerely,

Ashley Kramer

Permission granted for the use of the material as described above:

Agreed to: The use and publication of the Patterns of Adaptive Learning Scales (PALS)
Name & Title: Dr. Eric Anderman, Professor of Educational Psychology and author of PALS
Company/Affiliation: University of Michigan
Date: July 27th, 2020
Citation as it should appear in the work: (Midgley et al., 2000)

APPENDIX F: INSTITUTIONAL REVIEW BOARD APPROVAL

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

May 7, 2021

Ashley Kramer
Rebecca Lunde

Re: IRB Approval - IRB-FY20-21-771 THE IMPACT OF INCLUSIVE MIDDLE SCHOOL
CLASSROOMS ON STUDENTS' ACADEMIC SELF-EFFICACY DURING THE COVID-19
PANDEMIC

Dear Ashley Kramer, Rebecca Lunde:

We are pleased to inform you that your study has been approved by the Liberty University
Institutional Review Board (IRB). This approval is extended to you for one year from the
following date: May 7, 2021. If you need to make changes to the methodology as it pertains to
human subjects, you must submit a modification to the IRB. Modifications can be completed
through your Cayuse IRB account.

Your study falls under the expedited review category (45 CFR 46.110), which is applicable to
specific, minimal risk studies and minor changes to approved studies for the following reason(s):

7. Research on individual or group characteristics or behavior (including, but not limited to,
research on perception, cognition, motivation, identity, language, communication, cultural
beliefs or practices, and social behavior) or research employing survey, interview, oral history,
focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Your stamped consent form(s) and final versions of your study documents can be found under
the Attachments tab within the Submission Details section of your study on Cayuse IRB. Your
stamped consent form(s) should be copied and used to gain the consent of your research
participants. If you plan to provide your consent information electronically, the contents of the
attached consent document(s) should be made available without alteration.

Thank you for your cooperation with the IRB, and we wish you well with your research project.

Sincerely,

G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
Research Ethics Office

APPENDIX G: AUTHOR PERMISSION TO UTILIZE TOOL

Anderman, Eric
Mon 7/27/2020 6:36 AM
To: Kramer, Ashley

[EXTERNAL EMAIL: Do not click any links or open attachments unless you know the sender and trust the content.]

Hi Ashley. You don't need permission to use the PALS measure. We just ask that you be sure to cite it appropriately, and to describe in your manuscript any changes that you make. Good luck with your project.
Best regards,
Eric Anderman.

Eric M. Anderman
Professor, Educational Psychology
Editor, *Theory into Practice*
College of Education and Human Ecology

APPENDIX H: STUDENT ASSENT

Child Assent to Participate in a Research Study

What is the name of the study and who is doing the study?
The name of the study is The Impact of Inclusive Middle School Classrooms on Students' Academic Self-Efficacy during The COVID-19 Pandemic, and the person doing the study is Ms. Kramer.

Why is Ms. Kramer doing this study?
Ms. Kramer wants to know how inclusion and the COVID-19 pandemic has affected students' belief that they can accomplish things.

Why am I being asked to be in this study?
You are being asked to be in this study because you are a student (6th, 7th, or 8th grader) who learns in an inclusive middle school. You are learning through hybrid or remote learning.

If I decide to be in the study, what will happen and how long will it take?
1. If you decide to be in this study, you will complete four surveys using Google Forms that will take one class period. If you choose not to participate, you will have a different assignment you will be expected to do during class time.

Do I have to be in this study?
No, you do not have to be in this study. If you want to be in this study, then tell the researcher. If you don't want to, it's OK to say no. The researcher will not be angry. You can say yes now and change your mind later. It's up to you. Participating or not participating will not affect your grades at school. You may stop participating at any time without penalty. Even if your parents have approved your participation, you may decide not to participate if you don't want to.

What if I have a question?
You can ask questions any time. You can ask now. You can ask later. You can talk to the researcher. If you do not understand something, please ask the researcher to explain it to you again.

Signing your name below means that you want to be in the study.

_____
Signature of Child   Date

Ashley Kramer

Dr. Rebecca Lunde
Liberty University Institutional Review Board
1971 University Blvd, Green Hall 2845, Lynchburg, VA 24515
irb@liberty.edu

APPENDIX I: REQUEST FOR BUSINESS DONATION

Hello!

My name is Ashley Kramer. I am a local teacher and a research student at Liberty University. I am reaching out to you today hoping that you can support my upcoming study. I understand that the pandemic has had lasting impacts on businesses and schools and I hope to uncover how it has affected schools within the virtual and hybrid learning models. My study examines the effects of the pandemic on students and it requires involvement from teachers, parents or guardians, and students.

I am hoping to grant teachers a gift card to thank them for assisting in my study and accommodating their time and flexibility in working around curriculum. If you would be willing to donate some gift cards that I could give to teachers that participate in my study I would greatly appreciate it. I would be happy to include a card so they know which branch they should visit when using the gift card as well. I would like to gift them in $10 increments if possible.

Please let me know if is something that you are able to assist me with at this time. If you have any further questions please email me. I hope to hear from you soon.

Ashley Kramer

Learning Specialist, M.A.

Ph.D. Student, Liberty University

APPENDIX J: SCRIPT FOR STAFF MEETING PRESENTATION

For those that do not know me, my name is Ashley Kramer. I am a special education teacher and I am going to school for my doctorate in curriculum and instruction. I wanted to share my upcoming study with you all in hopes that you will be willing to participate. Teachers have experienced firsthand the difficult experiences that the pandemic has caused. My study is to help us understand on a broader scale how the pandemic has affected students' academic self-efficacy in an inclusive setting. Self-efficacy is the belief that one holds about his or her abilities to achieve something within an academic setting. Some people have high self-efficacy in math, but low self-efficacy in reading. My study will have students respond to a tool on Google Forms in regards to their own self-efficacy. Those results will then be analyzed and compared through factors such as gender, disability status, and learning format such as hybrid or virtual learning. There will also be an analysis around students' status for free or reduced lunch, ethnicity, and grade level. I am asking for your permission for me to conduct this study during some of your classes to help us understand where students are at on a wider scale based on these variables, their inclusive setting, and the pandemic we are all surviving through. I understand that this would slightly disrupt your classroom content for a couple days, so I want to be respectful of your time. I will be sending out permission slips to teachers I would like to have take part in this study within their classrooms and you will be compensated with a gift card if you choose to participate. If you choose not to participate, I nor the district will hold any penalties or ill will. You will not be able to see individual students' scores, but I can share the results with you when they are published if you are interested. If you have any questions, comments, or concerns you can email me.

APPENDIX K: SCHOOL NEWSPAPER RECRUITMENT STATEMENT

My name is Ashley Kramer. I am a teacher and a researcher. I am reaching out in effort for your permission to have your child participate in a study I am conducting. Many of us have experienced the effects of the pandemic firsthand, as we are still picking up the pieces. My study examines students' self-efficacy scores, which is their belief in their ability to be able to accomplish something. Students will have the opportunity to respond to Google Forms with statements they will rate based on their own beliefs. The results will be analyzed based on gender, learning format (virtual or hybrid), and disability status (qualifies for special education or does not). There will also be information gathered on students qualifying for free or reduced lunch, ethnicity, and grade level. This is not required, and if you choose not to participate you, your student, or your family will not be penalized. If you chose to participate in helping us understand self-efficacy in an inclusive setting during the pandemic, the researcher will have access to your child's reading level, if they qualify for special education (if applicable), their learning format (virtual or hybrid), and their gender (as listed on their Campus registration). This participation is entirely optional. You have the right to refuse participation and your child will not be involved in the study unless you provide consent. We will also ask students for assent sharing with them that they will not be penalized if they choose not to participate. Thank you for your time. Have a good day!