2021

The Relationship between Inclusive Classroom Practice and Student Self-Perception Outcomes

Jenifer York
Bethel University

The Relationship between Inclusive Classroom Practice and Student Self-Perception Outcomes

Jenifer Marie York

A dissertation submitted to the faculty of Bethel University
in partial fulfillment of the requirements for the degree of
Doctor of Education.

Saint Paul, MN

January 22, 2021

Approved by

Advisor: Dr. Annette Ziegler

Reader: Dr. Randall Peterson

Reader: Dr. Krista Soria

Abstract

The majority of students with special education needs spend of 80% their time in general education classrooms (National Center for Education Statistics, 2019c). While participation in general education classes is linked to positive outcomes for students with special education needs, little has been researched regarding actual practices occurring in inclusive classrooms and the impact of such practices. Academic and social gains for students in general education classrooms are unlikely without effective instruction and intervention. This quantitative study investigated whether there was a relationship between the degree of implementation of inclusive practices in classrooms and student self-perception of academic self-concept and social inclusion. This study intended to systematically examine what components of practice are related to improving student outcomes in classrooms including students with disabilities. The relationship between inclusive practices and student perception outcomes was investigated in high school English Language Arts classes with three or more students with special education needs across four suburban high schools. A positive highly statistically significant relationship was found between student rating of inclusivity of teacher practices and students' social inclusion. No relationship was found between inclusive practices and students' academic self-concept.

Dedication

To my Grandma Gladys. You always encouraged me to be a reader, both in the ways you read to me when I was little and in the notes I stumbled across every now and then in some of the books you gave me. I will have you know, I needed to do a *lot* of reading to complete this. I remember conversations you had with me or my sisters whenever school was hard reminding us in the most sincere and firm way that it was our teacher's job to teach us, charging us to ask questions and hang in there until things made sense. When I became a special education teacher, I learned a lot from you on the phone calls on my commute home from work as you reflected back to times with some of your own children that struggled in school and what it looked like to fight for their education. You are an example of how to be both strong and soft, and I know many prayers were said by you for me throughout, and starting long before, this dissertation process. I hope I can make it up north to see you soon for some of your fresh bread.

Acknowledgements

"If you want to go fast, go alone. If you want to go far, go together" is a proverb I first heard in training for my first marathon and said often amongst my running family in Team World Vision. What I have found is that dissertation research is like an endurance sport for your brain. It was early mornings, late nights, tears, may cups of coffee, and many tricks of organizing my time and space to step to and across the finish line of new research. Coincidentally, many of the articles referenced in this article were read from the seat of a stationary bike as I trained for my first Ironman. Like in training for an endurance event, there are many phases to the training. People might see the finish line moment, but few people see the training leading up to race day. Some people might only see a few letters after my name or ask about how many pages are in the big paper I wrote, but there are others who paced alongside me for stretches of the years of preparation without whom this dissertation would not exist.

To my committee. Dr. Ziegler for warm support, encouragement, and guidance. To Dr. Soria who is a wizard of quantitative analysis and spent more hours doing data cleaning and analysis on this study than any other and over Thanksgiving break to boot. To Dr. Peterson for being a part of my teaching work as my building principal and helping me navigate the waters of research in our school district and as a committee member. Thank you for all your expertise and guidance.

To my teaching colleagues. For being in the trenches with students, reading to learn, problem-solving, and being ready daily to pivot and retool the ecosystem of our classrooms, in normal years and in the year of a pandemic. Thank you for being thought partners, idea generators, and dreamers of a better world for students.

To the people who came alongside me in the every-day way, there is no way to sufficiently capture what your support and presents meant. To Kate, for picking up dinners, taking the pup(s), or always being ready with a "What do you need?" To Tiffany, for walks, laughs, cheers, and many, many homework dates. To My Squad, for support, laughs, prayers, and light, both in person and virtually. To Momma, for hugs, many prayers, calls, texts, and reminders to Whom I belong and from Whom my ability comes. To many more people who prayed, ran with me, listened to me whine, cheered, got me outside, or just sent back kind-funny-or-profane Snaps. Thank you for helping me go far.

And to my husband Justin. You were with me in this from the walk down Orme Street when the idea of a doctorate program was only an idea that formed as we talked. It was a thought that made me worry I might start into something big that might consume who I am and feed the side of me that likes to accomplish things at the expense of myself. It was a thought I believed I may intentionally turn away from to avoid the risk of losing sight of what matters. As we walked, you said you never had a desire to go after big things, as your picture of your life is more focused on being. You told me that I was built with a capacity to accomplish great things and that the fear I spoke of could hold back those great things. You told me with all confidence that you are my partner and there is no way you would every let me get lost. So, for holding the space for me as I do big things. For keeping me from getting lost in what I do. For never valuing accomplishments I produce in the way you value me. For helping me see beyond what I am doing. Thank you.

In the way endurance sports metaphor contributes to a picture of understanding of the dissertation process, Hebrews 12 uses the metaphor of a race to expand the understanding of the spiritual experience and the larger story of God in the world. While the dissertation journey cannot be equated with a spiritual journey, but it is another layer life that has breathed some of my own personal understanding of that deeper story. To a process that helped me to grow and change, may this research contribute to a more whole and right approach to education.

Table of Contents

List of Tables

List of Figures

Chapter One: Introduction

Introduction to the Problem

The Education for all Handicapped Children Act (EAHCA) of 1970 was the first point in United States history at which education of students with disabilities received any legal basis; the Act constructed a set of legal guidelines and processes for the education of individuals with disabilities. In 1990, EAHCA was reauthorized and renamed the Individuals with Disabilities Education Act (IDEA). This cornerstone piece of legislation set the legal foundation of special education at a national level. This law was reauthorized in 1997, 2000, and 2004, each time clarifying or revising rights of or procedural safeguards to protect them.

Emerging from a long history of systemic inequities and exclusion of students with disabilities, IDEA 2004 mandates that students with special education needs be provided with the Least Restrictive Environment (LRE) and Free and Appropriate Public Education (FAPE). This prioritizes placement of students with special education needs in the general education and provision of services that are appropriate to their learning needs. There has been a statistically significant increase in the rate of place students with disabilities in the general education environment and a corresponding decrease in placements in separate or segregated settings since the 2000 reauthorization of IDEA (McLeskey, Landers, Hoppey, & Williamson, 2011; McLeskey, Landers, Williamson, & Hoppey, 2012).

Placing students with special education needs in the general education setting has been associated with several positive outcomes, including increased academic achievement, post-secondary participation, and equitable social opportunity.

Academic achievement is positively correlated with students' participation in general education setting: each hour of the day in the mainstream corresponded with a half point increase on reading measure (Cosier, Causton-Theoharis, & Theoharis, 2013). Gauri and Bouck (2017) found each hour spent in a core course increased the odds of participation in postsecondary education by 1.6 for short-term participation and 1.9 for long term participation. Wei, Wagner, Yu, Hudson, and Javitz (2014) found a similar relationship between participation in an inclusive academic course, particularly science and social studies, and participation in post-secondary education. Other researchers have identified schools that outperform academic scores and growth rates of other schools while simultaneously implementing exclusive or at least high levels of mainstream placement of students with disabilities (McLeskey, Waldron, & Redd, 2014; Shogren et al., 2015a; Shogren et al., 2015b).

Additionally, positive non-academic outcomes have been associated with placement of students with disabilities in the general education setting, including increased positive self-perception (Shogren et al., 2015b), lower experiences of segregation based on disability (Cosier et al., 2013), and increased social outcomes (Bonati, 2018; Carter et al., 2017; Gómez-Zepeda, Petreñas, Sabando, & Puigdellívol, 2016; Hudson & Browder, 2014). The instructional context of the general education setting offered greater time spent on instruction, decreased focus on isolated activities, and higher quality curriculum and instruction when compared to placement in special education classrooms (Kurth & Mastergeorge, 2012; Theoharis & Causton, 2016). Others have advocated the placement of students with disabilities in the general education setting as creating equitable social and educational experiences for

students with and without disabilities, rather than creating segregated social and societal patterns (Booth & Ainscow, 2002; Jackson, 2009; Katz & Sokal, 2016; Maciver, 2018; Mohamed, 2018; Shogren et al., 2015b). Despite these benefits associated with placement in general education classrooms, other researchers have found placement in the general education does not always produce the desired, equitable outcomes and experiences for students with disabilities.

Outcome inequities have been discovered when comparing outcomes of students with and without disabilities in the same classroom. Farrell, Dyson, Polat, Hutcheson, and Gallannaugh (2007) found a statistically insignificant correlation between inclusive placement and academic outcomes. McLeskey et al. (2014) questioned whether placement of students with disabilities in the general education setting could produce academic gains. Devries, Voß, and Gebhardt (2018) found significantly lower outcomes for students with disabilities in areas of academic self-concept, feelings of emotional inclusion, and incidence of conduct problems. Others have found lower social outcomes including social skills, friendship, or quality of social interactions (Bossaert, Colpin, Pijl, & Petry, 2015; Gottfried, 2014; Lorger, Schmidt, & Vukman, 2015; Lyons, Huber, Carter, Chen, & Ausmus, 2016; Petry, 2015; Schwab, 2019).

Observed inequities in the experiences of students with disabilities in general education classes may contribute to the inequity in outcomes. Decisions related to seating and support of students with disabilities within general education classrooms can be discriminatory. Physical marginalization of students with disabilities through seating arrangements away from peers or practices of removal them from the

classroom for support can result in significantly fewer social and communication exchanges with peers (Efthymiou & Kington, 2017; Feldman, Carter, & Brock, 2016). For example, observations across 21 different high schools revealed proximity, or physical presence that would allow for interaction, was identified in less than half of observations, and social interaction was observed in only one fifth of opportunities (Feldman et al., 2016). Additionally, the presence of adult support contributed to lower interaction, marginalization, and reduced time with the teacher, resulting in poorer education experiences for students with disabilities when compared to peers (Blatchford & Webster, 2018). Programming and support decisions directly impact the educational and social opportunities afforded to students. However, equal opportunities are not necessarily equitable in the provision of effective support.

Similar physical access to an educational environment or provision of equal instruction does not guarantee equitable experiences and outcomes. Even when afforded comparable quality educational tasks, the engagement (Gallagher & Odozi, 2015) and academic outcomes (Elliot, Kurz, Tindal, & Yel, 2017) of students with disabilities may not be equal. Such gaps in outcomes would suggest that equality of an experience may not equitably address the needs of diverse learners. Furthermore, good hearted but uninformed attempts at differentiation by teachers can result in tracking, or creation of educational programming paths that perpetuate lower performance by teaching lower level content, and can perpetuate lower performance and social segregation of students with disabilities (Bešic, Paleczek, Krammer, & Gasteiger-Klicpera, 2017; Crevecoeur, Sorenson, Mayorga, & Gonzalez, 2014; Efthymiou & Kington, 2017; Webster & Blatchford, 2018). Relatedly, students in the

same class may experience instruction differently in terms of the degree to which it is inclusive of them personally in how effectively and equitably it meets their needs (Devries et al., 2018; Schwab et al., 2018).

This inequity of instructional practice that can perpetuate the disadvantage of an individual with a disability is similar to and compounds discrimination or inequity on the basis of cultural, racial, or linguistic diversity. Perpetuation of lower performance can be seen in inequitable practices that result in a higher identification for disabilities based on race (Poon-McBrayer, 2016) as well as the overrepresentation of African-American students in self-contained classrooms (Theoharis & Causton, 2016). A gap exists in research on effective practices for linguistically and culturally diverse classrooms that include students with disabilities (Sciuchetti, 2017; Sinclair et al., 2018). Researchers reported demographic data in only 56% of empirical special education intervention studies (Sinclair, 2018). The documented underperformance and overrepresentation of students with disabilities and who are from culturally and linguistically diverse backgrounds may be linked to lack of implementation of third generation inclusion (Hagiwara et al., 2019). Third generation inclusion is described as practice moves beyond mere student placement in the general education setting to consideration of the match or mismatch of classroom, curricular, or instructional expectations and student needs or abilities. It then involves adapting these environmental factors to increase meaningful participation for students with disabilities. Hagiwara et al. (2019) indicated that "third generation practices are only now emerging and have yet to be systematically tested when applied in general education environments" (p. 12). Advocates of advancing research in this area called

for inclusion that is effective across a broad definition of diversity encompassing race, culture, gender, as well as disability (Bjornsrud & Nilsen, 2019; Booth & Ainscow, 2002; Connor & Cavendish, 2018; Gómez-Zepeda et al., 2016; Sciuchetti, 2017; Shogren et al., 2015b; Theoharis & Causton, 2016).

Special education practice has shifted toward placing more students with disabilities in the general education setting (McLeskey et al., 2011; McLeskey et al., 2012); however, more research is needed exploring inclusive classroom practices that produce positive outcomes for students with disabilities in general education classes (Dymond, Butler, Hopkins, & Patton, 2018; Elliot et al., 2017; Gauri & Bouck, 2017; Gómez-Zepeda, et al., 2016; Lindner, Alnahdi, Wahl, & Schwab, 2019; Maciver et al., 2018; Mulholland & O'Connor, 2016; Schwab, Sharma, & Loreman, 2018).

Background of the Study

The current knowledge on practice that is truly inclusive and provides positive experiences and actualized gains is largely based in qualitative research. Qualitative researchers have contributed to this body of knowledge through examination of schools and classrooms where successful inclusion was occurring (Gatlin & Wilson, 2016; Gomez-Zepeda et al., 2016; McLeskey et al., 2014; Olson, Leko, & Roberts, 2016; Shogren et al., 2015a; Shogren et al., 2015b; Tjernberg & Mattson, 2014). A number of these studies explored factors related to inclusion and its success, including beliefs and roles of staff to support inclusion (Bjornsrud & Nilsen, 2019; Gómez-Zepeda et al., 2016; Shoulders & Krei, 2016; Theoharis & Causton, 2016), collaboration across the school team as effective in promoting inclusion (Bulgren, Marquis, Deshler, Schumaker, Lenz, Davis, & Grossen, 2006; Everett, 2017;

Leighers, Kleinert, & Carter, 2017; Maciver et al., 2018; Mulholland & O'Connor, 2016; Olson et al., 2016), and instructional beliefs and approaches (Bešic et al., 2017; Bulgren et al, 2006; Farrell et al., 2007; Maciver, et al., 2018; McLeskey et al, 2014; Molbaek, 2018; Tjernberg & Mattson, 2014). These beliefs and values related to inclusion can and should impact the approaches and instruction utilized within classrooms. More specifically, participant perceptions found a number of classroom level instructional factors to be associated with the success of inclusive schools, including the following: teacher awareness and integration of individual and group needs (Everett, 2017; Leko, 2015; Shogren et al., 2015a.; Tjernberg & Mattson, 2014), use of peer support and social engagement (Efthymiou & Kington, 2017; Gomez-Zepeda et al., 2016; Leko, 2015; Olson et al., 2016; Tjernberg & Mattson, 2014), and student involvement in learning (Buli-Holmberg & Jeyaprathaban, 2016; Molbaek, 2018; Olson et al., 2016; Tjernberg & Mattson, 2014). The themes and ideas derived from perception studies have implications for classroom level decisions impacting inclusive intervention and instruction.

The bulk of quantitative research on students with disabilities in the general education setting has focused on consideration of the impacts of placement alone. A number of researchers have examined relationships between placement of students with disabilities and academic outcomes of students with disabilities (Cosier et al., 2013; Devries et al., 2018; Farrell et al., 2007; Gauri & Bouck, 2017; Wei et al., 2014) and students without disabilities (Brown & Babo, 2016; Furth & Woods, 2015). Still others have examined non-academic measures, including social outcomes of students with disabilities (Bossaert et al., 2015; Gottfried, 2014; Lorger et al.,

2015; Lyons et al., 2016; Petry, 2015; Schwab, 2019) and students' perception of their classroom experience (Connor & Cavendish, 2018; Devries et al.; 2018; Kelley, Brown, & Knapp, 2017; Lindner et al., 2019; Schwab et al., 2018). Other researchers moved from correlational research to providing a quantitative description of the types of classroom conditions present in general education classes that contained students with disabilities (Feldman et al., 2016; Webster & Blatchford, 2018); some researchers described the specific teaching decisions or instruction in the classroom (Efthymiou & Kington, 2017; Molbaek, 2018). The existing descriptive research is intended to complement the correlational perspective on mainstream placement of students with disabilities but does not yet consider the outcomes of students within the observed classes. As this body of knowledge grew, other researchers started to explore the impact of classroom level decisions regarding the environment and instruction through examining the outcomes of students within that class.

Thus far, fewer researchers have published research quantifying classroom level instruction and with any of analysis of its impact on student outcomes. Researchers doing this type of analysis have considered the following student outcomes: academic outcomes of students with disabilities (Elliot et al., 2017) and without disabilities (Demirdag, 2017), social outcomes of students with and without disabilities (Lindner et al., 2019), and academic engagement of students with disabilities (Gallagher & Odozi, 2015; McKenna, Muething, Flower, Bryant, & Bryant, 2015; Scott, Hirn, & Alter, 2014). Maciver et al. (2019) conducted a large-scale meta-analysis aimed to address this emerging understanding of what is effective at a classroom level for producing positive outcomes for students with disabilities.

Maciver et al.'s 2019 critical review of studies published between January 2006 and October 2018 in an effort to "identify what works for whom, in what circumstances, and what respects and how, by identifying processes (mechanisms) that lead" (p. 3) to participation of students with disabilities. They created a concept map from their metanalysis that visually represented the relationship between psychosocial and environmental factors and their impact on the participation of individuals with disabilities (Maciver et al., 2019).

Other researchers similarly expanded the literature on classroom practices that are inclusive through examination of students' reflections on their classroom experience. Researchers have begun to assess outcomes by capturing student perceptions of teachers' practice in comparison to support criteria (Bonati, 2018; Buli-Holmberg & Jeyaprathaban, 2016; Efthymiou & Kington, 2017) or their personal experience in response to teacher instruction (Katz & Sokal, 2016). Others have recently been developing measures to assess the inclusivity of the classroom experience; these measures will be contrasted with measures of personal self-perception outcomes (Lindner et al., 2019; Schwab et al., 2018).

Expansion of the research of inclusion is necessary to move beyond location as the primary definition of access (Lindner et al., 2019; Lyons, 2016; Schwab et al., 2018) to an understanding of inclusive practices that produce the support and instruction necessary for true access (Dymond et al., 2018). In terms of classroom level supports and approaches, the role and approach of classroom teachers (Efthymiou & Kington, 2017; Gallagher & Odozi, 2015; Mohamed, 2018) carries great significance, as the choices of the classroom teacher impact the opportunities

provided to students (Molbaek, 2018; Scott et al., 2014). Teacher choices impact the instructional context of a classroom, including environmental, social, and internal student factors, all of which influence student participation outcomes (Maciver et al., 2019). Further, it is suggested that teacher choices or classroom practices can moderate complications that can arise due behavioral or academic needs related to disability (Gottfried, 2014). Therefore, expanding what is known about teacher choices and classroom factors will increase classroom practices that lead to true access for students with disabilities.

Numerous researchers have noted a need for additional research on actual practice and instruction occurring in inclusive classrooms, especially with regard to adaptation or differentiation (Elliot et al., 2017; Maciver et al, 2018), curriculum (Kurth & Mastergeorge, 2012; Hagiwara et al, 2019), instruction (Guari & Bouck, 2017; Hang & Rabren, 2009; McLeskey et al, 2011; McLeskey et al., 2012; McLeskey et al., 2014; Webster & Blatchford, 2018), and structures or routines (Bulgren et al., 2006; Cosier et al., 2013; Maciver et al, 2018). Implementation of evidence-based practices within inclusive classrooms and individualization to student needs are required to realize the academic and social outcomes possible in inclusion (Carter et al., 2017; Feldman, et al., 2016); these ideas and interventions need to be implemented effectively to realize the positive outcomes (Detrich & Lewis, 2013).

Some researchers have begun to examine classroom practices with critical consideration of criteria associated with effective inclusive practice (Booth & Ainscow, 2002; Buli-Holmberg & Jeyaprathaban, 2016; Shogren, McCart, Lyon, & Sailor, 2015) or the presence of identified instructional criteria (Elliot et al, 2017;

McKenna et al., 2015). An approach that systematically assesses teacher implementation of practices associated with effectively promoting access through inclusive practice and its relationship to student outcomes would begin to address some of the gaps in the existing body of literature (Lindner et al., 2019; Schwab et al., 2018). The examined student outcomes should go beyond academic outcomes to also consider social outcomes (Chen, 2017; Cosier et al., 2013; Hagiwara et al., 2019; Hang & Rabren, 2009; Olson et al., 2016; Schwab, 2019). This work is foundational in increasing the understanding of learning environments and classroom practices that will reach students with special education needs from diverse backgrounds. Such information would contribute to the body of knowledge related to effective instructional approaches for inclusive practices.

Statement of the Problem

Recent reports estimated that students qualify for and receive services due to special education needs at a rate of 13.2% nationally (National Center for Education Statistics, 2019b), 16.2% across Minnesota (MN Report Card, 2019e), and 15.4% in Independent School District 196 (Rosemount, Apple Valley, and Eagan) (MN Report Card, 2019e). Students with special education needs perform behind their peers on both state and local levels. For instance, students with special education needs perform below their peers on each subject on the Minnesota Comprehensive Assessments (MCA). At the state level, the gap between students with special education needs and their peers was 35% on math, 35% on reading, and 62% on science (MN Report Card, 2019d). While ISD 196 overall had higher average scores

for both groups, the gap was greater than the state in areas of math and reading: 41% in math, 40% in reading, and 34% in science (MN Report Card, 2019d).

Students with special education needs graduate high school and enroll in college at lower rates than their general education peers. For graduation, there was a 16.9% difference in the national rate (National Center for Educational Statistics, 2019a) and a 20.9% difference in Minnesota (MN Report Card, 2019b). In Independent School District (ISD 196), 68.4% of students with special education needs graduated, a gap of 22.1%, with a dropout rate twice that of their peers (MN Report Card, 2019b). As for college enrollment, there is an enrollment level difference of 35% at the state level and in ISD 196 (MN Report Card, 2019a). Achievement while in high school can impact graduation, and academic achievement of students while in high school also evidenced a gap.

In addition to lower academic outcomes, students with special education needs also reported lower social engagement and feelings of inclusion compared to their peers. Particularly, students with special education needs report lower engagement, future outlook, and social connections compared to their peers (Minnesota Department of Education, 2018a). Students with special education needs also reported that they are less likely than their peers to care about doing well in school; 9.6% less across Minnesota, and 8.7% less in ISD 196. Additionally, compared to their peers, students with special education needs reported lower levels of feeling in control of their life and future; 8.2% less statewide, and 5.9% less in ISD 196 and feeling good about their future; 7.8% less statewide, and 6.3% less in ISD 196. Socially, students with special education needs reported similar levels of feeling

valued or appreciated but reported lower rate of building friendships with others; 8.3% lower statewide, and 7.3% lower in ISD 196 (Minnesota Department of Education, 2018a).

The majority of students with special education needs spend a large proportion of their time in general education classrooms. The percentage of students with special education needs who spent 80% or greater of their time in the general education setting was 62.5% nationally (National Center for Education Statistics, 2019c), 60.9% in Minnesota (Minnesota Department of Education, 2018b), and 62.9% in ISD 196 (Minnesota Department of Education, 2018b). While participation in general education classes is linked to positive outcomes for students with students with special education needs, little is known about actual practice and instruction occurring in inclusive classrooms, especially adaptations to the curriculum and environment (Dymond et al., 2018; Hagiwara et al., 2019). Additionally, there is little empirical research in relation to effective practices for linguistically and culturally diverse inclusive classrooms (Sciuchetti, 2017; Sinclair et al., 2018). Unless educators develop intentional interventions, they are unlikely to see the academic and social impacts of inclusive classrooms (Carter et al., 2017; Feldman et al., 2016; Gallagher & Odozi, 2015).

Therefore, given the placement of the majority of students with special education needs in the general education setting and the legal and moral imperative for equitable experiences (Jackson, 2009; Mohamed, 2018), researchers need to explore approaches in inclusive educational environments that raise achievement and minimize the performance gap for students with special education needs.

Purpose of the Study

The purpose of this study was to contribute to the research on classroom practices and their influence on students with and without disabilities (Devries et al., 2018; Schwab et al., 2018). The intent was to address the gap in literature related to actual practice and instruction in classrooms that include students with disabilities, including: planning related to student needs (Elliot et al., 2017; Kurth & Mastergeorge, 2012; Hagiwara et al, 2019; Maciver et al, 2018), instruction (Guari & Bouck, 2017; Hang & Rabren, 2009; McLeskey et al, 2011; McLeskey et al., 2012; McLeskey et al., 2014; Webster & Blatchford, 2018), and structures or routines in the classroom (Bulgren et al., 2006; Cosier et al., 2013; Maciver et al, 2018). The study intended to examine practices associated with inclusive classroom practice (Booth & Ainscow, 2002) and measure it through teacher reporting of their instructional decisions at a classroom level, including self-report on ratings of the inclusiveness of their practices (Sharma & Sokal, 2016). The impact of these teacher decisions (independent variable) was examined through analysis of their relationship to student self-perception outcomes (dependent variables) (Renick & Harter, 2012; Venetz, Zurbriggen, Eckhart, Schwab, & Hessels, 2015). This relationship was investigated in high school English Language Arts classes with three or more students with special education needs. Inclusive indicators include domains of planning, learning activities, student involvement, and assessment (Booth & Ainscow, 2002). These domains of inclusive practice were assessed through teacher report through a survey. The teacher survey included an additional rating scale that has been used in other studies to report

a scaled inclusiveness score, the Inclusive Teaching Practices Scale (ITPS) (Sharma & Sokal, 2016).

The study used student perception of academic self-concept and social inclusion as the outcomes or dependent variables. Students self-perception outcomes were used as a measure of the degree to quick the classroom instruction was inclusive of them personally in terms of how effectively and equitably it met their needs (Devries et al., 2018; Schwab et al., 2018; Sharma & Sokal, 2016) and its impact on their self-concept (Blatchford & Webster, 2018; Efthymiou & Kington, 2017; Katz & Sokal, 2016; Maciver et al., 2019; Renick & Harter, 2012). Statistical analysis examined whether or not the degree of implementation of inclusive practices, as measured by both teacher and student report, contributed to a difference in student perception outcomes. Student outcomes were compared based on identification of disability, race, gender, reported internal factors, and contextual factors to determine if there was a relationship between the reported instruction approach of the teacher and degree and equity of student outcomes within the class (Bjornsrud & Nilsen, 2019; Booth & Ainscow, 2002; Connor & Cavendish, 2018; Gómez-Zepeda et al., 2016; Sciuchetti, 2017; Shogren et al., 2015b; Sinclair et al., 2018; Theoharis & Causton, 2016).

Research Questions

The primary questions that guided this study were:

- Is there a relationship between the degree of implementation of inclusive practices in classroom practice and academic self-concept?

- Is there a relationship between the degree of implementation of inclusive practices in classroom practice and social inclusion?

Significance of the Study

The high placement of students with special education needs in general education classrooms, especially in the secondary setting, contributes to the significance of the study. The rate of placement of students with special education needs in general education has seen a sharp increase (McLeskey, et al., 2011) since the 2000 reauthorization of the Individual with Disabilities Education Act (IDEA) that promoted placement in the least restrictive environment (LRE). The placement of students with special education needs in the general education setting across all grade levels increased by 93% from 1991 to 2008 (McLeskey et al., 2012). That placement rate increased more significantly in secondary education with an increase rate of 191%, despite secondary settings being less advanced in using mainstream placements (McLeskey et al., 2012) and the existence of lower expectations for students based on having special education needs (Bulgren et al., 2006). Large scale correlational studies have found positive outcomes associated placement of students with disabilities in the general education setting in academic (Cosier et al., 2013; Gauri & Bouck, 2017; Gómez-Zepeda et al., 2016; Wei et al., 2014) and social outcomes (Bonati, 2018; Carter et al., 2017; Gómez-Zepeda et al., 2016; Hudson & Browder, 2014; Leighers, Kleinert, & Carter, 2017). A research-based understanding of classroom conditions that promote effective inclusion of students with special education is critical to realize the potential of such placement for students (Cosier et al., 2013; Hagiwara, 2019; Lindner et al., 2019). Expansion of the research of

inclusion is necessary to move beyond location as the primary definition of access (Lindner et al., 2019; Lyons et al., 2016; Schwab et al., 2018) to an understanding of inclusive practices that produce the support and instruction necessary for true access (Dymond et al., 2018).

A foundation of knowledge on inclusive practices has emerged through qualitative and perception studies. Perception studies exploring the experiences and reflections of staff involved in the work of supporting with students in general education classes found a number of classroom level instructional factors to be associated with the success of inclusive schools, including teacher consideration of student needs (Everett, 2017; Leko, 2015; Shogren et al., 2015a.; Tjernberg & Mattson, 2014), the social environment of the classroom (Efthymiou & Kington, 2017; Gomez-Zepeda et al., 2016; Leko, 2015; Olson et al., 2016; Tjernberg & Mattson, 2014), and the involvement of the student in his or her learning (Buli-Holmberg & Jeyaprathaban, 2016; Molbaek, 2018; Olson et al., 2016; Tjernberg & Mattson, 2014). The themes and ideas derived from case studies have implications for classroom level decisions impacting inclusive intervention and instruction (Buli-Holmberg & Jeyaprathaban, 2016; Maciver et al., 2018; Molbaek, 2018; Olson et al. 2016). These concepts related to classroom practices for inclusion are beginning to be explored in mixed methods (Shogren et al., 2015b; Webster & Blatchford, 2018) and quantitative research (Demirdag, 2017; Devries et al., 2018; Elliot et al., 2017; Feldman et al., 2016; Schwab et al., 2018).

This knowledge of classroom practice is still emerging, as researchers continue to define and quantify the "what" of inclusion (Shogren et al., 2015b). The

what of inclusion requires movement from conceptualization of vision and theory to actual classroom practice (Molbaek, 2018). Hagiwara et al. (2019) described the concept of third generation inclusion, which involves movement from mere placement of students in the general education setting to crafting the classroom environment in terms of curriculum, instruction, and interactions to meet student needs. Third generation inclusion can also be described as access, which describes an experience of belonging and appropriate levels of challenges for all students in terms of both instructional and social experiences in the classroom (Buli-Holmberg & Jeyaprathaban, 2016; Dymond et al., 2018; Lorger et al., 2015; Olson et al., 2016; Shogren et al., 2015b). Numerous researchers have called for additional research on actual practice and instruction occurring in inclusive classrooms (Dymond et al., 2018; Elliot et al., 2017; Guari & Bouck, 2017; Hagiwara et al, 2019; Maciver et al., 2018; McLeskey et al., 2014; Schwab et al., 2018; Webster & Blatchford, 2018). Implementation of evidence-based practices within inclusive classrooms and individualization to student need is required to realize the academic and social outcomes possible in inclusion (Carter et al., 2017; Detrich & Lewis, 2013; Feldman et al., 2016).

Several studies have argued that the role and approach of classroom teachers (Efthymiou & Kington, 2017; Gallagher & Odozi, 2015; Mohamed, 2018; Lorger et al., 2015) carries great significance, as the choices of the classroom teacher impact the opportunities provided to students (Molbaek, 2018). The context and individual experiences shaping their involvement and role in learning have a relationship with student participation outcomes (Maciver et al., 2019) are hypothesized as being

shaped and influenced by the pedagogical decisions of the teacher (Buli-Holmberg & Jeyaprathaban, 2016; Olson et al., 2016; Maciver et al., 2019; Molbaek, 2018; Shogren et al., 2015b). Additionally, teachers' choices or classroom practices can moderate complications that can arise due to behavioral or academic needs related to disability (Gottfried, 2014). Therefore, expanding what is known about teachers' choices and classroom factors by examining the relationship between such choices and students' outcomes would increase awareness of classroom practices that lead to true access for students with disabilities.

An approach that assesses teacher implementation of practices associated with effectively promoting access through inclusive practice and its relationship to student outcomes would begin to address some of the gaps in the existing body of literature (Devries et al., 2018; Schwab et al., 2018). Access should be defined in terms of academic and social outcomes for students (Chen, 2017; Cosier et al., 2013; Hagiwara et al., 2019; Hang & Rabren, 2009; Olson et al., 2016; Schwab, 2018). Adoption of this definition of access is the foundation of learning environments and classroom practices that will reach students with special education needs from diverse backgrounds (Ainscow & Booth, 2002; Connor & Cavendish, 2018; Sciuchetti, 2017; Sinclair et al., 2018). Such information would contribute to the body of knowledge related to effective instructional approaches for inclusive practices.

The decisions of a teacher before, during, and after instruction are critical in the construction of the learning experience for students with disabilities and the social and academic outcomes of the experience (Efthymiou & Kington, 2017; Molbaek, 2018). The results of the study should have benefits for students, including

meaningful participation in general education classroom associated with academic (Cosier et al, 2013; Gatlin & Wilson, 2016; Gómez-Zepeda et al., 2016), social (Bonati, 2018; Carter et al., 2017; Gómez-Zepeda et al., 2016; Hudson & Browder, 2014; Leighers et al., 2017), and post-secondary outcomes (Gauri & Bouck, 2017; Wei et al., 2014). If teachers are to effectively educate students with diverse needs, they will need to be equipped with the knowledge and skills necessary for such a learning context. Gallagher and Odozi (2015) argued that the skills of teachers and service providers directly impacts the quality of services provided to students with special education needs. A universal instructional approach should maintain academic rigor, be multi-level, offer differentiation, and use authentic assessment (Katz & Sokal, 2016). This type of inclusion and access for students with disabilities requires careful construction of instructional and social contexts, curriculum, instruction, and collaboration (Olson et al., 2016). The study has implications for increasing competence and efficacy of teachers when working with inclusive classrooms (Bulgren et al., 2006; Everett, 2017; Maciver et al., 2019; Parsons, Miller, & Deris, 2016; Shoulders & Krei, 2016; Smith Catner, King, Williams, Metcalf, & Rhys Myrick Potts, 2017), greater clarity around their role in supporting students with special education needs (Gómez-Zepeda et al., 2016; Maciver et al., 2018; Maciver et al, 2019; Molbaek, 2018), and offering additional insight on practices and collaboration (Bešic et al., 2017; Maciver et al, 2019; Mulholland & O'Connor, 2016; Tjernberg & Mattson, 2014; Webster & Blatchford, 2018).

Additionally, the study has implications for contributing to classroom practices that embrace and benefit from the diversity of all students. Inclusion

involves crafting environments where barriers are less likely to interfere with individuals on the basis of disability, race, culture, or other factors (Booth & Ainscow, 2002; Connor & Cavendish, 2018; Sciuchetti, 2017; Sinclair et al., 2018). Inclusion also embraces the differences of individuals as an asset (Jackson, 2009) and in such a setting "all students are recognized for the richness and diversity of strengths they bring to their classroom and school communities" (Sciuchetti, 2017, p. 1250). Beyond educational equity, inclusion embraces an ideology that the learning experience for all is expanded by the diversity of its participants; "Richer learning might occur when children with differing traits and skills are brought together to solve the same challenges, especially if the natural diversity among children was cultivated when they are resolving challenges together" (Jackson, 2009, p. 182). Identifying classroom approaches that capitalize on such an opportunity will contribute to the classroom and school experience of all children.

Beyond the classroom context, the study may have significance for policy and decisions of learning organizations. Policy shifts at a national level are responsible for the overarching shift in placement decisions (McLeskey et al., 2012) as well as state target rates for promoting placement in more inclusive settings (Minnesota Department of Education, 2018b). However, at the local level, the reality is that placement decisions have more to do with district policy or preference and therefore vary by district (Kurth & Mastergeorge, 2012). This study should aid in the shift away from a reliance on self-contained classrooms, especially at a building level (Jackson, 2009; Theoharis & Causton, 2016) by contributing to informed classroom practices for inclusive classrooms (Tjernberg & Mattson, 2014). This knowledge can

be used to influence placement decisions, program development, professional development, and school wide practice.

Definition of Terms

Access: Description of an education experience that provides an individual with meaningful academic and/or social engagement that facilitates and challenges the student in a way that produces learning and positive identity.

Co-Taught: An instructional delivery model, that involves two teachers responsible for teaching a class. It often involves partnership between one general education and one special education teacher.

General education: A class or classes not provided in a special education setting, often referring to core content classes.

Inclusion: The practice of including students with disabilities within a general education class in a way that provides meaningful involvement and engagement that equitably contributes to the learning and experience of those students.

Individual Education Plan (IEP): A plan describing individual programming, services, and supports determined in response to the specific needs of an individual who meets education criteria for a disability in accordance with federal and state guidelines (IDEA, 2004).

Placement: The act of including one or more students with disabilities in a general education class without necessarily offering any description or contingency on the type of instruction or support provided to the student.

Students with disabilities: Students who have met educational criteria for provision of special education services due to their identification of having a disability in one of the 13 disability categories covered under IDEA (2004).

Universal Design for Learning (UDL): An education framework that was designed to support educational staff in proactively planning for diversity of students (CAST, 2018; Cook & Rao, 2018). UDL involves tailoring educational structures, instruction, and curriculum to meet the needs of the widest range of learners (Crevecoeur et al., 2014; Rose & Meyer, 2002).

Organization of the Remainder of the Study

Chapter One provides an introduction to the study, synthesizing the overall background and importance of the proposed research. Chapter Two presents a review of the literature on the education of students with disabilities in the general education environment. It organizes the literature in a manner that mirrors a socio-ecological perspective of learning and disability, starting from contextual factors such as the classroom teacher and social context of the classroom to individual student experiences and internal factors. Chapter Three outlines the research design, theoretical basis, and methodology of the proposed study. The instruments, including the developed teacher survey and the student self-perception survey, are described, along with the proposed procedures and sample. Chapter Four contains the findings of the study and chapter Five provides a summary, conclusion, and recommendations for the study upon completion of the data collection.

Chapter Two: Literature Review

Inclusion in the Socio-Ecological System of a School

The socio-ecological theory (Hobbs, 1966) offers a helpful perspective in conceptualizing the factors that influence the inclusivity of an individual's experience. A socio-ecological theory of disability emphasizes the existence and experience of an individual within larger social and environmental layers. These layers include cultural and social expectations of society, the community, school, classroom, interpersonal relationships, and intrapersonal experiences. It views disability as attributed to challenges or difficulties experienced when the characteristics of the individual conflict with the presumptions of these social and environmental layers rather than a defining deficit or characteristic of the individual (Hobbs, 1966). Considering barriers as external, environmental factors allow for an approach to inclusion where the environment is altered to better embrace the individual.

Socio-ecological theory emphasizes environmental factors as contributing to challenges or deficits associated with disability, contributing to a mismatch between the student and the environment (Hobbs, 1966). A traditional perspective on disability would characterize disability as a disturbance associated with the child while the socio-ecological theory within education would characterize this as a complication or barrier in interaction due to a mismatch between the child and the ecosystem of their educational environment (Wilson, 2013). While this perspective on disability is attributed to a mismatch between the individual and their environment, the solution is to change the environment rather than the child (Blatchford & Webster, 2018;

Hagiwara et al., 2019; Jackson, 2009). Barriers can stem from a mismatch of curriculum, presentation of curriculum, and curriculum sequence that are not appropriate for the needs of the student (Cook & Rao, 2018). Additionally, the educational environment is influenced by the interconnected nature of context, interaction, and pedagogy (Blatchford & Webster, 2018).

From this theoretical perspective, there are numerous environmental factors that can systematically impact the experiences and inclusion of students with disabilities. These environmental factors can also contribute to other systemic complications. It is identified that there is disproportionate representation of students from socio-culturally, racially/ethnically, and/or linguistically diverse backgrounds, due to environmental factors affecting rates of referrals (Poon-McBrayer, 2016; Sciuchetti, 2017). Additionally, there is also an overrepresentation of African-American students in self-contained classrooms (Theoharis & Causton, 2016). Environmental factors within an education system can contribute to inequitable systems that disproportionately impact students where their ability or background does not match the environment. Therefore, inclusive practices can benefit from embracing a socio-environmental perspective that critically considers how environmental factors can be shifted or adapted to match or encompass the needs of individual students, rather than defaulting to exclusion of students. Such an approach requires a posture of teachers and systems that seek to understand and adapt to students (Tjernberg & Mattson, 2014).

Within the socio-ecological layer of a classroom, Wenger (1998) developed a social learning theory, communities of practice. Communities of practice

conceptualized learning as an interactive experience of constructing meaning within a community through an interconnected relationship between practice and identity. His theory emphasized the importance of individual involvement in the process of meaning-making that shaped individual identity within the social context of community. Maciver et al. (2019) published a conceptual framework developed from a systematic review of research on the participation of students with disabilities in school that confirms this perspective. Their findings of indicate a cyclical relationship between the context of a student, their individual and internal mechanisms (i.e., experience, competence, and identity), and outcomes (Maciver et al., 2019). Therefore, the outcomes of an individual exist and develop within the broader socio-ecological components of his or her context.

The discussion of the literature on educational involvement and inclusion of students with disabilities will follow the broad structure of a socio-ecological perspective on disability (Hobbs, 1966) and mirroring the context factors identified by Maciver et al. (2019): classroom teacher, social context, classroom structures and organizations, instructional approaches and strategies, curricular adaptation, and internal aspects of the student experience.

Inclusion of students with disabilities requires more than placement in the general education setting and considers the involvement of the student within the classroom (Dymond et al., 2018; Hagiwara et al., 2019; Lorger, 2015; Lyons et al., 2016; Olson et al., 2016; Shogren et al., 2015b). Inclusion and involvement of the student encompasses social belonging and integration in the social community (Bjornsrud & Nilsen, 2019; Lorger et al., 2015), as well as meaningful involvement in

the learning practice within the classroom community (Wenger, 1998). Inclusion relates to access of students with disabilities, which includes instructional and social contexts, curriculum, instruction, and collaboration (Olson et al., 2016), all of which are factors associated with the classroom. Wilson (2013) described this as the ecosystem of the classroom, in describing the various environmental factors that a teacher needs to consider and adjust in response to the needs of the individual.

Classroom Teacher

The classroom teacher plays a significant role in the social and academic of outcomes of students with disabilities in the general education setting (Efthymiou & Kington, 2017; Gallagher & Odozi, 2015; Gatlin & Wilson, 2016; Lorger et al., 2015; Shogren et al., 2015a). Teacher instructional behaviors influence student engagement and disruption, and these instructional or facilitative choices influence the classroom context in which students with disabilities would be included (Scott et al., 2014). Efthymiou and Kington (2017) identified the behaviors and practices of the classroom teacher as having the greatest impact on educational outcomes for students with disabilities. African American students with disabilities in the small case study by Gatlin and Wilson (2016) described the role of the teacher as critical in their academic outcomes. Additionally, students have identified the teacher as central to their feelings of support and safety (Shogren et al., 2015b). It has been noted and reported by general education teachers that their relationship with students with disabilities and specific disability identification can differ (Santos, Sardinha, & Reis, 2016). Differences can include the level of dependence on the teacher, level of

conflict, and closeness. Yet, it is possible that organizational factors may influence these relationships (Santos et al., 2016).

When it comes to including students with disabilities in the general education classroom and working for inclusion and access, the skills of the teacher are important to provision of quality supports and services (Gallagher & Odozi, 2015; Lorger et al., 2015). The teacher plays an important role in creating the educational environment and experience through his or her instructional decisions, which then directly impact the quality of service provided to students (Gallagher & Odozi, 2015; Lorger et al., 2015; Scott et al., 2014). Connor and Cavendish (2018) described that "working with [students] in a unique classroom ecology as opposed to applying generic strategies to them will help teachers create and maintain authentic relationships with their classrooms" (p. 18). The work of inclusion requires a transformation or redefinition of the role of the teacher (Altemueller & Lindquist, 2017; Mohamed, 2018).

Scott et al. (2014) conducted a large-scale observational study that examined the correlation between teacher instructional behaviors and student engagement and disruption across 1,197 observations. Using a broad definition of instruction including whole group, small group peer, small group teacher, and one-on-one instruction, Scott et al. analyzed the relationship between the degree teachers were engaging in instruction and students were engaged. Their analysis revealed differences across elementary and secondary classrooms in instructional behaviors of teachers and differences in use of instructional grouping methods. The researchers found a positive relationship between instructional behavior of the teacher and engagement of

students. However, they found 40% of the class time did not have teacher instruction, even with a broad definition of instruction and conducting all observations in the middle of class periods to avoid transition or attendance related disruption. Secondary classrooms were observed to employ less instructional behaviors than elementary classrooms. They identified that their evidence would suggest insufficient facilitation of engagement based on their observations of teacher instruction, and they cautioned about negative implications for students who already have academic, attention, or behavior related disabilities (Scott et al., 2014).

Efthymiou and Kington (2017) conducted a qualitative study that explored the impact of teacher practice on inclusion through the perspective of two teachers and four students, ages eleven to twelve, with mild to moderate disabilities. The study concluded that the greatest influence on the social and educational outcomes of students with disabilities were the behaviors and practices of the teacher. Choices by the teacher related to instructional approach and grouping decisions influenced student experiences with social inclusion, educational progress, and academic identity. From their findings, Efthymiou and Kington (2017) promoted an approach by teachers that is flexible and person-centered.

Classroom teacher decisions influence the classroom environment, including opportunities to respond and interact. McKenna et al. (2015) sought to examine the relationship between praise and student engagement. In their observations in four ninth grade classes (two English and two math), they found low rates of opportunities to respond, as low as one third to half of the recommended rate. Similarly, they found low rates of praise within the classroom. Ultimately, the hypothesized relationships

were not confirmed, likely due to the low rates being too low to impact classroom engagement (McKenna et al., 2015). Such factors, like opportunities to respond and provision of praise, are examples of classroom factors that are present based on the teacher decisions that impact the environment and opportunities of the classroom.

Teacher decisions related to grouping and support by additional adults within the classroom can indirectly influence the amount of interaction and time with the teacher (Blatchford & Webster, 2018). In one study, classrooms that used an approach characterized by homogenous groups supported by a teaching assistant resulted in students with disabilities having less time with teachers compared to others (Blatchford & Webster, 2018). Similarly, another study found that teacher assistants had a social segregating effect, as it interfered with interactions with peers without disabilities and resulted in less interaction with the teacher (Efthymiou & Kington, 2017). Therefore, teacher decisions around adult support within the classroom can indirectly influence the social interactions and instructional exchanges with other students, staff, and the teacher within the classroom.

Connor and Cavendish (2018) conducted a qualitative study that involved gathering the perspective of high school students with learning disabilities on things that make a teacher effective or ineffective. Coding of student responses revealed two predominant types of responses from students: teacher characteristics and pedagogical practices. In terms of teacher characteristics, students identified: empathy, accepting of difference, supportive, dedicated, and firm. Students described ineffective teachers as indifferent, unresponsive to individual needs, having a bad attitude, and disrespectful. Students seemed to have an awareness and value of

teachers who were effective in their classroom practices, knowledgeable about content and effective instruction, with an evident interest and understanding of students and their broader lives rather than a transactional exchange. Connor and Cavendish (2018) synthesized student responses in saying that students overall value teachers who “balanc[e] content, motivation, and individualised support” (pp. 11-12).

Overall, the important role of the teacher relates to their influence and impact of their decisions related to the classroom environment or learning ecosystem experienced by students; this has a direct influence on the type of services and support provided to students (Gallagher & Odozi, 2015). As articulated by Scott et al. (2014), "As the leaders of instruction, teachers shoulder the responsibility for facilitating student engagement and success" (p. 199). Students with and without disabilities within effective inclusive classrooms recognized classroom management, via expectations and systems for enforcement, as important to their educational experience (Shogren et al., 2015b). The classroom teacher is important to inclusion in terms of their relationship with students, the opportunities and types of interactions allowed within the classroom, approach to classroom management, and in the instructional decisions that impact both social and academic aspects of the educational experience within the classroom. The teacher is important in orchestration of the various aspects of the classroom environment.

Facilitative. Adopting a facilitative role as a teacher has been recommended as an effective approach in inclusive classrooms (Bonati, 2018; Efthymiou & Kington, 2017; Leighers et al., 2017; Mohamed, 2018). In an academic discussion of an inclusive approach through a serving-learning project between two high school

classes (media arts class and a special education class for students with moderate to severe disabilities), Bonati (2018) recommended a facilitative approach without neglecting or overlooking the role of direct instruction within the learning process. This facilitative approach was characterized by the involvement of students in planning the project, initiation and completion of the steps of the project, and monitoring of learning outcomes, including goals or objectives of the Individual Education Plans (IEP) of students with disabilities (Bonati, 2018). Similarly, Leighers et al. (2017) examined implementation of peer support strategies for students with significant disabilities within two middle schools and two high schools and described adult actions related to structuring systems and opportunities for peer support as characteristics of facilitation. They described tasks such as communication, intention in scheduling for partnering of students within the same classes, creating databases of willing general education peers, structuring networks of adult supports, and development of goals as foundational work to facilitate this peer connection (Leighers et al., 2017). A facilitative role of staff involves intentional planning and creation of opportunities or systems that enables interaction between special education and general education students in a way that meaningfully meets student needs (Bonati, 2018).

Overall, a facilitative approach allows for more control and involvement in the hands of students (Altemueller & Lindquist, 2017). Facilitative teachers shift attention off of themselves and onto the learner (Altemueller & Lindquist, 2017). Teacher practices that are facilitative often integrate educational and social considerations and tend to include more dialogue and interaction both with the

teacher and peers (Efthymiou & Kington, 2017). These classrooms are more likely to be active and promote communication, compared to classrooms that are more strictly academic focused, competitive, or teacher focused (Efthymiou & Kington, 2017). When Demirdag (2017) examined academic outcomes for students without disabilities in inclusive and non-inclusive, classrooms that had a culture of peer support, rather than a higher focus on the teacher and teacher support outperformed even non-inclusive classrooms. A facilitative approach by a teacher is associated with higher student involvement in learning activities, social involvement, and potential for increased academic gains (Altemueller & Lindquist, 2017; Demirdag, 2017; Efthymiou & Kington, 2017).

Flexible. Another important characteristic of the teacher and approach to classroom instruction associated with effective inclusion is flexibility. Flexibility is important for teachers and service providers in terms of both approaches used (Bešic et al., 2017; Bonati, 2018; Farrell et al., 2007; Maciver et al., 2018; Tjernberg & Mattson, 2014) and their role (Gomez-Zepeda et al., 2016; Olson et al., 2016). Inherent in inclusion is the challenge presented in meeting the needs of diverse learners, and it is commonly noted that a flexible approach, defined by observing and learning about the unique learners to inform instruction and decisions of the teacher (Maciver et al., 2018; Tjernberg & Mattson, 2014). This requires an approach that is flexible and innovative (Bešic et al., 2017)

Maciver et al. (2018) explored practices and designs across secondary schools to examine how high school teachers went about meeting the learning needs of students in the classroom. The study included over eighty school staff members and

identified the importance of adjusting the physical environment, social environment, and practices of the teacher to support what the student can do. They emphasized the critical nature of interactions and exchanges between the individual and the environment (Maciver et al., 2018). Similarly, in a longitudinal case study of an inclusive elementary school, Tjernberg and Mattson (2014) described a type of flexibility that emerges from teacher awareness of students, followed by adapting to individual students. It described teachers as *engaging in the mess of the learning process* or learning from students in a way that influenced the types of grouping, instructional decisions, and interventions used within the classroom (Tjernberg & Mattson, 2014). This is similar to what was described by staff working together to support the inclusion of students with severe disabilities in the study by Olson et al. (2016). It is a type of flexibility that begins with awareness of individual needs that influences the learning opportunities and teaching style used in crafting the educational environment and experience. Additionally, it is simultaneously planned, but also requires in the moment decision making in the construction of opportunities for individual students (Olson et al., 2016).

Effective inclusion often requires that teachers and staff are flexible and shift from the traditional conception of a teacher's role. Teacher participants in the case study by Olson et al. (2016) identified shifts in the role of general education teachers. One of the shifts involved general education teachers moving beyond the role of curriculum and content expert to adopt some of the approaches and tasks traditionally done by special education teachers, including modifying and adapting instruction and materials to better meet the needs of students with disabilities. The 70 high school

teachers interviewed in the study by Bulgren et al. (2006) identified a necessary shift from the role of teaching content to also teach students how to learn. The study specifically focused on the evolution of the role of special education teachers within the movement to schoolwide inclusion, Gomez-Zepeda et al. (2016) found the role of special education shifted to promote and coordinate various services across the school and the day of the student, as well as a shift to be part of promoting improvement in the learning of all. Overall, inclusion requires flexibility by teachers both in the planning and day to day operation of their classroom and possibly the overarching focus of their role.

Responsive to student needs. For a classroom to be inclusive, instruction at the classroom level needs to be responsive to student needs and reject the one size fits all approach (Bonati, 2018; Bulgren et al., 2006; Crevecoeur et al., 2014; Jackson, 2009; Maciver et al., 2018; Tjernberg & Mattson, 2014). The environment, content, and interactions within the classroom should reflect the culture of the students (Sciuchetti, 2017). Responsiveness requires a balance of classroom level and individual consideration. It is recommended that teachers create a classroom level plan for diversity of all students (Cook & Rao, 2018; Crevecoeur et al., 2014). Such classroom level planning aligns with the concept of Universal Design for Learning (UDL), which plans for planning diversity of learners in opportunities for engagement, representation, and action or expression (Crevecoeur et al., 2014) and should be considered in unit, activity, instructional, and assessment planning. Within and aligned with this classroom planning, the teacher can build in individualized instruction (Bešic et al., 2017).

In line with being responsive to student needs, person-centered planning has been identified as a means of creating an effective academic and social environment (Efthymiou & Kington, 2017). It should be noted that this relates to the need for differentiation, not just homogenous tracking; homogenous grouping is found to have the negative affect of reducing the amount of teacher time spent with students with disabilities and (Webster & Blatchford, 2018) and can contribute to lower performance and social segregation (Efthymiou & Kington, 2017) or social discrimination of students with disabilities within the class (Schwab, 2019). Everett (2017) identified a number of good practices by the general education teacher that supported responsiveness to individual student needs including: a review of all student Individual Education Plans (IEP), individual conferencing with students on IEPs, student tracking of progress, and use of application or real-life problems to support progress towards transition goals. The individual student needs should then be integrated into the content and instruction within the classroom (Bonati, 2018; Everett, 2017). Inclusive, responsive instruction requires movement from content coverage to engagement in cognitive processing, skills instruction, and teaching students how to learn (Bulgren et al., 2006; Elliot et al., 2017) with a focus on increasing and extending student capacity.

Being responsive to student needs requires recognition of the variance in individual skill and appropriately providing interventions and support to facilitate skill growth. Lyons et al. (2016) conducted a quantitative study examining teacher and parent ratings of social skills and behavior problems of 137 high school students with severe disabilities. Their findings revealed a high degree of variation of social

skills and problem behaviors and they suggested that such variation among students requires highly individualized intervention (Lyons et al., 2016). The ability to be responsive through individualization comes from an approach that is student-centered, rather than teacher-centered (Altemueller & Lindquist, 2017; Efthymiou & Kington, 2017; Mohamed, 2018).

Groundwork for responding to the needs of students with disabilities begins with all staff involved (i.e., teacher, special education case manager, and any paraprofessionals or teacher assistants) knowing the student's IEP, the classroom curriculum, and any positive behavioral support plans (PBSP) (Gallagher & Odozi, 2015). Collaboration in initial classroom planning can establish environmental and ongoing considerations (Bonati, 2018; Everett, 2017). This knowledge, paired with ongoing observation of the student growth and performance should inform the day to day classroom level instructional decisions (Olson et al., 2016; Tjernberg & Mattson, 2014).

Social Context

Social opportunity and potential for social growth is often anticipated with placement of students with disabilities within the general education setting. However, time in the general education setting alone has not been found to improve social and behavioral outcomes (Lyons et al., 2016). Of students who were included in the general education setting, just over 25% of parents rated the level of peer interaction as unsatisfactory (Chen, 2017). In the study by Shogren et al. (2015a), students with disabilities identified the importance of friends and opportunity for reciprocal relationships, but the researchers noted that these students still needed more support

to develop these reciprocal relationships. Across the literature, there is evidence that there are aspects related to the social environment within the classroom that influence the overall experiences of students in general education classrooms (Bjornsrud & Nilsen, 2019; Efthymiou & Kington, 2017; Feldman et al., 2016; Gallagher & Odozi, 2015) or the social outcomes (Bossaert et al., 2015; Devries et al., 2018; Lyons et al., 2016; Petry, 2018; Schwab, 2019).

Inclusion goes beyond mere placement of students with disabilities in the general education setting and allows students with disabilities to experience actual social belonging and integration in the social community (Bjornsrud & Nilsen, 2019; Lindner et al., 2018). Advocates of inclusion on the basis of ability, culture, and language promote the idea that classrooms establish relationships for "rich understanding of lived experiences and backgrounds" (Sciuchetti, 2017, p. 1249). However, studies examining the social conditions and opportunities for social interaction within the general education classroom were often limited for students with disabilities (Bjornsrud & Nilsen, 2019; Efthymiou & Kington, 2017; Feldman et al., 2016; Gallagher & Odozi, 2015).

Feldman et al. (2016) examined the presence, proximity to peers, and the occurrence of interactions of high school students with severe disabilities. Limited opportunity to interact and work with peers were observed despite being in the same classroom. Proximity of the student with disability that would allow for interaction with peers was observed only 42.3% of class time. Proximity was influenced by late arrival or early dismissal from class as well as seating arrangements within the classroom. The actual occurrence of interaction was even less with interactions of

students with disabilities and mainstream peers occurring in about one fifth (21.8%) of opportunities. The large sample size and range of schools suggest that these conditions are likely common practice, and such findings illuminate the limited social opportunities actually provided to students with disabilities (Feldman et al., 2016).

Efthymiou and Kington (2017) described a similar occurrence in the experience of four students with mild to moderate disabilities in two primary schools in England, describing a "physical marginalization" of students with disabilities, influenced when teachers used seating by ability (p. 16). Such a practice of homogenous seating influenced interaction during whole group instruction and presented less opportunity for challenge of students with disabilities. They observed fewer social interactions and occurrences of communication and concluded that seating within the classroom influenced social opportunities, as well as whether or not the instruction had an individual or collaborative focus (Efthymiou & Kington, 2017). However, proximity within the general education classroom on its own is still not enough to ensure students with disabilities benefit from general education instruction (Gallagher & Odozi, 2015).

While their case study was small, the findings of Gallagher and Odozi (2015) offered factors to be considered in relation to instructional inclusion. Their research showed that even with proximity to peers, students with disabilities demonstrated lower engagement. They attributed the lower outcomes of students with disabilities to insufficient support in instruction, behavior, and the provision of accommodations and modifications (Gallagher & Odozi, 2015).

Related to proximity and its influence on social opportunities, Blatchford and Webster (2018) examined the impact of the presence of teaching assistants on the social interactions between students with disabilities and their peers. Observations indicated that the presence of a teaching assistant notably impacted the social interactions with peers. They observed that one fifth of interactions of students with disabilities were with teaching assistants and outweighed interactions with peers. Additionally, when a teaching assistant was present, the students with disabilities had less time with teachers compared peers (Blatchford & Webster, 2018). This suggested that the presence of a teaching assistant has a notable impact on the social environment for students with disabilities and can interfere with interaction with peers and the teacher.

Placement of students within the general education setting alone does not cause social interaction. The social context and experience of students with disabilities is influenced by their presence and proximity to peers within the setting of the classroom in both primary and secondary level classrooms (Efthymiou & Kington, 2017; Feldman et al., 2016). Additionally, the presence of teaching assistants has also been found to negatively impact the social opportunities for students with disabilities (Blatchford & Webster, 2018). These findings have implications for the construction of the social environment and provision of support and structures to enable students with disabilities to benefit from placement in the general education setting (Gallagher & Odozi, 2015). The classroom environment should be structured to allow for the presence and proximity of students with disabilities to their peers, provision of the needed support, and should offer

instruction that promotes increased collaboration and cooperation among students (Altemueller & Lindquist, 2017).

Classroom peer support. Peer support has been identified as a classroom component that is beneficial for inclusion of students with disabilities (Bonati, 2018; Gómez-Zepeda et al., 2016). Peer support can be conceptualized in terms of general collaboration in classroom learning and projects between students with and without disabilities (Bonati, 2018) or a description of the ongoing dynamics of the classroom with peers supporting one another in their learning (Demirdag, 2017; Gómez-Zepeda et al., 2016; Olson et al., 2016).

Peer support can be defined or conceptualized in different ways, and this consideration has implications for practice. Peer support can refer to the broader culture of collaboration in learning as Wenger (1998) discussed in the theory of communities of practice. Wenger described an interconnected relationship between the individual and his or her identity, practice, community, and meaning. Each component is seen as interdependent and suggests that learning, or negotiation of meaning, is social and therefore dependent upon the interaction of the individual within his or her community. This theory promotes a facilitated interdependence of students rather than the expectation that individual learners take on similar or identical roles in the classroom (Wenger, 1998). The interconnected work of students as members of the classroom is critical to the construction of meaning and the task of learning. The expression of this theory can be seen in classrooms where students, including those with disabilities, are collaboratively and uniquely engaged in the

learning work of the classroom (Bonati, 2018; Demirdag, 2017; Gómez-Zepeda et al., 2016; Olson et al., 2016).

Collaboration between students within a classroom contributes to more student-centered learning through the promotion of student involvement (Altemueller & Lindquist, 2017; Efthymiou & Kington, 2017) and movement away from the view of teacher as the sole dispenser of knowledge, support, or assistance (Demirdag, 2017; Olson et al., 2016). In one qualitative case study in a high school, school staff reported that peers played an integral role in the support of students with severe disabilities (Olson et al., 2016). They described that peers without disabilities were part of facilitating access to curriculum, serving as both academic and behavioral support to their peers with disabilities. In a study involving inclusion of students with severe disabilities within a general education elective course, teachers acquired permission to share student goal information with general education peers and included them as a support to their peers with disabilities in working on their goals (Bonati, 2018). This peer support was seen as a positive experience by students with and without disabilities. Not only does this classroom culture of peer support offer positive possibilities for students with disabilities, but it is associated with higher levels of academic growth for students without disabilities (Demirdag, 2017) and has been described as having a shared benefit for students with and without disabilities (Gomez-Zepeda et al., 2016).

In a quantitative study that compared pre- and post- exam scores for students without disabilities, the 20 eighth grade students who participated in the inclusion science class outperformed the 20 eighth grade students who participated in non-

inclusive science class in the same school (Demirdag, 2017). Demirdag (2017) found that participation in inclusive science classrooms had a significant positive relationship with outcomes on conceptual understanding for students without disabilities. A similar comparison was conducted with sixth and seventh grade classrooms; while students demonstrated growth in conceptual understanding, the 20 students from each inclusion room demonstrated a lesser degree of growth when compared to the non-inclusion room. Demirdag (2017) described a high degree of peer support within the eighth-grade inclusive science class that reduced the impact on teacher time in supporting students with disabilities and increased the academic outcomes for students without disabilities.

Classroom Structures and Organization

Structure and organization are components of the classroom context that can influence accessibility of learning in the classroom and inclusiveness (Maciver et al, 2019). Structure and organization of a classroom include the rules and routines (Molbaek, 2018) as well as an approach to classroom management (Parsons et al., 2016). This aspect of the classroom context is heavily influenced by theoretical and pedagogical knowledge of the teacher (Webster & Blatchford, 2018) as he or she makes decisions about the day-to-day operations of the classroom. This classroom level component is influenced by the teacher and both impacts and is impacted by the social, instructional, and curricular dimensions of the classroom ecosystem (Gallagher & Odozi, 2015; Maciver et al, 2019; Olson et al., 2016; Wilson, 2013).

Maciver et al. (2019) identified *qualities of structure and organization* as one of the contexts that can influence participation of students with disabilities in the

general education classroom (p. 9). They developed a theoretical framework that emerged from their meta-analysis and synthesis of the psychosocial and environmental factors that demonstrated a researched relationship with the participation of students with disabilities, ages four to 12. The contexts included structures and organization, peers, adults, physical spaces, and objects. The contexts were identified as interrelated, and the *quality* of organization and structure was considered in terms of the "tailoring to the child through flexibility and routines" (Maciver et al., 2019, p. 9). Additionally, contexts that were identified as beneficial to the participation of students with disabilities could be described as adaptive, responsive, facilitative, and well-planned. It was noted that lack of individualization was identified as the most common barrier to effective implementation of inclusive contexts (Maciver et al., 2019).

Molbaek (2018) contributed to the literature on the structure and organization of the classroom through a case study that examined teacher and research views impacting the production of knowledge within inclusive classrooms. Molbaek's work examined teacher decisions at a classroom level that influence participation of students. "In a context where more students are to be included in regular classrooms, the teachers' choices before, during and after the teaching are perceived as being even more essential for all students' opportunities for participation in the learning activities" (p. 1050). Her research further demonstrated the interrelated, complex components of inclusion through an examination of classroom teacher decision-making and planning across four dimensions. The framing dimension addressed structures and the organization of the classroom. It focused on visibility of the rules

and routines, clarity in practice, and was associated with the continuation and flexibility of learning. Additionally, this dimension considered how the teacher responded or reacted to interruption or non-compliance (Molbaek, 2018).

The classroom structure and organization are interrelated with the other aspects of the classroom environment, including the social dynamics and interactions, role and use of curriculum, and instructional exchanges that can be aligned through a student-centered approach (Buli-Holmberg & Jeyaprathaban, 2016; Maciver et al., 2019; Molbaek, 2018). The structure and organization of the classroom can be best leveraged in support of inclusion when approached from a student-centered focus that promotes choice, rather than a more traditional approach to classroom management with a higher teacher focus (Altemueller & Lindquist, 2017; Maciver et al., 2019). The routines and structure of the classroom need to be considered and adapted in to meet the needs of kids (Shogren et al., 2015b). Inclusion is most likely to be supported through classroom routines and structures that are well-planned and consistent but balanced with flexibility and responsiveness (Harn, Parisi, & Stoolmiller, 2013; Maciver et al., 2019) The practice and execution of effective, student-centered classroom structures and organization are a part of the emerging work around the "what" of inclusion (Shogren et al., 2015b) and require integration of practice and theory to move from the vision of inclusion to classroom practice (Molbaek, 2018). The structure and organization of the classroom environment are an aspect of the contextual components related to access and should be considered in conjunction with the social and instructional components and individual experience

(Buli-Holmberg & Jeyaprathaban, 2016; Maciver et al., 2019; Lorger et al., 2015; Olson et al., 2016; Schwab, 2018).

Instructional Approaches and Strategies

Instruction is an important aspect of the environment that needs to be considered for creating a match with the needs and abilities of students (Shogren et al., 2015b). This includes consideration and adaptation of the instructional strategies (Jackson, 2009; Shogren et al., 2015b) and instructional grouping (Bešic et al., 2017; Blatchford & Webster, 2018; Buli-Holmberg & Jeyaprathaban, 2016; Elliot et al., 2017; Olson et al., 2016; Tjernberg & Mattson, 2014) as a part of a systematic and deliberate system of teaching and re-teaching (Prater, 2014) of both skills and content (Bulgren et al., 2006; Shogren et al., 2015a). Choices related to the type of instructional delivery model and duration of it are and should be determined in an effort to complement content and student learning needs (Kelley et al., 2017). Review of literature from the last decade has shown an increase on research focused on academic interventions for students with disabilities, which encompasses instructional decisions (Dymond et al., 2018). As for instruction, researchers have called for a progressive, rather than a traditional, approach (Buli-Holmberg & Jeyaprathaban, 2016; Jackson, 2009; Mohamed, 2018), characterized by methods that are student-centered, collective, innovative, and promote an active role of the student (Connor & Cavendish, 2018; Mohamed, 2018). It has been identified that when classroom teachers are proficient at this component of instructionally meeting the needs of students, it can result in no need for students to request additional accommodation (Prater, 2014) and valued by students (Connor & Cavendish, 2018). In one study,

high school students with learning disabilities indicated instruction was effective when it was engaging, multimodal, explained clearly, and personalized rather than unvaried, boring, or too fast of pace (Connor & Cavendish, 2018). Dymond et al. (2018) called for a closer examination of quality instructional practices for students with disabilities, especially within secondary general education classrooms. Some researchers have begun to examine and evaluate the instruction occurring in inclusive classrooms (Buli-Holmberg & Jeyaprathaban, 2016; Elliot et al., 2017; Gallagher & Odozi, 2015; Molbaek, 2018; Shogren et al., 2015a).

Shogren et al. (2015a) examined the experiences of students with and without disabilities educated in inclusive schools, in terms of culture, inclusion, and practice. Students with and without disabilities indicated that they identified and appreciated instruction that supported self-determination, student direction, and multiple means of representation. A theme emerged in that students valued teachers who support development of self-direction and self-determination (Shogren et al., 2015a). These student perceptions (Shogren et al., 2015a) indicate awareness and value of what was identified by a perceived shift in the role of teachers in a previous teacher perception study by Bulgren et al. (2006), describing the need for teachers to instruct on more than just content but also how to learn.

In the same year, Gallagher and Odozi (2015) conducted a mixed method study that examined the triangular interactions between teachers, students, and content in examining the degree to which students with special education needs were effectively included. Data was gathered through observations using the Protocol for Assessment of Common Core Teaching (ProACCT), which measured academic

engagement through student participation, cognitive demand of lesson tasks, and the academic language used by students when they are learning content. The observations lasted the length of the class lesson, and the study incorporated three individual student case studies, gathering both quantitative and qualitative data in the observations. Gallagher and Odozi (2015) identified lower engagement of students with special education needs when compared to the class as a whole. The observations indicated a need for provision of specialized academic and behavioral supports. Additionally, Gallagher and Odozi (2015) suggested certain structures must be in place: close collaboration between the case manager and teacher, training for support staff, staff understanding of the link between the IEP and curriculum, and matching of IEP goals to standards. They noted proximity was not enough to ensure students can benefit from instruction in general education support, due to insufficient support instructionally and behaviorally and in terms of the provision of accommodations and modifications. Gallagher and Odozi (2015) reported that the quality of services was directly related to skills of teachers and service providers.

Gatlin and Wilson (2016) examined the experiences of two high school African American students with learning disabilities who had been educated in inclusive classrooms and demonstrated academic success. The case study interviewed the students, parents, and teachers. Responses from participants indicated a pattern of the expectations, support, and opportunities to support organization skills as central to the success of these students. Additionally, the parents of both students noted that neither student had ever been in a self-contained special education class, and each

parent independently reported this as significant to the success of the student (Galtin & Wilson, 2016).

A different qualitative case study by Buli-Holmberg and Jeyaprathaban (2016) evaluated the effectiveness of teaching practices for students with special education needs in general education classes through the lens of five different approaches to teaching. The researchers examined the following five teaching practices: traditional teaching, varied and flexible, one to one within the classroom, one to one teaching outside the classroom, and teaching in small groups outside the classroom. These teaching practices were assessed through ten criteria developed by the researchers in the areas of interaction, support, and adaptation. Overall, the varied and flexible approach to teaching was the only practice that met all of the criteria. Additionally, they noted different levels of mastery of the criteria, depending on ability and support of the teacher and the importance of the active role and involvement of both the general education and special education teachers in the classroom (Buli-Holmberg & Jeyaprathaban, 2016).

A later qualitative study (Elliot et al., 2017) examined the relationship between Opportunity to Learn criteria in a classroom and the relationship with end of the year achievement for students with and without disabilities. The study used teacher self-reporting of Opportunity to Learn criteria as well as observations to determine if the educational experience and opportunity was equal for students with and without disabilities. Teachers charted and tracked Opportunity to Learn Criteria, including: instructional time, content coverage, cognitive processes, instructional practices, and grouping format used in the classroom. Examination of the data

revealed no significant differences in the instruction of students with and without disabilities in terms of the experiences with Opportunity to Learn criteria and found relatively small correlation with end of year scores. However, there was still variance in end of year scores between students with and without disabilities. It was noted that they had no way of charting actions to differentiate or better support students, based on their needs. Elliot et al. (2017) concluded that equal opportunity to learn may not be equitable and suggested students with disabilities likely need more time and more differentiation. Unlike the findings of Feldman et al. (2016), which had quantified differences in the educational opportunities of students with severe disabilities within the same classroom as peers without disabilities, Elliot and colleagues' (2017) research suggests that equality of experience is not necessarily equitable or effective in meeting diverse needs.

A study by Webster and Blatchford (2018) used observations and student interviews to assess the nature and quality of the day-to-day educational experiences of adolescent students with disabilities across 34 schools in England. The researchers specifically focused on inclusiveness, appropriateness, and effectiveness of the educational experiences for students with high level needs. Webster and Blatchford (2018) described limited development of the understanding and practice of differentiation, with teachers implementing practices that focused more on tracking. This involved heterogeneous grouping by ability and resulted in practices similar to ability tracking, a pitfall noted by other studies as well (Bešic et al., 2017). Webster and Blatchford (2018) noted a gap in teacher knowledge related to support and strategies for students with special education needs. They described being "unable to

find evidence of an effective and theoretically grounded pedagogy for pupils with [special education needs] in the instructional approaches used by either teachers or TAs" (Webster & Blatchford, 2018, p. 12). The provision of instruction that will effectively meet the needs of students with mixed abilities requires individualization and differentiation, but teachers often struggle to implement this (Bešic et al., 2017; Webster & Blatchford, 2018).

Molbaek's 2018 case study used action research to increase teacher pedagogy and effectiveness of decision making for students with disabilities in general education classrooms. They constructed four dimensions to describe the types of decisions made by the teacher when planning. The four dimensions included framing, relational, organizational, and didactic. While all of these dimensions impact the learning experiences of students with disabilities, the didactic dimension specifically related the process of learning and practices to differentiation and varied approaches to teaching and learning, and the relational dimension directly related to the types of interactions, exchanges, and involvement of students in learning activities and the classroom community. Molbaek (2018) emphasized the critical impact of teacher decision making on the opportunities for participation and learning of students with disabilities. He described evidence of the four dimensions in examples of inclusive teaching, and he suggested the dimensions can serve as tools to facilitate discussion about decisions and good instructional practice. Molbaek (2018) described the complex nature of inclusive practices that require thoughtful integration of practice and theory.

Effective instructional approaches and strategies for inclusion begin with a rich classroom learning environment for all students (Elliot et al., 2017), then must be flexibly tailored to meet the unique needs of students (Bešic et al., 2017; Buli-Holmberg & Jeyaprathaban, 2016; Gallagher & Odozi, 2015; Shogren et al., 2015b; Webster & Blatchford, 2018). The instructional approaches and supports offered and their effectiveness in terms of meeting the needs of students is directly related to teacher pedagogy and practice for inclusive classroom practice (Gallagher & Odozi, 2015; Molbaek, 2018; Shogren et al., 2015a; Webster & Blatchford, 2018), and there is an identified need for additional research on quality instructional practices for students with disabilities (Shogren et al., 2015b.), especially within secondary general education classroom (Dymond et al., 2018).

Variety and flexibility in instructional practice. A varied and flexible approach to instruction is most suited to meet inclusion criteria related to interaction, support, and adaptation (Buli-Holmberg and Jeyaprathaban; 2016; Kelley et al., 2017). An instructional approach that is flexible and varied is helpful in promoting interaction, something that has been identified in other studies as being limited for students with disabilities (Chen, 2017; Efthymiou & Kington, 2017; Feldman et al., 2016; Gallagher & Odozi, 2015). Buli-Holmberg and Jeyaprathaban (2016) found this increased social interaction with a flexible and varied approach allowed for greater support from the learning community of the classroom, which has shown to produce increased academic gains for students in the classroom (Demirdag, 2017) and increased progress towards the goals of students with disabilities (Bonati, 2018; Olson et al., 2016).

Flexibility has been identified as a critical component of Universal Design for Learning (UDL) (Cook & Rao, 2018). In their discussion of UDL and evidence-based practices for students with learning disabilities, Cook and Rao (2018) drew a distinction between macro practices and micro practices. They described macro practices as larger scale programs or curriculum and described micro practices as smaller strategies, interventions, or practices that can be woven into various contexts and settings. Such language indicates the existence and potential for application of micro practices that are specific and evidence-based in their effectiveness for students with disabilities. Cook and Rao (2018) argued that this conceptualization of intervention makes it possible to implement specific, targeted practice to intervene with needs in flexible formats and settings. If a general education classroom was structured to use a varied and flexible teaching approach, that flexibility would allow for implementation of various micro practices as appropriate to the needs of students.

Shogren et al. (2015b) described a combination of flexibility both in the classroom environment and in the provision of additional intervention to meet the needs of students with disabilities. This classroom flexibility was designed to meet the needs of students, use data to make decisions, offer individualization to meet the needs of students, and involve staff sharing responsibility to meet the needs of students. Select instances were reported where students may be provided with some pullout support, but pullout services occurred only if needed to accelerate growth or provide very unique supports and were restricted to a brief period of time (Shogren et al., 2015b).

Instructionally meeting the needs of students with disabilities requires differentiation and individualization to provide the support necessary to equitably advance the learning outcomes of students (Bešic et al., 2017; Buli-Holmberg & Jeyaprathaban, 2016; Gallagher & Odozi, 2015; Shogren et al., 2015b; Webster & Blatchford, 2018). Provision of such support and differentiation is best done through an instructional approach that is varied and flexible (Buli-Holmberg & Jeyaprathaban, 2016) and provides space for implementation of specific, evidence-based practices to meet student needs (Cook & Rao, 2018).

Direct skill instruction. A number of researchers have identified the need for direct skill instruction to address specific student needs (Bonati, 2018; Carter et al., 2017; Hudson & Browder, 2014; Maciver et al., 2018). It is cautioned that application of this concept of direct instruction still needs to be responsiveness to student needs, and not a one size fits all approach (Bonati, 2018; Bulgren et al., 2006; Crevecoeur et al., 2014; Jackson, 2009; Maciver et al., 2018; Tjernberg & Mattson, 2014). Appropriate application of direct instruction requires consideration of the match between the topic for direct instruction, the number of students with needs related to the topic, the extent of their needs, and the decision of the format in which the direct skill instruction is delivered (Bešic et al., 2017; Bonati, 2018; Buli-Holmberg & Jeyaprathaban, 2016; Gallagher & Odozi, 2015; Shogren et al., 2015b; Webster & Blatchford, 2018).

Bonati (2018) described the use of direct instruction and other instruction decisions by general education and special education teachers in an inclusive service-learning project. The exploration aimed to demonstrate how collaborative planning

between general education and special education can influence curriculum, instruction, and assessment. The project merged two high school classes, including fourteen students from a general education media arts class and eight students with moderate to severe intellectual disabilities. Bonati (2018) described teachers adopting a facilitative role throughout the unit, paired with direct instruction for specific skills. Teachers demonstrated flexibility in choosing the instructional format to best support the learning goals and engagement of students. This occurred within a collaborative partnership between the general and special education teachers, where they worked to unify the general education curriculum and individual goals (Bonati, 2018).

Other researchers have examined interventions and supports delivered to students with disabilities in the general education classroom that include direct instruction (Carter et al., 2017; Hudson & Browder, 2014). In their examination of a peer delivered system of intervention, Hudson and Browder (2014) noted the importance of pre-teaching both academic and non-academic skills and concepts to students with disabilities. Additionally, their intervention incorporated careful application of least prompts intervention delivered by a peer (Hudson & Browder, 2014). Carter et al. (2017) included pre-teaching of content and roles for peers without disabilities who would be providing the support to their peers with disabilities. In both cases, direct and explicit teaching occurred in conjunction with a general education classroom environment that was defined by integration of student goal areas into the curriculum.

In both cases (Carter et al., 2017; Hudson & Browder, 2014), the direct instruction specifically targeted areas that were relevant to the classroom, either

academically or in terms of social interaction, and this approach of providing direct instruction for these necessarily skills could part of what Shogren et al. (2015b) described as the mutually reinforcing layers of effective inclusive support. The educational staff in the study by Maciver et al. (2018) emphasized the role of the teacher in constructing classroom environments that met student needs. They suggested that inclusive classrooms need to be learner centered and will simultaneously require certain adult-led strategies to meet the needs and facilitate skill and knowledge construction for individuals. "By focusing on the environment and the role of practitioners (rather than focusing on what an individual learner can and cannot do), the structure provides a focus for practitioners' which decentralize children's personal limitations and disabilities" (p. 1715). Constructing an inclusive classroom environment requires opportunities where the teacher or practitioner can respond with instruction or intervention tailored to the needs of select or individual students (Cook, Rao, & Collins, 2017) in a way that extends his or her capacity and involvement in the learning activities and classroom environment.

Flexible grouping. Grouping students within a classroom is an approach that can be used to aid in the provision of inclusive instruction (Bešic et al., 2017; Blatchford & Webster, 2018; Crevecoeur et al., 2014; Efthymiou & Kington, 2017; Olson et al., 2016). Certain practices with grouping have contributed to positive and supportive classroom environments characterized by collaboration (Bešic et al., 2017; Olson et al., 2016). In contrast, other practices like consistent use of ability-grouping that started as an effort to differentiate have resulted in perpetuating low performance and negative self-identity (Crevecoeur et al., 2014; Efthymiou & Kington, 2017;

Webster & Blatchford, 2018). Purposeful and flexible approaches to grouping have been associated with positive contribution to inclusive classroom practice (Bešic et al., 2017; Crevecoeur et al., 2014; Olson et al., 2016).

The case study by Efthymiou and Kington (2017) made note of the negative impact of ability grouping in their examination of teacher practices in two primary schools. Through observations, interviews, and focus groups, they found ability grouping contributed to lower academic performance and social interaction as well as an increased need to work with teacher assistants, thus reducing time with the teacher. Ability grouping did not contribute to educational progress or inclusion but rather contributed to negative academic identity of the students with disabilities who were often placed in the lower ability groups (Efthymiou & Kington, 2017).

Webster and Blatchford (2018) found similar negative outcomes associated with ability grouping and likened the practice to tracking that occurred in lieu of true differentiation of classroom practice and instruction. In 1,132 hours of observing 13- and 14-year-old students with disabilities, Webster and Blatchford noted that students with disabilities spent less time in mixed-attainment groups and observed a common practice of setting up groupings within the class, usually based on attainment. While the decision to use ability-grouping stemmed from an intent to help and meet the needs of students with disabilities, this practice had unintended consequences. Such grouping resulted in separation of students with disabilities and contributed to fewer interactions with peers and less time with teachers compared to others (Blatchford & Webster, 2018).

Experts interviewed in the study by Bešic et al. (2017) described using heterogeneous grouping to mitigate the negative outcomes associated with ability-grouping. Study participants described the necessity for innovative and flexible practices within the classroom. One practice identified was offering similar options for additional assistance or support to students with and without disabilities (Bešic et al., 2017) and has been cited by other researchers on inclusive practice (Buli-Holmberg & Jeyaprathaban, 2016). Conversely, it has been noted that offering support to students with disabilities only can contribute to a stigmatizing experience (Efthymiou & Kington, 2017).

Olson et al. (2016) described various grouping practices in a middle school identified as exemplar in inclusion. Participants noted employing a variety of learning arrangements, including one-on-one, partner, small group, or large group; the learning arrangement was based on individual needs, teacher styles, curriculum demands, and peer participation for the current learning activity (Olson et al., 2016). Grouping practices that are most supportive of inclusion are flexible and adjusted in a purposeful manner, considering the goals of the given learning activity and the impact on the experience and support of the students.

Co-teaching as an instructional approach. Co-teaching is an instructional approach that involves two teachers teaching together within a single classroom; it has been implemented and examined in an effort to support the needs of students with disabilities in general education classrooms (Gómez-Zepeda, et al., 2016; Hang & Rabren, 2009; Khoury, 2014; Mulholland & O'Connor, 2016). Co-teaching has been identified as an effective practice for inclusion by schools noted for the level of

inclusiveness and high achievement (Shogren et al., 2015b). This approach allows for collaboration between teachers to support students with severe disabilities (Olson et al., 2016) while also supporting students without disabilities (Gómez-Zepeda et al., 2016; Shogren et al., 2015a). Earlier literature on co-teaching (Hang & Rabren, 2009) called for researchers to examine the actual practices used in co-teaching and other characteristics of the classroom environment or learning experiences, and the body of research with this closer perspective is just beginning to emerge (Kelley et al., 2017). A number of qualitative and mixed methods studies have been conducted to explore practices in effective inclusive settings (Bešic et al., 2017, Gómez-Zepeda et al., 2016; Kelley et al., 2017; Mulholland & O'Connor, 2016).

In 2009, Hang and Rabren examined the influence of co-teaching on academic outcomes for students with disabilities as well as the perceptions of first year co-teachers on co-teaching as an instructional approach. Hang and Rabren (2009) found a statistically significant increase in the reading and math performance of students with disabilities when they received instruction in a co-taught class. However, they also found an increase in the number of absences, tardies, and behavioral referrals. Teacher input revealed a positive perception of co-teaching and an increased ability to support the needs of students with disabilities. Yet, they did note some differences in the degree of their response, with special education teachers more strongly agreeing with the effectiveness of co-teaching. Additionally, both general and special education teachers noted the critical importance of planning time. Despite the overall positive outcomes of both quantified academic performance and perception data, Hang and Rabren (2009) noted the need to "investigate the actual amount and degree

of support provided to students with disabilities by teachers implementing co-teaching versus other instructional approaches" (p. 267).

A later meta-analysis of quantitative studies by Khoury (2014) attempted to continue the exploration of the outcomes of co-teaching by examining the effects of co-teaching on academic outcomes and the role that secondary moderators or characteristics play on academic outcomes in co-teaching. The meta-analysis confirmed the findings of academic outcomes associated with co-teaching and found that co-teaching did have a significant effect size in improving the academic performance of students compared to those not in a co-taught setting. It also suggested that there was a greater benefit in academic outcomes associated with participation in a co-taught class for more than a year. However, the approaches to co-teaching could not be analyzed due to a lack of reporting in studies (Khoury, 2014). Rabren (2009) and Khoury (2014) both indicated the need for additional information on the degree of support provided in co-teaching and its impact. Khoury (2014) suggested that future research should include an analysis of other variables, including “classroom setting, type of disabilities, teacher characteristics, school climate and method of co-teaching implemented” (p. 35) by expanding the variables and factors reported.

Shogren et al. (2015b) indirectly contributed to the literature on co-teaching as a component within their exploration of culture, inclusion, and practices within effective inclusive classrooms. Teachers and students in the exemplar schools included within the study described co-teaching as a means to partner in the work of supporting student success. This was reflected as a success in the perceptions of

students with and without disabilities, as well as increased teacher capacity to support students within the general education class. The students with and without disabilities reported increased access to teacher support from both the general education and special education teachers. Shared responsibility for both populations of students was evidenced in the responses of students. Additionally, participant responses contributed to a description of flexible grouping with focused instruction on identified skills more specific to what the students needed to learn (Shogren et al., 2015b).

A later qualitative study in Spain by Gómez-Zepeda et al. (2016) contributed to the literature on actual practices within co-teaching by more closely examining the role of the special education teacher within inclusive classrooms. The study examined practices within three inclusive preschool and elementary schools, which had been selected for documented improvements in student learning and noted demographic diversity. This exploration considered the development of the role of the Support and Attention to Diversity Teacher, which traditionally was considered a special education teacher. Construction of the role focused on addressing the underlying factors by first removing barriers the working to accelerate the growth of students with disadvantages. Themes emerged regarding the nature of classrooms and the role of the Support and Attention to Diversity Teacher in contributing to such classroom environments. Classrooms were characterized by individualized care and a focus of bringing resources to the student, not removing students for access to specialized support or resources. Teachers demonstrated shared responsibility for all learners and participants noted the benefits of two teachers being able to facilitate smaller heterogeneous groups and diversify support. They described facilitation of peer

support within the classroom and teacher collaboration on creation of materials, design of strategies, and adjustments of support. Specifically, the Support and Attention to Diversity Teacher worked to promote and coordinate various services. All participants saw the Support and Attention to Diversity Teacher as part of learning improvement of all, not just students with special education needs. Additionally, participants noted the experience and collaborative work of co-teaching resulted in improved teacher performance (Gómez-Zepeda et al., 2016).

Mulholland and O'Connor (2016) examined the degree and nature of collaboration within general education and special education teacher partnerships, as well as obstacles and benefits of collaboration. Collaboration, as described in the study, encompassed co-teaching as well as means of collaborating that did not involve daily shared teaching presence in a classroom. All 90 teacher participants said collaboration took place and described it as a “very important dimension of their teaching" (Mulholland & O'Connor, 2016, p. 1075). Teacher input identified that collaboration and a strong working relationship was critical to provision of inclusion and appropriate educational support for students with disabilities. Collaboration was identified as effective for inclusion because of the "capacity-building potential of co-operative learning and shared experience" of both students and staff (Mulholland & O'Connor, 2016, p. 1079). They considered team teaching, or co-teaching, to be an effective means of progressing towards more collaborative practice. However, with inclusive practice, they noted practice drifted to separate, supplemental instruction rather than actual recommended inclusive practice in situations that lacked clarity on expectations or implementation of inclusion.

Bešic et al. (2017) interviewed co-teaching partners to get their perspectives as experts on the implementation of inclusion at a class level. A barrier of teachers' tendency to want to stick to a traditional single teacher model even in co-taught classes was noted. They emphasized the need to individualize instruction and offer differentiation but noted challenges with resources, cooperation between staff, and limitations on time (Bešic et al., 2017). For managing the classroom learning environment, a number of teachers described offering the opportunity to leave the room to all students, which could be compared to the one on one outside the room or small group outside the room discussed by Buli-Holmberg and Jeyaprathaban (2016). Bešic et al. (2017) noted the recommendation of using heterogeneous grouping due to negative outcomes associated with ability grouping.

Kelley et al. (2017) conducted a unique study in that they primarily focused on student perceptions to consider and compare the results of various co-teaching models. Over a six-week period, the co-teachers partnered with the researcher to implement the five models of co-teaching (one teach/one assist, station teaching, alternative teaching, parallel teaching, and team teaching) for at least two consecutive days each, and student perspectives were gathered on the experience. Overall, results supported the idea that more benefit was derived from variation in the approach to instruction or support rather than lying with a single type or approach to instruction. Conversely, the lack of variation contributed to an unsuccessful co-taught classroom (Kelley et al., 2017).

The positives associated with co-teaching go beyond students with disabilities (Gómez-Zepeda et al., 2016; Shogren et al., 2015a; Smith et al., 2017). In addition to

providing additional support to students within the classroom, co-teaching offers positive possibilities for expanding teachers' knowledge and skills with inclusive pedagogy (Gómez-Zepeda et al., 2016). Co-teaching is associated with greater potential, support and resources for teachers, to implement Universal Design for Learning and thus, can contribute to a shift in classroom and teacher practices (Smith et al., 2017); this can be stymied by teachers' tendency towards a traditional single teacher model (Bešic et al., 2017). Co-teaching is most effectively inclusive in classroom settings where co-teaching partnerships offer support to all students and does not associate or attach support to students with disabilities only (Shogren et al., 2015a).

Curricular Adaptation

Inclusive classroom practice includes leveraging the environment, including curriculum and instruction, to support and appropriately challenge students (Shogren et al., 2015b). Providing access to general education curriculum is multi-dimensional and complex (Olson et al., 2016) as it encompasses multiple, interrelated facets of the educational and instructional ecosystem. Just as instruction needs to be adapted to address the diverse needs of students, materials or curriculum should be adapted to meet student needs, as interrelated components of classroom instruction (Jackson, 2009). Effectively adapted curriculum should both offer challenge to students and facilitate student learning (Shogren et al., 2015b). In order to provide meaningful access and engagement in general education classrooms, teachers need to plan and prepare with differentiation, accommodations, and modifications for students with severe disabilities (Olson et al., 2016). Despite the importance of adaptation of

curriculum and materials for the participation of students with disabilities in general education classrooms, there is a significant lack of research on this topic (Hagiwara et al., 2019).

In her academic discussion of whether or not to adapt evidence-based practices, Leko (2015) suggested that adaptation can increase student engagement, appeal to student interests, and meet student needs. In the study by Shogren et al. (2015a), students with and without disabilities self-reported that they valued and appreciated materials available in formats more effective for them. In contrast, the observational study conducted by Gallagher and Odozi (2015) noted lower engagement of students with disabilities when adaptations were not in place. They conducted observations in three individual student case studies using the Protocol for Assessment of Common Core Teaching (ProACCT), which measured academic engagement through student participation, cognitive demand of lesson tasks, and the academic language used by students when they were learning content. In their assessment of the triangular relationship between teacher, student, and content, it was noted that sufficient support was not in place, including appropriate accommodations and modifications, which impacted student engagement (Gallagher & Odozi, 2015).

In Buli-Holmberg and Jeyaprathaban's (2016) case study examining five different approaches to teaching, adaptation was one of three outcome areas. Ratings of teaching methods on adaptation, interaction, support were used to assess the effectiveness of teaching methods in meeting the needs of students with disabilities. Assessment of adaptation included consideration in the following areas: mastery of learning, classroom facilities, learning materials, and instructions. Findings were

founded upon and affirmed the belief that inclusiveness is a result of interrelated components of the classroom ecosystem. Buli-Holmberg and Jeyaprathaban (2016) found the greatest degree of student development for students with disabilities occurred in the varied and flexible approach to instruction, which entailed a different arrangement of the physical classroom and materials than is typical in classrooms using a traditional approach.

In the exploration of the impact of teacher practice on inclusion in two primary schools, Efthymiou and Kington (2017) suggested that curriculum differentiation contributed to the development of cognitive, behavioral, and task outcomes. However, they cautioned that teachers be considerate of the appearance and application of diverse materials, as it can influence visibility of differences or weakness and influence interaction, identity, and labels (Efthymiou & Kington, 2017). While adaptation and differentiation of curriculum and materials is important for access, teachers should consider its implementation within the complex learning ecosystem within the classroom community and avoid differentiation practices that are exclusive to students with disabilities.

Adaptation of curriculum and materials is interrelated with instruction and the types of interactions or engagement of members of the classroom (Buli-Holmberg & Jeyaprathaban, 2016; Jackson, 2009; Gallagher & Odozi, 2015; Olson et al., 2016; Shogren et al., 2015a; Shogren et al., 2015b), but systematic exploration in research and effective implementation continue to be in explored (Bešic et al., 2017; Hagiwara et al., 2019). The experts interviewed in a 2017 study (Bešic et al.) acknowledged differentiation as an important aspect of inclusive practice but noted teacher

challenges with resources, cooperation, access, and time. A systematic review of literature found a fraction of studies in the area of curricular adaptation, three studies, when compared to instructional supports with 47 studies and participation supports with 34 studies (Hagiwara et al., 2019). This was attributed to the idea that development of student skills has tended to focus on instructional support or promoting participation, rather than individualized learning through adapting the curriculum to meet student needs (Hagiwara et al., 2019). Adaptation of curriculum and materials needs to continue to be explored as a component of the classroom ecosystem that impacts inclusiveness and access for students with disabilities.

Universal Design for Learning. Universal Design for Learning (UDL) is a framework for teaching that aims to craft classroom experiences that meet the needs of a broad range of students (Cook & Rao, 2018; Crevecoeur et al., 2014; Rose & Meyer, 2002). Universal Design for Learning operates from the premise that when students experience barriers in their classroom education, the problem lies with the curriculum and instruction rather than the student (Rose & Meyer, 2002). Universal Design for Learning is anchored in the concept that teachers need to proactively plan for diversity of the student group in their classroom and to navigate with flexibility in their planning and instructional decisions to meet and address student needs (Cook & Rao, 2018). This planning for diversity requires broad inclusive planning, as well as making shifts in instruction and curriculum along the way to meet the needs of the widest range of learners, rather than working from a singular curriculum that is believed to fit the needs of all (Crevecoeur et al., 2014; Ok, Rao, Bryant & McDougall, 2017).

The organization CAST, Center for Applied Special Technology, is a nonprofit research organization that actively promotes University Design for Learning (UDL) and has published a visual framework of guidelines (CAST, 2018) that is often cited and used in research related to UDL (Cook & Rao, 2018; Crevecoeur et al., 2014; Ok et al., 2017; Prater, 2014; Smith et al., 2017). CAST framework, or Universal Design for Learning Guidelines version 2.2, is a visual representation of various aspects of learning that continues to evolve with science-based research on inclusion and learning (CAST, 2018). The guidelines capture three components related to access to learning experiences including: the "why" of learning or engagement, the "what" of learning or representation, and the "how" of learning as action and expression (CAST, 2018). These layers of UDL offer concrete suggestions for users to consider in crafting instructional and curricular experiences that empower students to become "purposeful and motivated," "resourceful and knowledgeable," and "strategic and goal-directed" (CAST, 2018). The guidelines are designed to be used as a tool by educators to provide meaningful learning experiences for students.

A study by Prater (2014) on teaching self-advocacy high school students with learning disabilities indirectly captured an example of the impact of Universal Design for Learning (UDL) in one of the cases. Prater (2014) involved teaching four self-advocacy lessons to three classes of high school students; four students were then observed with their implementation of the self-advocacy strategy. While the study primarily focused on effectiveness of the lesson delivery on self-advocacy in terms of student follow through, it was noted that one student in a class with a teacher proficient at UDL had no need to request accommodations, as the teacher had already

created an inclusive classroom experiences to the degree that no additional individual accommodation or modification was needed (Prater, 2014). Additionally, Cook et al. (2017) indicated that this flexibility of the classroom structure allowed by UDL makes it possible to embed intervention strategies and support within the class. Through development of teacher efficacy in using inclusive practices, in this case through a developed understanding of UDL, it is possible for teacher choices and actions to bear the responsibility of ensuring the learning experiences provide access to all students, rather than relying on individual accommodation or modification that could be exclusive, draw negative peer attention to the student with a disability, or be dependent upon the student's ability to recognize when their needs are not being met, communicate this to the teacher, and adequately receive and apply a separate accommodation or modification.

Teacher efficacy in inclusive practice and implementation of Universal Design for Learning can be cultivated through professional development (Smith et al., 2017). In an exploration of professional development related to the implementation of Universal Design for Learning, Smith et al. (2017) found shifts in teacher knowledge, perception, and instructional practice of UDL. They noted co-teaching partnerships provided greater built in potential, in terms of support and resources for teachers, to implement UDL and shift practice (Smith et al., 2017). There is value of teachers at any level broadening their understanding of UDL as a framework for inclusion as UDL can be applied across a range of age and grade levels (Crevecoeur et al., 2014; Ok et al., 2017; Smith Catner et al., 2017).

Ok et al. (2017) conducted a systematic review of 13 empirical studies examining Universal Design for Learning (UDL) in Pre-kindergarten through twelfth grade classrooms between 2000-2014. Overall, the findings in the literature indicated that UDL was effective for addressing variation among learners, which corresponded with increased access to curriculum. They found researchers and practitioners were still largely defining UDL interventions. They described that implementation required lesson design with flexible methods, materials, and assessments from the beginning and noted it could be implemented in a multitude of ways to curriculum and instruction across the various grade levels. Despite its potential for application across grade levels, Ok et al. (2017) called for additional research to investigate the effectiveness of UDL.

Student Experience

Considering the learning ecosystem of a classroom through Wenger's (1998) communities of practice theory, the individual is central to the conception of community, as identity and meaning are both theorized as constructed from the individual. Parallel to this concept is the idea that progressive approaches to education are student-centered, contrasting a teacher-focused traditional approach (Mohamed, 2018). A progressive, student-centered approach is accomplished through student involvement (Altemueller & Lindquist, 2017; Efthymiou & Kington, 2017; Lindner et al., 2018) and student-centered efforts and decision-making (Maciver et al., 2018).

After a systematic review of research on the participation of students with disabilities in the general education classroom, Maciver et al. (2019) constructed a

framework that captured a research-based relationship between contextual factors, such as factors related to adults, peers, structures and organization, objects, the physical space, and the internal mechanisms of the individual. This systemic review of research by them informed their three proposed individual or internal mechanisms including: identity, experiences of body and mind, and competence (Maciver et al., 2019). Identity was considered to include individual preferences, perceptions of self, meaningfulness, internalization and perception of roles and internalization of habits and routines. Experience of body and mind had to do with the physiological and psychological experiences of the individual. Competence referred to the individual opportunity or capacity for making choices, persistence, meeting role expectations, meeting habit and routine expectations, and skills (Maciver et al., 2019). This framework proposed a cyclical relationship between the context and the internal mechanisms (Maciver et al, 2019), confirming what Wenger (1998) proposed as the concept of a community of practice with the symbiotic relationship between the individual and the community through the shared work of meaning and practice. Therefore, the experience of the individual and his or her role within the learning community is important to a definition of access and inclusion, as defined by belonging and meaningful involvement in learning (Buli-Holmberg & Jeyaprathaban, 2016; Dymond et al., 2018; Lorger et al., 2015; Lyons et al., 2016; Olson et al., 2016; Schwab et al., 2018; Shogren et al.; 2015b).

Academic outcomes. Several quantitative researchers have examined the relationship between academic outcomes for students with disabilities and placement in the general education setting (Cosier et al., 2013; Farrell et al., 2007; Gauri &

Bouck, 2017). Farrell et al. (2007) discovered a slight negative correlation between academic outcomes on national assessments and inclusive placement data across sixteen schools. The large-scale study by Cosier et al. (2013) provided strong evidence of a link between achievement and participation in general education setting. They thus advocated for an ideology of moving toward a continuum of service rather than a continuum of placements (Cosier et al., 2013).

The exposure to increased rigor presumed with involvement in the general education class has been promoted in an effort to increase preparation for post-secondary education. In their study examining post-high school outcomes for secondary students with disabilities, Gauri and Bouck (2017) conducted statistical analysis on a sample of 289,720 students. They found a statistically significant correlation between participation in mainstream core content area instruction and attendance of postsecondary education. They called for more research on how the type, extent, frequency, and quality of services, as well as factors of core content instruction, influence outcomes for students with disabilities (Gauri & Bouck, 2017).

Wei et al. (2014) examined post-secondary participation by students with autism and found a similar correlation with involvement in general education classes across a large, national sample. Involvement in general education classes promoted academic rigor, and the researchers' analysis revealed a significantly higher relationship of attending a two- or four-year college when students participated in math, science, or social studies compared to other classes. The researchers argued that inclusion in core academic classes, particularly math, science, and social studies, were best practice for college preparation (Wei et al., 2014).

These correlation studies of outcomes associated with placements in the general education setting would suggest that there are quantified outcomes supporting the perceived importance of this commitment to placement within the general education setting. Other qualitative researchers have selected schools based on exemplar performance that include outperforming academic scores and growth rates of other schools while simultaneously implementing high levels of inclusion (McLeskey et al., 2014; Shogren et al., 2015a; Shogren et al., 2015b). Authors of the quantitative studies examining the academic and post-secondary outcomes have called for a closer examination of classroom practices and their impact on the performance of students with disabilities (Cosier et al., 2013; Farrell et al., 2007; Gauri & Bouck, 2017). Further, it has been argued that placement of students with disabilities alone is insufficient, and that inclusion is more appropriately characterized by classroom and instructional practices that effectively, equitably, and appropriately meet the academic needs of students with disabilities (Bjornsrud & Nilsen, 2019; Buli-Holmberg & Jeyaprathaban, 2016; Olson et al., 2016).

Social outcomes. Social outcomes are a foundational consideration for the degree of inclusivity of a classroom for students with disabilities (Buli-Holmberg & Jeyaprathaban, 2016; Lorger et al., 2015; Olson et al., 2016). This includes the student's experience of being accepted, valued, and of belonging (Bjornsrud & Nilsen, 2019; Lorger et al., 2015). Interaction is considered definitive of inclusion (Buli-Holmberg & Jeyaprathaban, 2016) and should contribute to social outcomes for students with disabilities (Bossaert et al., 2015; Devries et al., 2018; Lorger et al., 2015; Lyons et al., 2016; Petry, 2018). These social outcomes have been described by

researchers as including measures or perception of companionship, reciprocated relationships (Bossaert et al., 2015; Schwab, 2019), development of social skills (Lyons et al., 2016), degree of social inclusion (Devries et al., 2018), acceptance by peers (Lorger et al., 2015; Petry, 2018), attitudes of their peers, presence of interactions (Petry, 2018), and perception of social competence (Lorger et al., 2015; Renick & Harter, 2012).

Bossaert et al. (2015) conducted a quantitative study examining the social outcomes of students with identified disabilities in a mainstream, secondary school. They compared the companionship, intimacy, and reciprocal friendships of students with autism spectrum disorder (ASD) or motor/sensory disabilities to typically developing students. No significant differences were found in companionship and support across groups, but students with autism did report lower levels of intimacy in their friendships. Reciprocal relationships were overall similar in nature or quality; however, there were notably fewer reciprocal relationships for students with autism. The breakdown of students without a reciprocal friendship were one quarter of students with autism, one fifth of students with sensory/motor disabilities, and one tenth of typically developing peers (Bossaert et al., 2015).

Lorger et al. (2015) also observed a difference in social acceptance as well as a more negative perception of personal social efficacy in their research with secondary students with learning disabilities. Overall, students with learning disabilities were considered to be less socially integrated based on a review of sociometric and self-perception ratings. On sociometric questionnaires, students with learning disabilities had a significantly higher frequency of rejection and lower

likelihood of being seen as *popular*. They also had a lower perception of their own social competence and saw themselves as less socially successful when compared to the self-rating of their peers without disabilities. Lorger et al. (2015) argued that inclusive practice includes contributing to the classroom climate of acceptance and integration. The researchers also advocated that the inclusive teacher must be equipped with strategies to support the social development of students (Lorger et al., 2015).

Another study by Lyons et al. (2016) examined social and behavioral outcomes of students with autism or a cognitive disability placed in general education classes. They examined the relationship between ratings and various factors, including time spent in the general education setting. The researchers expressed concern that even in final stage of public education, the students with disabilities showed considerable social and behavioral needs with 82% of the sample having at least one below average score on a social skill. Lyons et al. (2016) advocated for schools to go beyond placement of students in the general education setting the as definition of access to general education or inclusion. They noted a need for further exploration to determine whether the lower social scores were a related to the quality of opportunities are provide to the students. They advocated for further exploration of the effects of increased time in the general education setting and quality of inclusion (Lyons et al., 2016).

Devries et al. (2018) explored student ratings of social inclusion in schools that practice general education placement of middle school students with disabilities. They used the Perception of Inclusion Questionnaire (PIQ) for students to self-report

their perceived levels of academic self-concept, emotional inclusion, and social inclusion. The researchers found that any difference in self-reported social inclusion was eliminated by seventh grade. Thus, they proposed the idea of a longitudinal effect of inclusive schooling as having positive outcomes for students with disabilities, particularly in terms of perception or experience of social inclusion (Devries et al., 2018).

Petry (2018) conducted a study, similar to that of Bossaert et al. (2015), examining the ratings and perceptions of students with and without disabilities. They studied peer attitudes towards students with disabilities, peer acceptance and friendship, and the presence of social interactions. The researcher used sociometric nominations and rating scales to assess peer acceptance, friendships, and social interactions. They noted that students with autism had significantly less nominations by peers than students without disabilities; however, they also noted that larger class sizes resulted in more acceptance. Additionally, Petry (2018) found significantly more negative results with friendship, less peer interactions, and less acceptance for students with disabilities. Overall, the presence of students with disabilities had no effect on class attitude on acceptance. Yet, more positive attitudes towards peers with disabilities were related to increased friendship, as there was a marginally significant effect of attitude on friendships between among with disabilities (Petry, 2018).

Schwab (2019) conducted a longitudinal, quantitative study that examined the number and stability of friendships of students with special education needs. The majority of students identified with special education needs had learning disabilities (77.4%). Findings revealed a number of differences in friendship between students

with and without special education needs. Students without special education needs had more friendships and those friendships were more stable. Students with special education needs had a higher proportion of friends with special education needs themselves; Schwab (2019) was unsure if this was due to uninfluenced student choice or discriminatory practices or grouping. Students with special education needs were much more likely to have no friends (15-20%) when compared to students without special education needs (1-4%). Additionally, Schwab (2019) expressed worry that across both groups, a high percentage of students had no stable friendships at all. As a result, she argued for the importance of schools to promote social participation across classes. This study did not investigate the cause or source of these differences. Schwab (2019) expressed concern that "...a large group of students, even when educated in inclusive settings, is at risk for difficulties in their personal development and well-being" (p. 399).

While many students with disabilities are provided experiences in the general education setting, there are many instances of differences in the social outcomes or perceived social experiences compared to their general education peers (Bossaert et al., 2015; Lorger et al., 2015; Lyons et al., 2016; Petry, 2018). There are conflicting findings related to the impact of longitudinal placement in the general education setting in terms of social inclusion experiences and social outcomes for students with disabilities (Devries et al., 2018; Schwab, 2019). Additional research is needed to determine what instructional or classroom environmental factors contribute to more inclusive experiences in terms of social experiences and outcomes for students with disabilities (Buli-Holmberg & Jeyaprathaban, 2016; Bjornsrud & Nilsen, 2019;

Lorger et al., 2015; Lyons et al., 2016; Olson et al., 2016). The educational and social environment influence the development of identities of students with and without disabilities (Efthymiou & Kington, 2017; Lorger et al., 2015) and opportunities for interaction with peers is critical to inclusion (Buli-Holmberg & Jeyaprathaban, 2016; Lorger et al., 2015). Future research needs to provide a clearer understanding of practices that contribute to the quality of inclusion (Lorger et al., 2015; Lyons et al., 2016) produce more equitable social outcomes and experiences of students with disabilities (Schwab, 2019).

Self-perception outcomes. According to theoretical models (Wenger, 1998) and research-based frameworks (Maciver et al., 2019), the internal and individual experiences are definitively linked to whether or not classroom practice is inclusive. Researchers have argued that internal outcomes, particularly those of students with disabilities, are indicators that the classroom practices are sufficiently inclusive (Buli-Holmberg & Jeyaprathaban, 2016; Dymond et al., 2018; Lyons et al., 2016; Olson et al., 2016; Schwab et al., 2018; Shogren et al.; 2015b). Researchers have identified the importance of considering students' perspectives in their experiences (Connor & Cavendish, 2018; Lindner et al., 2019; Schwab et al., 2019). A number of researchers have begun to examine classroom practices and assess their inclusiveness using student self-perception as an outcome measured (Devries et al., 2018; Kelley et al., 2017; Lindner et al., 2019; Lorger et al., 2015; Shogren et al., 2015b; Venetz et al., 2015). Connor and Cavendish (2018) argued that student perspectives are particularly beneficial and important in advancing culturally responsive pedagogy across many facets of diversity, including race, class, gender, culture, sexuality, and disability.

In 2018, Devries et al. conducted a quantitative study that explored the personal experiences of students with and without disabilities. The study examined the perceived levels of inclusion, academic self-concept, and developmental problems of sixth and seventh graders in inclusive schools. The study used a strengths and difficulties questionnaire and the Perception of Inclusion Questionnaire (PIQ) (Venetz et al., 2015). In comparing the results between students with and without disabilities, they found significant differences for students with special education needs. Student perception ratings indicated significantly lower academic self-concept, lower feeling of emotional inclusion, and greater incidence of conduct problems for students with disabilities (Devries et al., 2018).

Conversely, a qualitative case study by Shogren et al. (2015b) found that students with disabilities self-reported a high degree of positive self-identity in relationship to the inclusive practices used within their classrooms. The case study explored practices within elementary and middle schools selected for exemplar inclusion practices that outperformed other nominated schools when considering their growth rates on academic achievement tests. Students with disabilities reported positive personal experiences related to their inclusive education. Students reported that the inclusiveness of their classroom caused them to experience belonging, support for their needs, and practices that promote their success. Students valued teachers that had high-expectations and provision of opportunities to be self-determined, that offered challenge, and allowed them to be meaningfully engaged. Shogren et al. (2015b) also examined the what, where, and how of inclusion to assess practices that contributed to both the positive academic and student perception

outcomes. While it has traditionally been common for students with disabilities to experience different or lower personal experiences in the general education classroom when compared to their peers without disabilities, it is possible for them to have more equitable individual experiences in a truly inclusive classroom environment (Shogren et al., 2015b) as theorized by Wenger (1998) and identified in the research-based model of Maciver et al. (2019).

In their study designed to compare models of co-teaching, Kelley et al. (2017) observed differences between student and teacher perception. Results of the teacher and student participants indicated a high degree of difference between teacher and student perception of the impact of various models. Differences existed between student and teacher perception, particularly in terms of ranking models, perception of learning, student behavior, student confidence, and teacher authority across models. Such inconsistencies indicated that teachers and students have a different frame of reference from which they experience and perceive practices based on their role. The student experience was likely impacted by factors other than the actual model of instruction and more related to structural, perceived, or lack of variation in approaches. They emphasized the importance of student voice in research (Kelley et al., 2017).

Schwab et al. (2018) conducted a large quantitative study across 18 schools in Germany examining the perspective of secondary students on the inclusiveness of their classroom climate. They compared student perception of the inclusivity of the classroom climate and the relationship to student perception of their academic self-concept, social inclusion, and emotional inclusion on the Perceptions of Inclusion

Questionnaire (PIQ) (Venetz et al., 2015). They found that in the sample, particularly in earlier grades, identification of having a disability was not a significant predictor of whether or not the student was included (Schwab et al., 2018). However, they noted that ratings by students in higher grades indicated a weaker inclusivity in classroom climate. They advocated that "it remains unclear if schools truly include all learners and provide them with the best developmental possibilities instead of simply physically placing different students in the same classroom" (Schwab et al., 2018, p. 38). They argued that gathering student perceptions of their experiences are a means of evaluating the execution of inclusive policies or practices (Schwab et al., 2018).

Lindner et al. (2019) used a quantitative approach to determine teacher and student perception of inclusive practices within the classroom with a focus on differentiation and personalization. Data was gathered using three versions of the Inclusive Teaching Practices Scale (ITPS), including teacher, student, and teacher-student specific rating. The study involved examining the psychometric properties of the ITPS as well as generating a description of the perceptions of students and teachers of inclusivity. The premise behind this research was that placement does not necessarily lead to changes in teaching practice, and the ITPS intended to quantify the inclusivity of teaching practice from different perspectives. Responses from this sample did not differ in rating based on gender, migrant background, or disability status; this could support the conclusion that the teachers were sufficiently inclusive by focusing on addressing the needs of each student. Neither the number of years of teaching nor the number of students with special education needs correlated with the teaching practices. Differences were noted between student and teacher ratings and

could be due to students not perceiving the efforts at differentiating and personalizing or that teachers were not accurate in reporting their actual practices. New research should incorporate additional means for quantifying inclusive practices and to further explore the reasons inclusive practices may be used in one class compared to another (Lindner et al., 2019).

Outcomes for students without disabilities. Concern has been raised that placement of students with disabilities in general education courses can have a negative impact on students without disabilities and their teachers (Gilmour, 2018). Researchers have expanded their exploration of practice and outcomes in classrooms that include students with disabilities to consider the outcomes of students without disabilities as more than just a comparison group (Brown & Babo, 2016; Demirdag, 2017; Furth & Woods, 2015; Gottfried, 2014; Shogren et al., 2015a). Their efforts have considered both academic (Brown & Babo, 2016; Demirdag, 2017; Furth & Woods, 2015) and nonacademic outcomes (Gottfried, 2014; Shogren et al., 2015a) occurring in conjunction with instruction in a class with students with disabilities. However, it was noted that a number of these studies had not considered any instructional practices and only considered the presence of students with disabilities (Brown & Babo, 2016; Furth & Woods, 2015). Placement alone had resulted in inconsistent or negative outcomes (Brown & Babo, 2016; Furth & Woods, 2015; Gottfried, 2014), but researchers have begun to capture the factors and practices in classrooms that include students with disabilities that simultaneously provide a successful growth experience for students without disabilities (Demirdag, 2017; Shogren et al., 2015a).

Gottfried (2014) examined outcomes of elementary students without disabilities in relationship to the number of classmates with disabilities across a large sample. Gottfried found a negative social relationship and emotional factors in relationship to the placement of students with disabilities within the class. However, they noted that individual, classroom, and teacher factors can moderate the effects of this (Gottfried, 2014).

A later study by Furth and Woods (2015) considered the impact of inclusion on secondary students by focusing on the performance of students without disabilities based on whether or not they were educated in classrooms alongside students with disabilities. The study included 10th-grade students without disabilities and compared their performance on statewide academic tests based on whether or not their instruction was in classrooms that included students with disabilities or not. They found no significant difference in the academic performance of the two groups in social studies, science, and reading, but in math, the segregated group performed significantly higher. Furth and Woods's (2015) research was in response to the concern that differences or variations in instruction that can occur in inclusive classrooms to meet the needs of individuals could be detrimental. However, they argued that such varied practice did not negatively impact outcomes for students without disabilities. Furth and Woods (2015) advocated that future research consider the nature of the impact of inclusion on students with and without disabilities.

Brown and Babo (2016) explored the relationship between instruction in a co-taught class and outcomes for eleventh grade students without disabilities on statewide tests. They found slight, statistically significant negative influence on

student performance on the state literacy test, which contributed to a slight variance. Past performance was a stronger predictor of results and that the number of years placed in a classroom that included students with disabilities mattered. Brown and Babo (2016) noted that school-based factors not reflected in the independent variables such as quality of instruction, class size, curriculum, or scheduling could have influenced the results.

A later study by Demirag (2017) had a conclusion similar to Furth and Woods (2015) that placement of students with disabilities in the class was not negative for students without disabilities. Additionally, Demirag (2017) found that in the case of one of the classrooms, classroom instruction factors could cause the outcomes of students without disabilities in the inclusive classroom to outperform other classes. Demirag's quantitative analysis indicated that participation in inclusive science classrooms had a significant positive relationship with outcomes on conceptual understanding in sixth-, seventh-, and eighth- grade classes as students without disabilities all demonstrated growth. However, it was noted that even higher growth was noted in the inclusive eighth grade class. Demirag (2017) attributed this to the increased peer support in the eighth-grade class. Overall, he suggested that inclusive placement had positive effects for all students and the degree of the positive effect can be influenced by factors or approaches within the classroom environment (Demirdag, 2017).

Beyond exemplary academic performance on state assessments in the classes examined by Shogren and company (2015a), the students without disabilities self-reported a value of inclusive experiences. The students without disabilities identified

positive perceptions of including students with disabilities. It was noted that students saw inclusion as an asset and reported greater understanding of one another. Students reported a negative perception of separate or segregated services when they noticed or observed peers with disabilities removed from class. Adult participants noted that practices for inclusion facilitated a shift in teacher focus to what everyone needed regardless of disability. This shift in mindset contributed to a shift in practice as all benefited from individualized supports and differentiation (Shogren et al., 2015a).

Chapter Three: Methodology

Purpose of the Study

The purpose of this study was to contribute to the research on classroom practices and their influence on students with and without disabilities (Devries et al., 2018; Schwab et al., 2018). The intent was to address the gap in literature related to actual practice and instruction in classrooms that include students with disabilities, including: planning related to student needs (Elliot et al., 2017; Kurth & Mastergeorge, 2012; Hagiwara et al., 2019; Maciver et al., 2018), instruction (Guari & Bouck, 2017; Hang & Rabren, 2009; McLeskey et al., 2011; McLeskey et al., 2012; McLeskey et al., 2014; Webster & Blatchford, 2018), and structures or routines in the classroom (Bulgren et al., 2006; Cosier et al., 2013; Maciver et al., 2018). It intended to examine practices associated with inclusive classroom practice (Booth & Ainscow, 2002) and to measure it through teacher reporting of their instructional decisions at a classroom level, including self-report on ratings of the inclusiveness of their practices (Sharma & Sokal, 2016). The impact of these teacher decisions (independent variable) was examined through analysis of their relationship to student self-perception outcomes (dependent variables) (Venetz et al., 2015; Renick & Harter, 2012). This relationship was investigated in high school English language arts classes with three or more students with special education needs. Inclusive indicators examined included domains of planning, learning activities, student involvement, and assessment (Booth & Ainscow, 2002). These domains of inclusive practice were assessed through teachers reporting through a survey. Additionally, the teacher survey

included the Inclusive Teaching Practices Scale (ITPS) that had been used in other studies to report a scaled inclusiveness score (Sharma & Sokal, 2016).

The study used student perception of academic self-concept and social inclusion as the outcomes or dependent variables. Students' self-perception outcomes were used as a measure of the degree to which the classroom instruction was inclusive of them personally, in terms of how effectively and equitably it meets their needs (Devries et al., 2018; Schwab et al., 2018; Sharma & Sokal, 2016) and its impact on their self-concept (Blatchford & Webster, 2018; Efthymiou & Kington, 2017; Katz & Sokal, 2016; Maciver et al., 2019; Renick & Harter, 2012). Statistical analysis examined whether or not the degree of implementation of inclusive practices, as measured by teacher report and student report on a scale, contributed to a difference in student perception outcomes. Student outcomes were compared based on identification of disability, race, and gender to determine if there was a relationship between the reported instruction approach of the teacher and degree and equity of student outcomes within the class (Bjornsrud & Nilsen, 2019; Booth & Ainscow, 2002; Connor & Cavendish, 2018; Gómez-Zepeda et al., 2016; Sciuchetti, 2017; Shogren et al., 2015b; Sinclair et al., 2018; Theoharis & Causton, 2016).

Theoretical and Conceptual Frameworks

This study was nested within the overarching perspective of the ecological theory and its perspective on disability. Ecological theory has a focus on the student within the environment, with the emphasis on environmental factors contributing to the deficit (Hobbs, 1966). Within this perspective, disability is viewed as more of a result of a mismatch between child's behavior and the environment, rather than

disability as an inherent characteristic of the individual (Hobbs, 1966). In such a perspective, the environment can be considered in terms of changes that might be made to increase the match between the context and individuals.

Maciver et al. (2019) developed a conceptual framework based on research on the participation of children with disabilities in school based on a review of research (see Figure 1). This framework provided a visual conceptual framework of the empirically-derived relationships among mechanisms, contexts and outcomes of students with disabilities' participation in the general education classroom. This framework showed a cyclical relationship between environmental contexts, the internal mechanisms of the student's experience, and the outcomes as defined by participation in school.

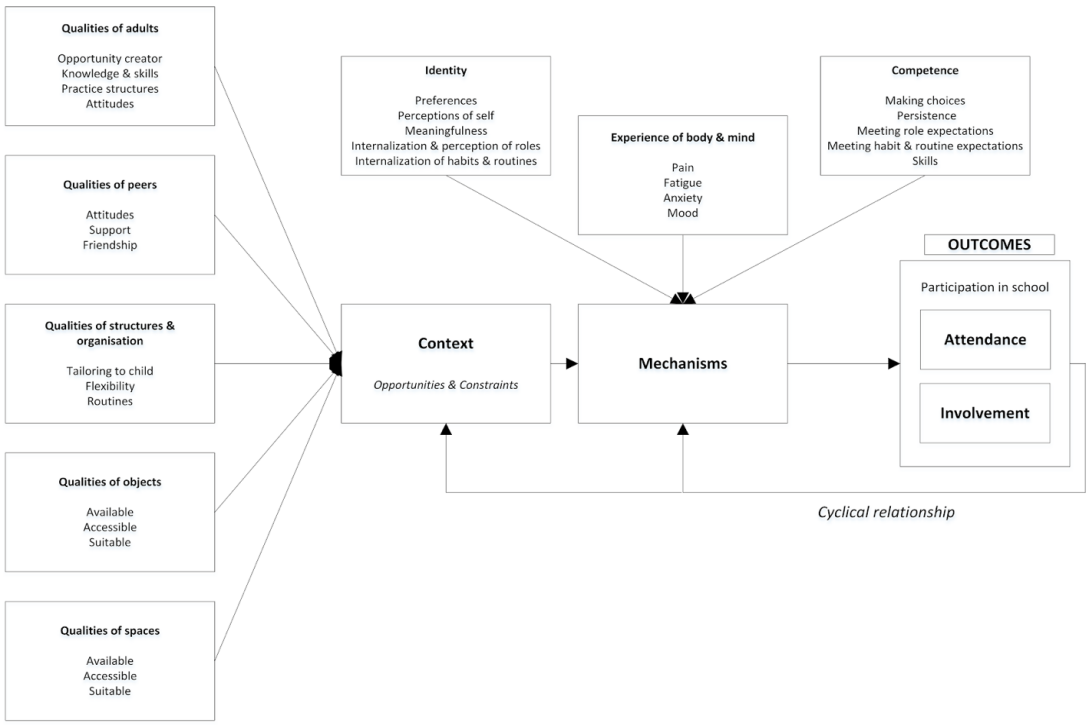


Figure 1. Research framework on the participation of students with disabilities in general education (Maciver, et al, 2019).

From this cyclical relationship, it can be inferred that there is a relationship between contextual factors and internal factors, influencing the identity and perceived competence of the student. Wenger's (1998) communities of practice offer a theoretical understanding of the interrelationship between practice, community, identity, and meaning (see Figure 2). This theoretical perspective suggests that learning is social; it relies on the involvement of the individual within a community experience through negotiation of meaning. In this theory, community membership of the individual is central to learning and is characterized by interdependent, not identical, roles of individuals. Each component (i.e., practice, community, identity, and meaning) is an integral part of learning and functions as a mechanism of the community experience of the class and the individual experience of the student.

Theoretically, these components intersect in a community of practice where the community is characterized by knowledge construction and accumulation that unites the efforts of individuals within the community. Within this collective learning effort of the community, the individual derives meaning and experiences belonging. Through these relationships and the practice of collectively constructing meaning, individuals develop a common knowledge and understanding as well as habits of practice and approaches for working and learning together (Wenger, McDermott, & Snyder, 2002). The relationship between contextual factors and student participation outcomes has emerged in synthesis of the research (Maciver et al., 2019). Closer examination of the dynamics of these contextual, classroom factors and student outcomes with the theory of communities of practice (Wenger, 1998) would increase

practical application of classroom practices to support inclusion and access for students with disabilities.

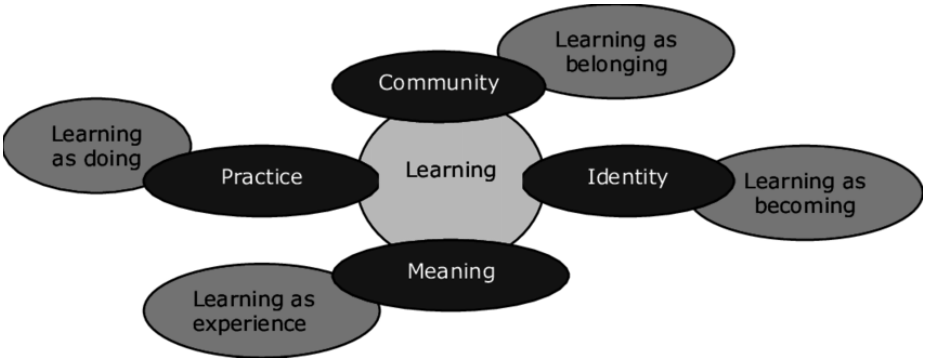


Figure 2. Components of communities of practice (Wenger, 1998).

Wenger (1998) asserted that learning is not necessarily attributed to instruction; rather, it is the creation of contexts for learning to occur through negotiation and resources. He described that students need "1.) Places of engagement 2.) Materials and experience with which to build an image of the world and themselves 3.) Ways of having an effect on the world and making their actions matter" (Wenger, 1998, p. 271). This study examined the relationship between inclusive practices and student self-perception on specific outcomes. Classroom practices corresponded with Maciver et al.'s (2019) structures and organization, characterized as "tailored to the child," "responsive to needs," "individualized," "adaptable," "flexible," "predictable," and "well planned" (p. 12). This study conceptualized these structures and organizations as initiated by the teacher who orchestrates of the individual learning experience and interactions with peers. The relationship between these contextual factors and student self-perception were measured through multilinear regression using demographics data, teacher and student report of inclusive practices, and student perception for outcome measures.

This study sought to determine if there was a relationship between the variables of inclusive classroom practice providing affirmation of the conceptual framework from Maciver and company (2019) and operationalizing classroom practices associated with communities of practice (Wenger, 1998) (see Figure 3).

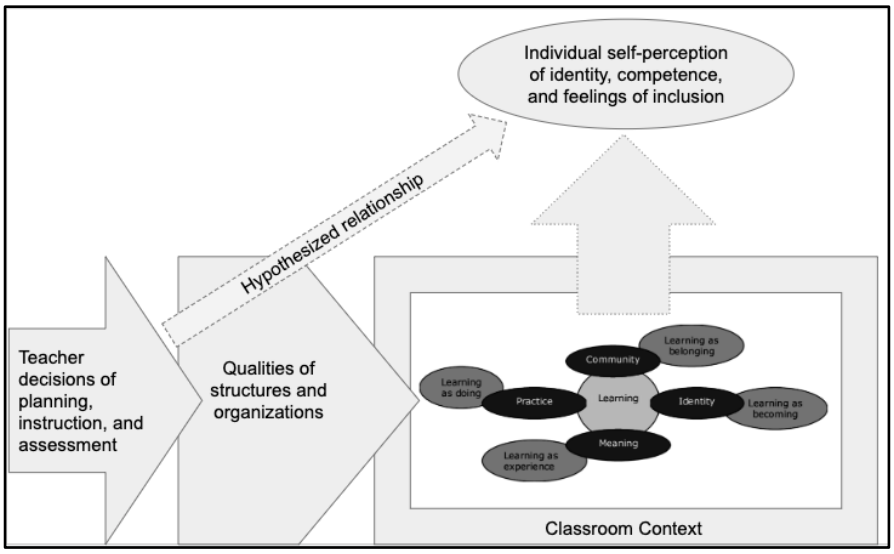


Figure 3. Hypothesized relationship between inclusive classroom practice variables and student outcomes.

Research Design

This study was a non-experimental, exploratory study that used a quantitative design (Creswell, 2014; Orcher, 2014). It aimed to build on previous research related to the criteria of effective inclusive practice (Booth & Ainscow, 2002; Buli-Holmberg & Jeyaprathaban, 2016; Shogren et al., 2015). This study examined the relationship between the degree of teacher inclusiveness and student self-perceptions of measures academic self-concept and social inclusion (Carter et al., 2017; Chen, 2017; Cosier et al., 2013; Feldman et al., 2016; Hagiwara et al., 2019; Hang & Rabren, 2009; Olson et al., 2016) in general education classrooms that included at least three students with disabilities. Student and teacher report items were used to quantify the inclusivity of

practices used in general education classrooms including students with disabilities and student outcomes as measured by a survey. Multi-linear regression was then used to make an inference about the relationship between classroom practices and outcomes for students with and without disabilities (Creswell, 2014; Muijs, 2011; Orcher, 2014; Patten, 2014). A survey study design was selected due to the flexibility allowed for more wide-ranged and complex data collection than an experimental study (Muijs, 2011). The goal of this study was to examine the relationship of teacher practices compared to other internal and external factors in their relationship on student self-perception outcomes in the high school setting.

This study utilized a quantitative methodology to examine teacher- and student-reported inclusive practices and its relationship with student self-perception of academic self-concept and social inclusion. The results of the teacher survey and student survey items measuring degree of inclusiveness were compared to the student self-perception survey through multiple linear regression to determine whether or not there was a relationship between classroom level approaches associated with inclusion and student self-perception outcomes when compared against other independent variables.

Research Questions and Hypotheses

1. Is there a relationship between the degree of implementation of inclusive practices in classrooms and academic self-concept?

   H01. The degree of implementation of inclusive practices in classrooms has no relationship with academic self-concept.

   H1. The degree of implementation of inclusive practices in classrooms has a

positive relationship with academic self-concept.

2. Is there a relationship between the degree of implementation of inclusive practices in classrooms and social inclusion?

   H02. The degree of implementation of inclusive practices in classrooms has no relationship with social inclusion.

   H2. The degree of implementation of inclusive practices in classrooms has a positive relationship with social inclusion.

Variables

The dependent variables for this study were student perceptions of academic self-concept and social inclusion. Inclusive practices were measured in two ways: teacher self-report on inclusive indicators adapted to Likert form (Booth & Ainscow, 2002) and student rating on the Inclusive Teaching Practice Scale (ITPS) student scale (Sharma & Sokal, 2016).

Measures. Surveys were administered online due to ease of administration and an effort to span multiple classrooms and more students; an electronic instrument was better equipped to manage the size of the anticipated data set and aided in efficiency and accuracy of scoring and analysis (Muijs, 2011). The surveys were developed in the online survey platform Qualtrics. The online survey offered both ease and efficiency of access to students due to the one-on-one initiative in place at the target school district (i.e., an iPad for every student and teacher) and mobile interface of Qualtrics. This one-to-one initiative minimized, if not eliminated, the bias that can occur when access to technology is varied across a population (Orcher, 2014). It was believed that the electronic survey would minimize a common error in

student response associated with the unique format of self-report items identified by the researchers in the paper version of one of the selected data collection tools (Renick & Harter, 2012) by allowing only one response compared to a common error of students selected more than one box on the paper pencil version.

Teacher survey. The teacher survey was intended to quantify the behaviors and classroom practices of the teacher (Patten, 2014) (Appendix A). Teachers rated themselves on statements about inclusion practices. Teachers rated their own instruction on items adapted from domains in the Index for Inclusion: planning with all students in mind, student participation, student involvement in learning, and assessment practices that contribute to achievement (Booth & Ainscow, 2002). The literature on implementation of classroom practices recommends that future research should examine the degree to which specific components are implemented (Harn et al., 2013). Therefore, a continuous scale (Muijs, 2011) was employed to capture the degree to which teachers implemented the specific inclusive practices.

The survey used a closed-ended rating scale for ease of use (Muijs, 2011). The survey consisted of a consent statement, Likert-scale items related to implementation of inclusive practices adapted from the Index for Inclusion (Booth & Ainscow, 2002), statements from the Inclusive Teaching Practices Scale (Sharma & Sokal, 2016), and a closing statement with a reminder of subsequent steps for student data collection (Appendix A). Electronic communication was sent inviting teachers to participate and providing informed consent (Appendix B).

Muijs (2011) warned that differences can exist between teacher ratings of their practice and what might be observed by an outsider. The degree of

implementation of inclusive practices can be compared to what Harn et al. (2013) described as a "process dimensions" of an intervention or delivery of an approach. This refers to the quality or degree of which an approach is implemented. Harn et al. (2013) noted that reliably assessing process dimensions can be challenging due to their subjective nature; however, process dimensions are important as they often directly relate to student outcomes.

In an effort to assess the validity and reliability of the teacher survey adapted for this study from the Index for Inclusion (Booth & Ainscow, 2002), the teacher items from the Inclusive Teaching Practice Scale (ITPS) were embedded in the teacher self-report survey (Sharma & Sokal, 2016). In recent psychometric testing done with a sample of high school age students, the Inclusive Teaching Practice Scale (ITPS) was found to have reliability between $\alpha = .81$ and $\alpha = .87$ (Schwab, Sharma, & Hoffmann, 2019).

Teacher Survey Pilot Study. A pilot study was conducted to develop the teacher self-report survey. Initially, 55 items were drafted from select Evolving Inclusive Practices domains from the Index for Inclusion (Booth & Ainscow, 2002). Dr. Susanne Schwab, who has recently done work on psychometric testing of other scales for measuring inclusive practice, reviewed and provided feedback on the survey in November of 2019 (Schwab et al., 2019). Feedback from this review was used to revise the number, wording, and scale of the survey, resulting in 30 revised statements and 14 additional items from the Inclusive Teaching Practice Scale (ITPS) (Sharma & Sokal, 2016). This revised survey was then reviewed by three committee members, three practitioners, and four district-level teaching and learning staff. The

final survey included 30 statements modified from the Index for Inclusion (Booth & Ainscow, 2002) with revisions from the pilot study and 14 items from the Inclusive Teaching Practice Scale (ITPS) (Sharma & Sokal, 2016). Similarly, 14 student-rating statements from the Inclusive Teaching Practice Scale (ITPS) were embedded in the student survey to be used as an additional measure of inclusivity (Sharma & Sokal, 2016). After data collection, internal consistency reliability and validity were assessed through Cronbach's alpha (Muijs, 2011).

Student survey. The student survey was used to assess the desired outcomes of effective inclusive practices (Appendix C). The student report items from the Inclusive Teaching Practices Scale were included to capture another rating of inclusivity of practice from a student perspective (Sharma & Sokal, 2016). Originally, the survey included a cover letter with informed consent information and directions to be read by the classroom teacher, prior to survey administration. Due to COVID-19 and the change in learning model from fully in person to hybrid or full distance learning, the informed consent and survey directions were adapted to an audio/visual format of two brief videos embedded in the digital student survey (Appendix D).

The digital student survey included: informed consent information, a consent question, direction overview, a question of learning model, a continuous scale self-perception section, a Likert scale self-perception section, the Inclusive Teaching Practices Scale student report (Sharma & Sokal, 2016), and a closing statement. Self-perception measures were identified as offering ease of administration when working with secondary students due the complex nature of the schedules of secondary students (Devries et al., 2018). Select survey self-perception subscales the Self-

Perception Profiles for LD Students were used to measure student factors as independent variables (Renick & Harter, 2012). Two subscales from the Perceptions of Inclusion Questionnaire (PIQ) (i.e., academic self-concept and social inclusion) were used as dependent variable measures (Venetz et al., 2015). Permission for use and modification to be administered as an electronic, online survey was established through email correspondence.

The approach of using measures to assess similarities or differences in outcomes for students with and without disabilities was consistent with existing studies, which examined outcomes within general education classrooms that include students with disabilities (Blatchford & Webster, 2018; Bossaert et al., 2015; Carter et al., 2017; Devries et al., 2018).

Self-Perception Profile for LD Students. The Self-Perception Profile is a questionnaire developed for students ages eight to 18; students indicate their self-perception on items across multiple domains (Renick & Harter, 2012). The domains were developed to make specific distinctions between different academic or scholastic areas to be more sensitive to the perceptions of students with learning disabilities. Domains used as independent variables within this study included student perceptions of general intellectual ability, reading competence, writing competence, and social competence.

Items selected for this study maintained a similar wording and formatting of text to the original version. However, each item was modified to the format of a multiple-choice question by placing a letter matching a corresponding multiple-choice item in place of the checkbox used on the paper version of the instrument. The

multiple-choice format was selected in the electronic construction of the instrument for effective use of the scoring capabilities of Qualtrics (Renick & Harter, 2012) and to align with the scoring guidelines of the Self-Perception Profiles for LD Students (Renick & Harter, 2012). Additionally, a multiple-choice format which controlled for a single response was believed to minimize errors of selecting too many responses as indicated in email correspondence with the original researcher (S. Harter, personal communication, July 19, 2019) and as cautioned in the instrument manual (Renick & Harter, 2012).

Construct validity and convergent validity were established by the researchers for the measure (Renick & Harter, 2012). Construct validity (Creswell, 2014) of this measure was established through a "model of determinants, correlates, and consequences" (p. 17) and was affirmed through empirical support (Renick & Harter, 2012). Convergent validity was established through comparison with similar constructs on different instruments (Renick & Harter, 2012). Reliability was determined by internal consistency. Internal consistency reliability was determined by Cronbach's alpha for both students with and without learning disabilities as separate populations. Internal reliability scales of subscales ranged from $\alpha = .80$ to $\alpha = .89$ for normal achieving students and .78 to .89 for students with learning disabilities (Renick & Harter, 2012).

Perceptions of Inclusion Questionnaire (PIQ). The Perceptions of Inclusion Questionnaire (PIQ) is a brief questionnaire that asks students to rate their agreement with items on a Likert-scale and was adapted from a larger, German questionnaire (Venetz et al., 2015). The scale was designed to assess how students feel without

addressing what the teacher or school does to influence these feelings (Schwab et al., 2018). The instrument had been psychometrically tested with students in grades three through nine or ages eight to sixteen. Items from the Perception of Inclusion Questionnaire (Venetz et al., 2015) included in the scoring of this study were selected subscales: academic self-concept (four items) and social inclusion (four items). Items were modified to an electronic or online format from the original paper version with the permission of the researchers and maintained a similar wording, formatting, rating, and scoring as the original version.

Construct validity, convergent validity, and divergent validity were established by the researchers in the development and psychometric testing of the Perception of Inclusion Questionnaire (Venetz, Zurbriggen, & Schwab, 2019). Construct validity was established in initial development of the instrument in 2014 (Venetz et al., 2019). Convergent validity was established through correlation of questionnaire outcomes with affect state of students during lessons, teacher report of peer problems, and another self-concept scale. Divergent validity was established by determining a negative relationship between the questionnaire and teacher report of student emotional problems (Venetz et al., 2019). As for reliability, self-perception ratings are known for test, re-test reliability due to the nature of self-rating (Renick & Harter, 2012). Additionally, reliability of the Perception of Inclusion Questionnaire was established through unidimensional graded response model and investigated for differential item functioning; the instrument was found to be reliable for students with and without learning disabilities (Zurbriggen, Venetz, Schwab, & Hessels, 2017).

Student Survey Pilot Study. In response to conversation with school district leadership, a small student pilot was conducted. The pilot consistent of five students with varying areas of disability identification and profiles of needs and abilities. Three of the five students experienced temporary technical difficulties with the internet within the building, but including this time, the survey took five to eight minutes to complete. When asked specifically about their understanding of the layout of survey items by Renick and Harter (2012), one indicated the items were slightly confusing. Two other students reported that it was slightly confusing as they did the first item or two, but then it was clear and comfortable as they understood the item format. These results were shared with two district teaching and learning staff and considered within the study procedures as a part of the process for approval for research within district.

Learning Model Question Discussion. In preparation for data collection in the fall of 2020 after the disruption of COVID-19, an additional demographic question was added to identify the student's learning model. On the student survey, students were asked to identify the learning model in which they had participated. At the beginning of the school year, students were in one of two learning models which included hybrid or digital academy. The hybrid model included two days per week of in-person learning in which the student would attend each class in person one time per week, and three days of digital learning. Digital academy was an instructional model that included only digital learning and included one, thirty-minute synchronous learning session on Zoom one time per week for a class. The two-week student data collection started while the two models were operating. However, eight days into data

collection, due to an increase in cases of COVID-19, the school district made a shift to distance learning for all students. The survey question was worded in a way to clearly prompt students to identify the learning model in which they had begun the school year, in anticipation of a possible shift in learning model.

Sampling Design

The population of this study was students in Independent School District 196 taking a high school general education English 9 or English 11 class with three or more students with disabilities. English 9 and English 11 classes were determined as eligible through Section Roster Reports through Infinite Campus to identify which classes included three or more students with disabilities, then teachers of eligible classes were contacted regarding their purposive, voluntary participation in the study. The combined populations of the four comprehensive high schools within the school district was approximately 8,000 students (MN Report Card, 2019c). The school district had 15.4% students qualifying for special education (MN Report Card, 2019e). The demographics of the school district by race/ethnicity was as follows: 9.9% Hispanic or Latino, 0.3% American Indian or Alaska Native, 8.4% Asian, 12.1% Black or African-American, 0.1% Native Hawaiian or other Pacific Islander, 62.7% White, and 6.4% two or more races (MN Report Card, 2019e). A review of section roster reports identified that a total of 1,259 students, including 314 students with disabilities, were registered in 43 classes that met this criterion during the term for data collection.

The population was selected through convenience sampling as it was the school district in which the researcher was employed. Additionally, the study used

purposive sampling for communicating with eligible classroom teachers after intentional selection of English Language Arts classes that included three or more students with disabilities eligible for special education services. The criteria of three or more students was selected as a minimum number based on a sample sizes of students with disabilities used within other studies related to students with disabilities within general education classes (Carter et al., 2017; Efthymiou & Kington, 2017; Prater, 2014). It was proposed that the sample would consist of 30 teachers to avoid causing undue burden of time on classrooms as discussed and agreed with district teaching and learning leadership.

The results of the study were intended to be generalized to general education classrooms containing three or more students with disabilities (Muijs, 2011). It was suggested by researchers examining educational practices for inclusion of students with disabilities that research on supports should be consistent with the location, setting, and context in which they are intended to be used (Dymond et al., 2018; Hagiwara et al., 2019). Census sampling (Creswell, 2014; Muijs, 2011; Orcher 2014; Patten, 2014) was then used within identified classrooms by surveying all students within the class.

Data Collection Procedures

Eligible high school English teachers were selected through examination of Section Roster Reports through Infinite Campus. Review of Section Roster Reports indicate that up to 43 classrooms met the criterion of having three or more students with disabilities. Next, electronic communication was sent through email to teachers and co-teachers with eligible classrooms to provide information on the study and seek

their participation. This communication included informed consent information and a link to the electronic survey (Appendix B). Teacher participants were invited to complete the survey with the opportunity to be entered into a drawing for one of four $25 Amazon gift cards. Reminder emails were sent to non-respondents over the week and a half following the initial email invitation. Student roster information within the classrooms of the teacher participants (i.e., class size, number of students with an Individual Education Plan) was gathered and deidentified to be merged in data analysis. Parent communication for opt-out consent was sent to households within the teacher participant classrooms (Appendix D). Initial and reminder communication to families was sent through email.

At the beginning of the student data collection window, teachers were sent email notification. Students whose parents opted out were removed prior to electronic communication. Student school emails were used for study communication through Qualtrics email distribution. Student participants were invited to complete the survey with the opportunity to be randomly selected to receive one of five $10 Target gift cards in appreciation of their time and input. As for student informed consent, originally, teacher participants were going to be provided a document to read for student consent and administration directions to be read aloud as a brief announcement in class. However, due to the change in learning models as a result of COVID-19, communication of informed consent for students and directions for survey completion were revised to a video format with visual presentation embedded within the Qualtrics survey link sent to students (Appendix D). The survey began with a two and a half minute video informing students of their rights and voluntary

consent, and inviting them to continue the survey. After a consent item, student participants who provided consent were prompted to watch the embedded two-minute video providing basic survey directions.

During the two-week student data collection window, reminder communication was sent. Reminder emails were sent to non-respondents or unfinished respondents. One reminder was sent to teachers encouraging them to make a brief announcement encouraging students to check their email for the invitation to participate in the research study. After closing the student survey, a list of student respondents was sent to district assessment staff who de-identified and merged demographic data with student responses to minimize stereotype threat by requesting demographic or disability status information (American Psychological Association, 2006) while also maintaining participant privacy.

Data Analysis

The data analysis for this study examined the correlational relationship between the identified independent variables and the dependent variables (Creswell, 2014). In order to process and statistically analyze the data, JASP, an open-source data analytics software, was utilized. A multiple linear regression was used to examine the relationship between the independent variables and dependent variables. Independent variables included rating of inclusive teaching practices from both teachers and students self-reported student self-perception factors (i.e., general intellectual ability, reading competence, writing competence, and social competence using the Self-Perception Profiles for LD Students by Renick and Harter in 2012), demographic data of student participants (i.e., gender, disability identification,

eligibility for free or reduce-priced lunch, federal race/ethnicity identification, learning model of the study), and class-level factors (i.e., class size, percentage of students identified as having a disability within the class, and whether or not the class was co-taught). Dependent variables included student self-report of academic self-concept and social inclusion using Likert scales from the Perceptions of Inclusion Questionnaire (PIQ) (Venetz et al., 2015).

Limitations. Although this study had the potential to inform practices used in general education classes that include students with disabilities, it is cautioned that the study findings had limitations. One limitation was that individuals may differ in their interpretation of survey items, both on the teacher survey and student survey. Teachers may have self-reported their choices and instructional practices differently than an outsider observer might have reported (Muijs, 2011). Despite this, self-report was still used, as the process of self-reflection and awareness aligns with the intent of the study to increase teacher decision making, despite the potential differences in individual perception. Post data collection analysis examined the correlation of the survey items adapted from the Index for Inclusion against the teacher rating items and student rating items from the Inclusive Teaching Practice Scale (ITPS) (Sharma & Sokal, 2016) and internal consistency reliability was assessed through Cronbach's alpha (Muijs, 2011)

Another limitation was the convenience sampling used in selecting the identified school district. The convenience sample was based on one suburban public-school district in Minnesota and may not be easily or fully generalizable to other districts or high schools (Creswell, 2014; Muijs, 2011). However, selection of this

school district was also purposeful, as in a purposive sample, in that longitudinal professional development has occurred since 2010 related to inclusive practices within English Language Arts classes.

Another potential limitation was that student self-perception responses used as the student outcome measure were possibly influenced by factors other than instructional practices used by the English teacher.

The occurrence of COVID-19 during the time of data collection of this study is another limitation. The cross-section of data collection occurred at a time in which high schools in the study were in learning models determined by the school district. The data reported, both by rating of inclusiveness of practice and student self-perception, may be influenced by constraints from the learning model, learning experience, and classroom experience due to COVID-19. The stressor of COVID-19 could have influenced the response rate of participants. Additionally, some of the original plans for the study needed to be altered in timeline and delivery due to the disruption of COVID-19 on the teacher and student experience.

Delimitations. In designing the study, the researcher intentionally made choices in the design and boundaries of the study, or delimitations. The following delimitations should be considered.

The study was limited to high school only, to address the gap caused by more studies addressing practices for inclusion in primary schools as well as challenges related to inclusive practices in the high school setting (Bešic et al., 2017; Blatchford & Webster, 2018; Bulgren et al., 2006; Dymond et al., 2018; Gauri & Bouck, 2017; Kurth & Mastergeorge, 2012; McLeskey et al., 2012). The selection of high school

classrooms alone minimized interference of structural differences of elementary or middle school systems while specifically aiming to address an identified gap in research.

Another delimitation was that the study included English Language Arts classes only, as the school district had been involved in an ongoing process of professional learning and curriculum review in the last eight years. It emphasized creating inquiry units of study with a constructivist approach to instruction through use of multiple texts, teaching for understanding, and implementation of the Common Core state standards (National Governor's Association Center for Best Practices and Council of Chief State School Offices, 2010). This district initiative was intended to promote curriculum and instruction that were accessible and inclusive for students with disabilities and culturally equitable. This was found to have overlap with the literature on characteristics of inclusive practices, and English Language Arts classes were selected for presumed examples of implementation or opportunities for familiarity or foundational teacher understanding of inclusive practices.

Ninth and 11th-grade classrooms were selected due to greater consistency across the four comprehensive high schools. Across all four high schools, Grades nine through 11 had similar requirements for the type of courses required for English credit. As for the 12th-grade required English courses, a high degree of variance, due to a broad range of options for English elective courses was determined to contribute to too many structural and course differences to allow for meaningful sampling and comparison across buildings. Tenth grade was excluded from the study in discussion

with the district teaching and learning department due to the timing with statewide tests for 10th-graders in reading and science to avoid additional loss of class time.

Demographic data was collected from roster information while still maintaining confidentiality of student responses through external deidentification of the information by district assessment staff. This demographic data included information on racial groups to combat invisibility of often vulnerable populations (Sciuchetti, 2017; Sinclair et al., 2018). Additionally, collection and analysis of demographic data allowed for consideration of race, gender, and disability when examining the relationship between inclusive instructional practices and student outcomes.

Ethical considerations. Research ethics exist to protect the rights of human subjects, including protection from harm, informed consent, and confidentiality (Arwood & Panicker, 2018; Bogden & Biklen, 2007; Creswell, 2014; Patten, 2014; Roberts, 2010). While this study would exist within the typical educational environment without manipulation of the educational practices, opportunities, or content, it would involve access to identifiable information, which would meet the criteria for research involving human subjects, and thus, must abide by the identified rights (Hicks, 2018). The research ethics established in the *Belmont Report*, including respect for persons, beneficence, and justice will be considered through safeguards to ensure protection from harm, informed consent, and confidentiality (Rose & Abakar, 2018). The researcher bore the responsibility to protect participants, and the study was required to go through Institutional Review Board (IRB) approval to ensure compliance with ethical guidelines protecting these rights (Creswell, 2014).

Protection from harm is a basic requirement that ethical construction of a study will not entail participant harm, whether physiological or psychological (Bogden & Biklen, 2007; Patten, 2014). This entails ensuring research participants are not exploited (Bogden & Biklen, 2007; Creswell, 2014), nor is there presence of disrespect or stress induced by a power imbalance in the relationship between researcher and participants (Creswell, 2014). This study included consideration of psychological harm in wording or presentation of questions through the field study process, and processes for collection of demographic information was considered thoughtfully to avoid undue burden of time in the survey process. Additionally, the researcher needed to be clear and transparent in sample selection that participation in the study was not required nor would it have weight in the standing or perception of the teacher in his or her role as a teacher in the district.

Informed consent consists of several types of knowledge or information which must be made clear to participants. Components of consent include the following information related to the study: purpose, process, benefits, harm, and option for withdrawal (Patten, 2014). All participants were made aware of the option to refuse or withdraw and that participation was voluntary (Bogden & Biklen, 2007; Roberts, 2010). Due to the potential vulnerability of students under the age of 18 and in accordance with school district policy, parents were contacted to explain necessary information about study and to provide opportunity for opt-out consent prior to student involvement in the study (Independent School District 196, 2019). All participants and parents of student participants were provided information related to the purpose of the study, identification of the researcher and sponsoring institution,

guarantee of privacy and confidentiality, assurance of voluntary involvement and opportunity to withdrawal, and information to contact the researcher with questions. This was communicated to students through a brief video that included visual and written presentation of information embedded in the digital survey to increase the understanding of their rights as participants.

Confidentiality was maintained in the collection, analysis, and storage of information (Creswell, 2014; Patten, 2014; Roberts, 2010). The survey platform and data collection were done using district survey software. Information gathered sufficiently disguised the identity of participants (Patten, 2014). This included proper secure storage and disposal of any documents or materials with participant data, including coding of classrooms and student demographic information by numbers to avoid ability to deduce participant identities (Creswell, 2014; Roberts, 2010). Storage and de-identification of participant data was done in collaboration with district staff to increase participant confidentiality and security of data as discussed and agreed in the process of district approval for research.

Chapter Four: Results

Overview of the Study

The purpose of the study was to examine the relationship of instructional factors on academic and social self-perception outcomes of students in general education classes that include students with disabilities. This study examined the dependent variables of academic self-concept and social inclusion and their relationship with inclusive instructional practices and other independent variables through a multi-linear regression. Dependent variables were measured using student self-perception survey items. Independent variables related to instruction were measured through self-report survey items to be compared against demographics data and contextual factors.

The independent variables were measured by student self-perception items from the Perceptions of Inclusion Questionnaire (PIQ) (Venetz et al., 2015) measuring academic self-concept and social inclusion. Independent variables included scaled measures of inclusive practices and additional contextual or demographics data. Inclusive practices were measured with teacher self-report on a survey that included items from the Index for Inclusion (Booth & Ainscow, 2002) and the Inclusive Teaching Practices Scale student report form (Sharma & Sokal, 2016). Demographics data and contextual factors were gathered from the student information system through partnership with the data and assessment staff at the school district.

Description of Sample

The school district in which the study was conducted was selected through convenience sampling. The purposive sample of teacher participants included 20 out

of 31 possible teacher participants (65%) across the four high schools; these teachers were responsible for 33 out of 43 possible classrooms (77%). Roster information was used to identify class level factors to be used in analysis as independent variables. Descriptive statistics for class level factors are reported in Table 1.

Table 1

Descriptive Statistics for Surveyed Classes

Categorical Variables Used in Analysis	*n*	%	Coding/Range
Co-Taught	27	82.35	0 = all others; 1 = yes
Grade			
9	19	57.57	
11	14	42.42	
High School			
1	8	24.24	
2	7	21.21	
3	9	27.27	
4	9	27.27	
Continuous Variables Used in Analysis	m	sd	Coding/Range
Class Size	29	3.28	22-36
Percentage of students with IEPs in classes	28	12.82	8-48

Across the 33 classrooms represented or identified through eligibility and teacher participation, there were 937 possible student participants within the census sample. Eighty-three students were removed from the sample, due to parental opt-out consent. Of the 854 remaining students, 110 provided informed consent and participated in the study, for a total response and completion rate of 13%.

Demographics data for the 110 student participants was collected from the student information system, de-identified, and merged with the student survey responses by district assessment staff for analysis. A summary of student participant demographics is located in Table 2.

Table 2

Student Participant Demographic Data

Variable	*n*	%
Gender		
Female	63	57.27
Male	47	42.73
Grade		
9	74	67.27
11	36	32.72
Federal race/ethnicity		
White, not Hispanic	79	71.81
Black, not Hispanic	12	10.90
Hispanic	8	7.27
Asian/Pacific Islander	5	5.45
Two or more races	6	5.46
Flags		
Individual Education Plan	26	23.64
Free or reduced-price lunch	18	16.36
English learner	2	1.82
Learning model		
Digital academy	24	21.82
Hybrid	86	78.18

Research Questions

1. Is there a relationship between the degree of implementation of inclusive practices in classrooms and academic self-concept?
2. Is there a relationship between the degree of implementation of inclusive practices in classrooms and social inclusion?

Statistical Analysis

In preparation for the analysis, data was cleaned and scores were calculated for survey items dependent and independent variables. Raw survey responses from the Qualtrics Survey Software from teacher surveys, student surveys, and additional external factors (i.e., building, class level factors) were merged and de-identified by

district staff and Dr. Soria prior to being shared with the researcher. The data was then coded for statistical analysis using JASP.

Dummy coding was used for demographic factors (i.e., grade, gender, race/ethnicity) and context factors (i.e., co-taught, identified learning model) to allow for analysis. Scoring capabilities within the Qualtrics Survey Software were used to convert Likert scale items were to a numerical scoring of one through four. Identified items from the Self-Perception Profiles for LD Students (Renick & Harter, 2012) and Perceptions of Inclusion Questionnaire (PIQ) (Venetz et al., 2015) on the student survey were reverse scored. Dr. Soria and the researcher reviewed the coded data set to check for and either confirm or update for accurate numerical coding.

Survey responses with incomplete responses were reviewed. Within individual survey responses where one item was skipped or left blank, an average score based on the individual's responses within a similar type of question was calculated and input for the missing item to avoid skewing variable scores; this was done on three teacher responses and ten student responses. Survey responses missing more than one item in a scoring category were removed prior to analysis. Within the data set, sub scores were then calculated for independent variables and dependent variables.

In order to run the analysis, a single teacher value or rating for inclusive teaching practices was needed. In classes with only one teacher, the individual teacher response was merged each student response in their class. In instances in which both members of a co-teaching partnership responded, an average was calculated for each sub-test within the adapted inclusive practices survey used in this study and for the

Inclusive Teaching Practices Scale teacher rating (Venetz et al., 2015) to provide a single teacher score to use in analysis while still reflecting the perspective of each co-teaching partner. Teacher scores were merged with each student response in their class by district assessment staff and Dr. Soria.

Reliability and validity analysis were run post-data collection on data collection measures. Cronbach's alpha (α) was used to examine internal consistency for reliability and validity of both teacher and student measures. From the Perceptions of Inclusion Questionnaire (PIQ), the academic self-concept measure yielded $\alpha = .701$ and the social inclusion measure was $\alpha = .761$, which was similar to internal reliability in previous research (Schwab, Zurbriggen, & Venetz, 2020). On the Inclusive Teaching Practices Scale, the alpha value was $\alpha = .90$ for the student scale and $\alpha = .73$ for the teacher scale, which was similar to what was found in previous research (Schwab, Sharma, & Hoffmann, 2019). The alpha scores for subscales within the Self-Perception Profiles for LD Students (Renick & Harter, 2012) were as follows: $\alpha = .793$ for general intellectual ability, $\alpha = .841$ for reading competence, $\alpha = .867$ for writing competence, and $\alpha = .835$ for social competence. This is similar to what was reported in previous reliability and validity measures of the instrument (Renick & Harter, 2012). The calculated alpha scores across measures were all similar to previous research, reflecting strong psychometric properties.

Cronbach's alpha was also used for reliability and validity evaluation of the inclusive survey items adapted from the Index for Inclusion and used within this study (Booth & Ainscow, 2002). The Cronbach's alpha scores for the items and subtests within the measure are reported in Table 3. A correlation analysis was then

run to examine the relationship between the adapted survey (Booth & Ainscow, 2002), Inclusive Teaching Practices Scale (ITPS) teacher version, and ITPS student version (Venetz et al., 2015).

Table 3

Cronbach's Alpha for Inclusive Indicators

Domain	α	*n*
Planning	.773	12
Learning Activities	.749	5
Student Involvement	.827	9
Assessment	.737	4

An analysis of the adapted inclusive teaching practices survey (Booth & Ainscow, 2002) and the Inclusive Teaching Practices (ITPS) teacher scale revealed a statistically significant, positive relationship ($r = .957$, $p = .001$). However, the adapted teacher survey was not significantly associated with the Inclusive Teaching Practices Scale (ITPS) student scale ($r = .046$, $p = .643$). There was also no significant relationship between the Inclusive Teaching Practices Scale (ITPS) student version and the teacher version ($r = .091$, $p = .359$). Because of the lack of linear relationship between teacher and student report of inclusivity of classroom practice, both teacher and student rating would be included in analysis. Due to the strong positive relationship between the ITPS teacher version and the adapted survey, it was determined that the adapted teacher survey would be used in the analysis.

Statistical analysis of the research questions was run using a multi-linear regression using JASP software. The academic self-concept and social inclusion subtests of the Perceptions of Inclusion (PIQ) (Venetz et al., 2015) were used to measure the outcomes or independent variable. The linear regression examined the

relationship and degree of relationship of demographic factors, identified classroom or context factors, disability status, internal student factors as measured by subtests from the Self-Perception Profiles for LD Students (Renick & Harter, 2012), Inclusive Teaching Practices Scale (ITPS) student scale, and teacher self-report on the adapted inclusive practices scale.

Prior to analysis of the research questions, the data set was reviewed against the four assumptions of regression (Goss-Sampson, 2018; Muijs, 2011). Assumptions of independence, normality, homoscedasticity, and multicollinearity were examined (Goss-Sampson, 2018; Muijs, 2011). Scores were determined to be sufficiently independent through the survey occurring as a singular, cross-sectional survey and confirmed in a review of data. Standardized residuals histograms indicated normal distribution satisfying the assumption of normality. The assumption of homoscedasticity was found to be met through review of residual plots on a scatterplot with sufficient equality of variance across factors. Variance inflation factors and tolerance statistics were well within acceptable ranges indicating that predictors were not highly correlated, thus meeting the assumption of multicollinearity.

Findings

Research question one. Is there a relationship between the degree of implementation of inclusive practices in classrooms and academic self-concept?

Analysis of null hypothesis one and the alternate hypothesis. A multivariate linear regression was completed to measure whether a relationship existed between inclusive teacher practices and student academic self-concept in comparison against

potential relationships of other factors. The null hypothesis was that the degree of implementation of inclusive practices in classrooms has no relationship with academic self-concept, with the alternative hypothesis that there is a positive relationship between the degree of implementation of inclusive practices and academic self-concept. The degree of implementation of inclusive practices was measured by both teacher report ($n = 20$) and student report ($n = 110$). No significant relationship was found between student and teacher rating of inclusive practices (i.e., $r = .046$ and $p = .643$), so analysis for hypotheses considered both values. The results of the regression for academic self-concept suggested that there were five variables that were significantly ($p < .05$) associated with students' academic self-concept. Hispanic students had a significantly lower academic self-concept compared to their peers ($\beta = -.167$, $p < .05$). Students' general intellectual ability ($\beta = .360$, $p < .001$), reading competence ($\beta = .231$, $p < .01$), writing competence ($\beta = .239$, $p < .01$), and social competence ($\beta = .168$, $p < .05$) were all positively associated with their academic self-concept. There appeared to be no statistically significant relationship between inclusive practices, whether rated by students or teachers, and student academic self-concept; thus, the null hypothesis fails to be rejected. The results are displayed in Table 4.

Research question two. Is there a relationship between the degree of implementation of inclusive practices in classrooms and social inclusion?

Analysis of null hypothesis two and the alternate hypothesis. A multilinear regression was completed to measure whether a relationship existed between inclusive teacher practices and social inclusion when compared against potential

relationships of other factors. The null hypothesis was that the degree of implementation of inclusive practices in classrooms has no relationship with social inclusion, with the alternative hypothesis that there is a positive relationship between the degree of implementation of inclusive practices and social inclusion. The degree of implementation of inclusive practices was measured by both teacher report (n = 20) and student report (n = 110). The results of the regression for social inclusion suggested that there were three variables that were significantly ($p < .05$) associated with students' social inclusion. Female students had a significantly lower social inclusion score compared to males ($\beta = -.087$, $p < .01$). Students' social competence ($\beta = .478$, $p < .001$) and ratings on the Inclusive Teaching Practices Scale ($\beta = .239$, $p < .001$) were positively associated with their social inclusion. Due to the positive, highly significant relationship between student rating of inclusiveness and social inclusion, the null hypothesis was rejected. The data are displayed in Table 4.

Table 4

Regression Models Predicting Student Self-Reported Perceptions of Academic Self-Concept and Social Inclusion (n = 110)

	Perceptions of Inclusion (PIQ)							
	Academic Self-Concept				Social Inclusion			
Predictor	B	SE	β	Sig.	B	SE	β	Sig.
(Intercept)	11.495	.232		***	11.129	.251		***
Grade 11	.817	.428	.165		.470	.532	.088	
Female	.161	.377	.034		-1.415	.965	-.087	**
Black, not Hispanic	.391	.568	.052		.334	.706	.041	
Hispanic	-1.671	.718	-.167	*	-.437	.893	-.040	
Asian/Pacific Islander	-1.189	.776	-.119		-.035	.041	-.016	
Two or more races	-.387	.753	-.039		.327	.937	.030	
Individual Education Plan (IEP)	-.282	.463	-.050		.108	.575	.018	
Free or reduce-priced lunch (FRP)	.029	.476	.005		-.701	.591	-.102	
Co-Taught	-.377	.435	-.081		-.127	.540	-.025	
Learning Model	-.048	.444	-.009		.045	.552	.007	
Class Size	-.012	.053	-.019		.032	.066	.046	
Percent of students with IEPs in the class	.007	.015	.040		-.002	.019	-.012	
General Intellectual Ability (GIA)	.258	.067	.364	***	.069	.084	.090	
Reading Competence	.185	.059	.231	**	-.037	.074	.616	
Writing Competence	.180	.068	.239	**	.024	.084	.029	
Social Competence	.102	.052	.168	*	.316	.064	.478	***
Adapted Inclusive Practices Survey	-.004	.009	-.036		-.002	.011	-.013	
Inclusive Teaching Practices Scale (ITPS) - student	.003	.024	.008		.100	.030	.289	***
R^2				61.8%				49.8%

*Note. * $p < .05$, ** $p < .01$, *** $p < .00$*

Summary of Findings.

Table 5

Summary of Research Findings

Hypothesis	Result	Test	Summary
H01. The degree of implementation of inclusive practices in classrooms has no relationship with student academic self-concept.	Failed to reject	Multi-linear regression	No statistically significant relationship.
H1. The degree of implementation of inclusive practices in classrooms has a positive relationship student academic self-concept.	Rejected	Multi-linear regression	No statistically significant relationship.
H02. The degree of implementation of inclusive practices in classrooms has a no relationship with social inclusion.	Rejected	Multi-linear regression	There was a statistically significant relationship between ITPS student rating (β =.289, p = .001).
H2. The degree of implementation of inclusive practices in classrooms has a positive relationship with student social inclusion.	Failed to reject	Multi-linear regression	There was a statistically significant relationship between ITPS student rating (β =.289, p = .001).

Chapter Four included descriptive statistics of the sample and analysis through multilinear regression. Descriptive statistics captured participant demographic information, the classroom context, and student reported internal factors utilized in the multilinear regression. Data was analyzed using JASP (Goss-Sampson, 2018) from 110 student participants across 33 high school English classrooms within the identified school district. There was a significant and positive relationship found between student rating of inclusiveness and social inclusion, but no relationship was found with teacher rating of inclusiveness. No statistically significant relationship was found between student or teacher rating and student academic self-concept.

Chapter Five: Discussion, Implications, and Recommendations

Overview of the Study

The purpose of the study was to examine the relationship of instructional factors on academic and social self-perception outcomes of students in general education classes that include students with disabilities. This study examined the dependent variables of academic self-concept and social inclusion and their relationship with inclusive instructional practices and other independent variables through a multi-linear regression. Dependent variables were measured using student self-perception survey items. Independent variables related to instruction were measured through self-report survey items to be compared against demographics data and contextual factors.

Research Questions

1. Is there a relationship between the degree of implementation of inclusive practices in classrooms and academic self-concept?

   H01. The degree of implementation of inclusive practices in classrooms has no relationship with academic self-concept.

   H1. The degree of implementation of inclusive practices in classrooms has a positive relationship with academic self-concept.

2. Is there a relationship between the degree of implementation of inclusive practices in classrooms and student social inclusion?

   H02. The degree of implementation of inclusive practices in classrooms has no relationship with social inclusion.

   H2. The degree of implementation of inclusive practices in classrooms has a

positive relationship with social inclusion.

Conclusions

Research Question One. The results of the multilinear regression indicated that no statistically significant relationship existed between teacher or student ratings of inclusiveness and the academic self-concept of students. Across all independent variables examined including class level factors, racial demographics, gender, and disability status, student self-perception of competence in various areas were found to have a statistically significant positive relationship with academic self-concept. General intellectual ability and reading competence had a significant positive relationship with students' academic self-concept. Writing competence and social competence also had a significant positive relationship with students' academic self-concept.

Additionally, Hispanic students had a significantly lower academic self-concept compared to their peers. However, no significant relationship was found between students' academic self-concept and degree of classroom inclusiveness, either on teacher rating or student rating. The rating of inclusiveness by teachers and by students did not show a statistically significant relationship to students' academic self-concept. Academic self-concept of students was found to be higher in students that rated themselves as higher in general intellectual ability, reading competence, writing competence, and social competence, and are not identified as Hispanic, regardless of disability status, racial identification, class size, proportion of students with disabilities in the class, or inclusivity of the teaching practices used in their class.

Research Question Two. The results of the multilinear regression indicated that a highly statistically significant positive relationship existed between student ratings of inclusiveness and the social inclusion of students. Across all independent variables examined, gender and student self-perception of social competence had a statistically significant positive relationship with social inclusion of students. Students' social competence had a statistically significant positive relationship with social inclusion. Females reported significant lower levels of social inclusion compared to males. The rating of inclusiveness by students showed a highly statistically significant relationship to students' social inclusion. Social inclusion of students was found to be higher in students that perceived their teachers to rate highly in using inclusive teaching practices, rated themselves as higher in social competence, and are identified as male, regardless of disability status, racial identification, class size, self-perception in academic areas, or proportion of students with disabilities in the class.

Implications for Practice

Effective inclusion is conditionally defined based on the academic and social outcomes of students (Bjornsrud & Nilsen, 2019; Lindner et al., 2018; Lorger et al., 2015; Olson et al., 2016), and this study aimed to contribute to the emerging conversation of classroom instructional practices that can be defined as inclusive. Since inclusion is entirely dependent upon results realized for students within a class, classrooms aiming to be inclusive should operate in a way that is flexible and student centered (Altemueller & Lindquist, 2017; Efthymiou & Kington, 2017). This study adds to the conversation of inclusive classroom practice by examining the

relationship of various factors on students' academic self-concept and perception of social inclusion. In addition, the lack of relationship between teacher rating of inclusivity with either outcome compared to the correlation found between student rating of inclusivity and actualized social inclusion would affirm that inclusion is student centered in definition, as the teacher perception of inclusivity is not effective in producing outcomes that are inclusive.

This study adds new considerations of what can be seen and what is not yet known about instructional practices and their implications on inclusive student outcomes. The analysis would suggest that the scaled items related to inclusion do have an impact on social inclusion and can contribute to an understanding of practices that contribute to socially inclusive classrooms. While a relationship was not found between the scaled items and students' academic self-concept, some considerations can be drawn from what factors were found to have relationship with academic self-concept to be considered in instruction.

Social inclusivity. Analysis of the data suggests that in the classrooms examined, individual social competence appeared to contribute to academic self-concept, but competence in academic areas did not appear to be related to social inclusion. This affirms the theorized (Wenger, 1998) and quantified relationship (Maciver et al., 2019) between social and academic factors. First, this would suggest that even though the examined practices believed to be inclusive maybe did not influence academic outcomes, they did reliably correlate with social inclusion. Researchers have drawn attention to social barriers that can be experienced by students with disabilities (Bjornsrud & Nilsen, 2019; Efthymiou & Kington, 2017;

Feldman et al., 2016; Gallagher & Odozi, 2015). The present study found no relationship between disability identification and social inclusion and has been seen before (Shogren et al., 2015b), which is contrary to several other studies where students with disabilities rated themselves lower when compared to peers without disabilities (Devries et al., 2018; Schwab et al., 2018). Such a result seems to suggest that teaching practices had a higher influence on social inclusion than disability identification and would affirm the centrality of the role of the teacher in creating the social conditions of the classroom (Efthymiou & Kington, 2017; Shogren et al., 2015b). Student self-perception of social competence also had a strong relationship with social inclusion.

While disability identification did not independently cause barriers to social inclusion, teachers do need to be equipped to contribute to the development students' social competence (Carter et al., 2017; Hudson & Browder, 2014; Lorger et al., 2015; Schwab, 2019) to promote social inclusion in classrooms where students have lower social competence. Additionally, absence of a relationship between perceived competence in academic areas would suggest that social benefits of inclusion could be realized in classrooms with inclusive teaching practices regardless of a student's perceived status of academic competence.

The significant relationship between student perceived social competence and academic self-concept offers considerations for practice. The relationship may have to do with the isolating effect of being a struggling student or needing to request additional support due to instruction not being sufficiently academically inclusive of the student (Prater, 2014). Previous research has found that collaboration between

students contributes to more student-centered learning, promotion of student involvement, and higher academic outcomes (Altemueller & Lindquist, 2017; Demirdag, 2017; Efthymiou & Kington, 2017), and the relationship between social competence and academic self-concept could be highlighting the opportunity of academic benefit for students who are more highly engaged with peers in the learning environment.

Academic inclusivity. The lack of relationship between the employed measures of inclusive teaching practices and students' academic self-concept would indicate more has yet to be explored to effectively understand what instructional and curricular practices contribute to academically inclusive classrooms, as has been described as a need in previous research (Cook & Rao, 2018; Hagiwara et al., 2019; Olson et al., 2016). The strong relationships between student competence in various academic areas (i.e., perceptions of general intellectual ability, reading competence, and writing competence) would suggest that the key to being academically inclusive lies in the ability of classroom practices to meaningfully develop and extend student competence in these areas. The need to better understanding practices that contribute to development of the academic competence in diverse classrooms is consistent with a previously identified need in secondary classrooms.

Secondary classrooms face challenges that are different from elementary classrooms and have tended to demonstrate gaps in instructional practices. Secondary classrooms have been observed to demonstrate fewer instructional behaviors (Maciver et al., 2018; Scott et al., 2014), offer lower rates of opportunity to respond and interact (McKenna et al., 2015), and are more likely to struggle with developing

the underlying academic skills of students (Bulgren et al., 2006; Elliot et al., 2017; Maciver et al., 2018). It is possible that this gap and the lack of relationship between practices found in this study correspond with a misstep between being both facilitative (Bonati, 2018; Efthymiou & Kington, 2017; Leighers et al., 2017; Mohamed, 2018) with a broad plan for differentiating (CAST, 2018; Cook & Rao, 2018; Crevecoeur et al., 2014; Rose & Meyer, 2002) and still providing sufficient direct instruction for skill development (Bonati, 2018). Teachers may authentically rate themselves highly on the inclusivity measures or students may rate them highly for providing opportunities that are accessible, having embedded choices, and allowing students to engage without ever moving into providing individualized instruction (Bešic et al., 2017) that accelerates the skill and competency development of students. This distinction between providing accessible options and providing skill development is what Cook and Rao (2018) described as macro practices and micro practices.

The macro, or overall practices of a classroom, should be facilitative, sufficiently accessible, provide opportunity for individual extension, and allow for collaboration (CAST, 2018; Cook & Rao, 2018; Crevecoeur et al., 2014; Rose & Meyer, 2002). Teachers then need to employ effective micro practices (Cook & Rao, 2018) or targeted practices designed to ensure the development of competence through direct instruction. Particularly in classrooms with students with disabilities, this entails specifically targeting the areas of need relevant to a classroom or student (Carter et al., 2017; Hudson & Browder, 2014). Micro practices can include specific strategies employed by the teacher (Cook & Rao, 2018), individualized

instruction (Bešic et al., 2017), or may include peer support that is more than just social (Leighers et al., 2017). Such intervention requires teaching and re-teaching (Prater, 2014) of both skills and content (Bulgren et al., 2006; Shogren et al., 2015a). The broad and specific actions on the part of the teacher to influence classroom context (Maciver et al., 2019; Scott et al., 2014) and take action in a way that directly impacts the competence of students is a complex feat that has been a challenge to effectively document and quantify (Elliot et al., 2017) and will require further exploration.

Teacher perceptions and decisions. Data in this study indicated that there was no relationship between teacher rating their own inclusivity and student rating of inclusivity. A similar difference between teacher rating and student rating as has been seen in other studies (Kelley et al., 2017; Lindner et al., 2019). Previous research with high school students with learning disabilities has argued that student perceptions and assessment of teacher characteristics and pedagogical practices is related to teacher effectiveness (Connor & Cavendish, 2018). Data from this study also suggested that it is only the students' rating of inclusivity that meaningfully attributed to any gains and only in social areas. The student rating of inclusivity is related to the degree to which a student feels socially included, and provides opportunity to consider and expand teachers' perceptions to better critically align to what students experience.

The classroom teacher is important to academic and social outcomes of students (Efthymiou & Kington, 2017; Gallagher & Odozi, 2015; Gatlin & Wilson, 2016; Lorger et al., 2015; Shogren et al., 2015a), but there is a lack of meaningful relationship between teacher measures of inclusiveness using these measures and

student outcomes. This lack of relationship could be that the employed measures do not effectively measure inclusivity of practices, or it could be due to teachers perceiving execution of certain acts as inclusive without effectively centering the student in those decisions. Previous research has indicated that quality supports and services are tied to the skills of the teacher (Gallagher & Odozi, 2015; Lorger et al., 2015). It is unclear whether or not the inclusive instructional factors rated do not matter for academic inclusion or if this is due to a gap between teacher perception of what they think they are doing and its execution or actual impact on the classroom environment and student learning opportunities. This study would suggest student perspective matters more than teacher perspective on this as researchers continue to develop criteria for teachers to use to analyze and inform their own practice.

Recommendations for Future Research

There are a number of questions that arise in this study for researchers to continue to explore. There is a need to better understand and measure teaching practices that contribute equitably to academic outcomes or academic self-concept. This is related to the need to continue to transform and redefine the role of the teacher (Altemueller & Lindquist, 2017; Mohamed, 2018), especially in terms of their role in influencing changing the trajectory of students' competence in academic and social areas. This may involve other ways of defining and quantifying equitable, responsive practice other than teacher report (Webster & Blatchford, 2018). While student perspectives are noted as particularly beneficial and important in advancing culturally responsive pedagogy across many facets of diversity (Connor & Cavendish, 2018), further exploration is needed of the relationship of perceived outcomes like academic

self-concept and social inclusion and ways of measuring gains in student competence and capacity (Demirdag, 2017; Lyons et al., 2016).

This study used a cross-sectional survey, capturing data at a singular point time. Future research might consider capturing data at the beginning of the year and a later point in the year to examine the influence of inclusive practices over time and to better understand practices influence the perceptions of competence of the individual.

Additional research might consider the nuance of support and service and its relationship on outcomes (Gauri & Bouck, 2017). This could consider closer comparison of outcomes in co-taught classes, pullout classes, or for students who receive resource services in conjunction with participation in a general education class. Also, this study did not consider the different categories of disability identification for which a student can be identified as eligible for special education. Consideration of disability area might be useful in better understanding the role of perceived competence in a given area and its relationship to academic self-concept and social inclusion.

Race, class, gender, language, and sexuality are factors that have correlated inequalities in education (Connor & Cavendish, 2018; Poon-McBrayer, 2016; Santos et al., 2016; Sciuchetti, 2017; Sinclair et al., 2018; Theoharis & Causton, 2016). In the analysis of academic self-concept, there was a moderately significant negative relationship found with the racial identification as Hispanic. In the analysis of social inclusion, there was a highly significant negative relationship with identification as female. Future research should seek to better understand factors contributing to

inequities based on race and gender (Santos, Sardinha, & Reis, 2016; Tjernberg & Mattson, 2014).

Concluding Comments

Inclusion in education is a lofty goal that brings diverse students together across various social-ecological contexts (Hobbs, 1966; Jackson, 2009; Sciuchetti, 2017; Wenger, 1998) into a community that unites them through the shared work of learning together and actualizes individual growth. The experience of inclusion is accomplished through work of the teacher by adjusting the context (Maciver at al., 2018; Maciver et al., 2019) or ecosystem of the classroom environment (Wilson, 2013) to support and expand what students can do (Maciver at al., 2018).

Research has not yet captured a sufficient picture of what specific teacher practices will reliably result in increase in student gains. The relationship between students' perception of the inclusivity of teacher practice and social inclusion contributes to an understanding that can expand classroom practices that promote social inclusivity. While more research is needed to advance the understanding of inclusive teaching practices that contribute to academic gains, data within this study affirms the relationship captured in the metanalysis by Maciver et al. (2019) of student competence as a critical, internal component of the student experience.

It is the work of teachers to construct classroom ecosystems that will equitably advance the learning of their students. There is a dichotomy of teacher self-rating or perception of inclusiveness and student perceptions of inclusiveness. A student-centered orientation is the keystone of inclusive practice, not just in intention, but process of responsiveness based on centering the student experience. Connor and

Cavendish (2018) argued that student perspectives are particularly beneficial and important in advancing culturally responsive pedagogy across many facets of diversity, including race, class, gender, culture, sexuality, and disability. Advancing inclusive teaching practices will require attuning to the factors that add or detract to the academic and social outcomes of students. In all likelihood, the mechanisms for determining inclusiveness will require bringing practitioners to a cyclical process to consider the impact of their instructional choices on the students within a given class to inform their ongoing instructional decisions.

References

Altemueller, L., & Lindquist, C. (2017). Flipped classroom instruction for inclusive learning. *British Journal of Special Education, 44*(3), 341-358.

American Psychological Association. (2006). Stereotype threat widens achievement gap. Retrieved from https://www.apa.org/research/action/stereotype

Arwood, T., & Panicker, S. (2018, November). "Assessing Risk - RBE." CITI Program. Retrieved from: https://www.citiprogram.org

Bešic, E., Paleczek, L., Krammer, M., & Gasteiger-Klicpera, B. (2017). Inclusive practices at the teacher and class level: The experts' view. *European Journal of Special Needs Education, 32*(3), 329–345.

Blatchford, P., & Webster, R. (2018). Classroom contexts for learning at primary and secondary school: Class size, groupings, interactions and special educational needs. *British Educational Research Journal, 44*(4), 681–703.

Bonati, M. L. (2018). Collaborative planning: Cooking up an inclusive service-learning project. *Education and Treatment of Children, 41*(1), 139-152. doi: https://doi.org/10.1453/etc.2018.0005

Booth, T., & Ainscow, M. (2002). Index for inclusion: Developing learning and participation in schools. Retrieved from: https://www.eenet.org.uk/resources/docs/Index%20English.pdf

Bossaert, G., Colpin, H., Pijl, S. J., & Petry, K. (2015). Quality of reciprocated friendships of students with special educational needs in mainstream seventh grade. *Exceptionality, 23*(1), 54-72.

Brown, J. E., & Babo, G. (2017). The influence of placement in an inclusive classroom on the academic performance of non-disabled eleventh grade students in a suburban New Jersey school district. *Education Leadership Review of Doctoral Research*, 5, 1-15.

Bulgren, J. A., Marquis, J. G., Deshler, D. D., Schumaker, J. B., Lenz, B. K., Davis, B., & Grossen, B. (2006). The instructional context of inclusive secondary general education classes: Teachers' instructional roles and practices, curricular demands, and research-based practices and standards. *Learning Disabilities: A Contemporary Journal, 4*(1), 39-65.

Buli-Holmberg, J., & Jeyaprathaban, S. (2016). Effective practice in inclusive and special needs education. *International Journal of Special Education, 31*(1), 119-134.

Carter, E., Gustafson, J., Sreckovic, M., Dykstra Steinbrenner, J., Pierce, N., Bord, A., . . . Mullins, T. (2017). Efficacy of peer support interventions in general education classrooms for high school students with autism spectrum disorder. *Remedial and Special Education, 38*(4), 207-221.

CAST. (2018). *Universal design for learning guidelines version 2.2*. Retrieved from http://udlguidelines.cast.org

Chen, L. (2017). Critical components for inclusion of students with moderate intellectual disabilities into general junior high school. *International Journal of Developmental Disabilities, 63*(1), 8-16.

Connor, D. J., & Cavendish, W. (2018). 'Sit in my seat': Perspectives of students with learning disabilities about teacher effectiveness in high school inclusive

classrooms, *International Journal of Inclusive Education*, doi: 10.1080/13603116.2018.1459888

Cook, S. C., & Rao, K. (2018). Systematically applying UDL to effective practices for students with learning disabilities. *Learning Disability Quarterly, 41*(3), 179-191.

Cosier, M., Causton-Theoharis, J., & Theoharis, G. (2013). Does access matter? Time in general education and achievement for students with disabilities. *Remedial and Special Education, 34*(6), 323-332. doi:10.1177/0741932513485448

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches.* Thousand Oaks, CA: Sage.

Crevecoeur, Y. C., Sorenson, S. E., Mayorga, V., & Gonzalez, A. P. (2014). Universal design for learning in K-12 educational settings: A review of group comparison and single-subject intervention studies. *Journal of Special Education Apprenticeship, 3*(2).

Demirdag, S. (2017). What instructional leaders need to know about the effects of inclusion. *European Journal of Educational Research, 6*(2), 175-186.

Detrich, R., & Lewis, T. (2013). A decade of evidence-based education: Where are we and where do we need to go? *Journal of Positive Behavior Interventions, 15*(4), 214-220. doi:10.1177/1098300712460278

Devries, J. M., Voß, S., & Gebhardt, M. (2018). Do learners with special education needs really feel included? Evidence from the perception of inclusion questionnaire and strengths and difficulties questionnaire. *Research in Developmental Disabilities,* 83, 28-36.

Dymond, S., Butler, A., Hopkins, S., & Patton, K. (2018). Curriculum and context: Trends in interventions with transition-age students with severe disabilities. *The Journal of Special Education, 52*(3), 152-162.

Efthymiou, E., & Kington, A. (2017). The Development of inclusive learning relationships in mainstream settings: A multimodal perspective. *Cogent Education, 4*(1).

Elliot, S. N., Kurz, A., Tindal, G., & Yel, N. (2017). Influence of opportunity to learn indices and education status on students' mathematics achievement growth. *Remedial and Special Education, 38*(3), 145-158. doi: 10.1177/0741932516663000

Everett, D. (2017). Helping new general education teachers think about special education and how to help their students in an inclusive class: The perspective of a secondary mathematics teacher. *International Journal of Whole Schooling, 13*(3).

Farrell, P., Dyson, A., Polat, F., Hutcheson, G., & Gallannaugh, F. (2007) Inclusion and achievement in mainstream schools. *European Journal of Special Needs Education, 22*(2), 131-145. doi: 10.1080/08856250701267808

Feldman, R., Carter, E. W., Asmus, J., & Brock, M. E. (2016). Presence, proximity, and peer interactions of adolescents with severe disabilities in general education classrooms. *Exceptional Children, 82*(2), 192-208.

Gallagher, K. L., & Odozi, A. (2015). Protocol for the assessment of common core teaching: The impact of instructional inclusion on students with special needs. *Contemporary School Psychology, 19*(2), 77-88.

Gatlin, B., & Wilson, C. (2016). Overcoming obstacles: African American students with disabilities achieving academic success. *The Journal of Negro Education, 85*(2), 129-142.

Gauri, S. J., & Bouck, E. C. (2017). Examining postsecondary education predictors and participation for students with learning disabilities. *Journal of Learning Disabilities, 50*(1), 3-13. doi: 10.1177/002221945572894

Gilmour, A. F. (2018). Has inclusion gone too far? Weighing its effects on students with disabilities, their peers, and teachers. *Education Next, 18*(4), 8-16.

Gómez-Zepeda, G., Petreñas, C., Sabando, D., & Puigdellívol, I. (2016). The role of the support and attention to diversity teacher (SADT) from a community-based perspective: Promoting educational success and educational inclusion for all. *Teaching and Teacher Education, 64,* 127-138. doi: 10.1016/j.tate.2017.02.002

Goss-Sampson, M.A. (2018). *Statistical analysis in JASP: A guide for students.* Retrieved from https://static.jasp-stats.org/Statistical%20Analysis%20in%20JASP%20-%20A%20Students%20Guide%20v2.pdf.

Gottfried, M. A. (2014). Classmates with disabilities and students' noncognitive outcomes. *Educational Evaluation and Policy Analysis, 36*(1), 20-43.

Hagiwara, M., Shogren K. A., Burke, K., Uyanik, H., Amor A., M., ... Aguayo, V. (2019). International trends in inclusive education intervention research: A literature review. *Education and Training in Autism and Developmental Disabilities, 54*(1), 3-17.

Hang, Q., & Rabren, K. (2009). An examination of co-teaching: Perspectives and efficacy indicators. *Remedial and Special Education, 30*(5), 259-268. doi: 10.1177/0741932508321018

Harn, B., Parisi, D., & Stoolmiller, M. (2013). Balancing fidelity with flexibility and fit: What do we really know about fidelity of implementation in schools? *Exceptional Children, 79*(2), 181–193.

Hicks, L. (2018). "Defining research with human subjects - SBE." CITI Modules. Retrieved from: https://www.citiprogram.orgs

Hobbs, N. (1966). Helping disturbed children: Psychological and ecological strategies. *American Psychologist, 21,* 1105.

Hudson, M. E., & Browder, D. M. (2014). Effects of a peer-delivered system of least prompts intervention and adapted science read-alouds on listening comprehension for participants with moderate intellectual disability. *Education and Training in Autism and Developmental Disabilities, 49*(1), 60-77.

Independent School District 196. (2019, August). Use of Students, Employees and/or District Data for Research, 801.9AR, (September 1990, revised August 2019), https://www.district196.org/about/policies/800-districtcommunity-relations/801/8019ar

Individuals with Disabilities Education Act, 20 U.S.C. § 300.107-320 (2004).

Jackson, L. B. (2009). The dynamic relationship between context, curriculum, and student learning: A case for inclusive education as a research- based practice.

Research and Practice for Persons with Severe Disabilities: The Journal of TASH, 33(4), 175-195.

Katz, J., & Sokal, L. (2016). Universal design for learning as a bridge to inclusion: A qualitative report of student voices. *International Journal of Whole Schooling, 12*(2), 36-63.

Kelley, R. G., Brown, M. R., & Knapp, D. (2017). Evaluation of the student experience in the co-taught classroom. *International Journal of Special Education, 32*(3), 520-537.

Kurth, J., & Mastergeorge, A. (2012). Impact of setting and instructional context for adolescents with autism. *The Journal of Special Education, 46*(1), 36-48.

Leighers, K., Kleinert, H. L., & Carter, E. W. (2017). "I never truly thought about them having friends": Equipping schools to foster peer relationships. *Rural Special Education Quarterly, 36*(2), 73-83. doi: 10.1177/876870517707711

Leko, M. M. (2015). To adapt or not to adapt: Navigating an implementation conundrum. *TEACHING Exceptional Children, 48*(2), 80–85.

Lindner, K.-T., Alnahdi, G. H., Wahl, S., & Schwab, S. (2019). Perceived differentiation and personalization teaching approaches in inclusive classrooms: Perspectives of students and teachers. *Frontiers in Education, 4*(58). doi: 10.3389/feduc.2019.00058

Lorger, T., Schmidt, M., & Vukman, K. B. (2015). The social acceptance of secondary school students with learning disabilities (LD). *Center for Educational Policy Studies Journal, 5*(2), 177-194.

Lyons, G. L., Huber, H. B., Carter, E. W., Chen, R., & Asmus, J. M. (2016). Assessing the social skills and problem behaviors of adolescents with severe disabilities enrolled in general education classes. *American Journal on Intellectual and Developmental Disabilities, 121*(4), 327–345. doi: 10.1352/1944-7558-121.4.327

Maciver, D., Hunter, C., Adamson, A., Grayson, Z., Forsyth, K., & Mcleod, I. (2018). Supporting successful inclusive practices for learners with disabilities in high schools: A multisite, mixed method collective case study. *Disability and Rehabilitation, 40*(14), 1708-1717.

Maciver, D., Rutherford, M., Arakelyan, S., Kramer, J. M., Richmond, J., Todorova, L., . . . Forsyth, K. (2019). Participation of children with disabilities in school: A realist systematic review of psychosocial and environmental factors. *PLOS ONE, 14*(1). doi: 10.1371/0210511

McKenna, J. W., Muething, C., Flower, A., Bryant, D. P., & Bryant, B. (2015). Use and relationships among effective practices in co-taught inclusive high school classrooms. *International Journal of Inclusive Education, 19*(1), 53-70.

McLeskey, J., Landers, E., Hoppey, D., & Williamson, P. (2011). Learning disabilities and the LRE mandate: An examination of national and state trends. *Learning Disabilities Research & Practice, 26*(2), 60-66.

McLeskey, J., Landers, E., Williamson, P., & Hoppey, D. (2012). Are we moving toward educating students with disabilities in the less restrictive settings? *The Journal of Special Education, 46*(3), 131-140. doi: 10.1177/0022466910376670

McLeskey, J., Waldron, N. L., & Redd, L. (2014). A case study of a highly effective, inclusive elementary school. *The Journal of Special Education, 48*(1), 59-70. doi: 10.1177/002246691244045

Minnesota Department of Education. (2018a). *Minnesota student survey report 2016.* Retrieved from: http://w20.education.state.mn.us

Minnesota Department of Education. (2018b). *Special education district profiles - Part B.* Retrieved from: http://w20.education.state.mn.us/.

Minnesota Report Card. (2019a). *College-going.* Retrieved from: https://rc.education.state.mn.us

Minnesota Report Card. (2019b). *Graduation rates.* Retrieved from: https://rc.education.state.mn.us

Minnesota Report Card. (2019c). *My school.* Retrieved from: https://rc.education.state.mn.us

Minnesota Report Card. (2019d). *Test results and participation.* Retrieved from: https://rc.education.state.mn.us

Minnesota Report Card. (2019e). *Who are the students?* Retrieved from: https://rc.education.state.mn.us

Mohamed, N. (2018). The debate between traditional and progressive education in the light of special education. Online Submission.

Molbaek, M. (2018). Inclusive teaching strategies - dimensions and agendas. *International Journal of Inclusive Education, 22*(10), 1048-1061.

Muijs, D. (2011). *Doing quantitative research in education with SPSS* (2nd ed.). Thousand Oaks, CA: Sage.

Mulholland, M., & O'Connor, U. (2016). Collaborative classroom practice for inclusion: Perspectives of classroom teachers and learning support/resource teachers. *International Journal of Inclusive Education (20)*10, 1070-1083, doi: 10.1080/13603116.2016.1145266

National Center for Educational Statistics. (2019a). *High school graduation rates.* Retrieved from: https://nces.ed.gov/fastfacts/display.asp?id=805

National Center for Educational Statistics. (2019b). *Students with disabilities.* Retrieved from: https://nces.ed.gov/fastfacts/display.asp?id=64

National Center for Educational Statistics. (2019c). *Students with disabilities, inclusion of.* Retrieved from: https://nces.ed.gov/fastfacts/display.asp?id=59

Ok, M. W., Rao, K., Bryant, B. R., & McDougall, D. (2017). Universal design for learning in pre-k to grade 12 classrooms: A systematic review of research. *Exceptionality, 25*(2), 116-138.

Olson, A., Leko, M. M., & Roberts, C. A. (2016). Providing students with severe disabilities access to the general education curriculum. *Research and Practice for Persons with Severe Disabilities, 41*(3), 143-157.

Orcher, L. T. (2014). *Conducting research: Social and behavioral science methods.* Glendale, CA: Pyrczak Publishing.

Parsons, L. D., Miller, H., & Deris, A. R. (2016). The effects of special education training on educator efficacy in classroom management and inclusive strategy use for students with autism in inclusion classes. *Journal of the American Academy of Special Education Professionals*, *8*(1), 7-16.

Patten, M. L. (2014). *Understanding research methods: An overview of the essentials* (9th ed.). Glendale, CA: Pyrczak Publishing.

Petry, K. (2018). The relationship between class attitudes towards peers with a disability and peer acceptance, friendships and peer interactions of students with a disability in regular secondary schools. *European Journal of Special Needs Education, 33*(2), 254-268.

Poon-McBrayer, K. F. (2016). Complexities of shared ethnicity, immigrant education, and disabilities: Reconceptualizing multicultural special education. *International Journal of Special Education, 31*(3).

Prater, M. A. (2014). Teaching adolescent students with learning disabilities to self-advocate for accommodations. *Intervention in School and Clinic, 49*(5), 298-305.

Renick, M. J., & Harter, S. (2012). Self-perception profile for learning disabled students: Manual and questionnaires. Retrieved from https://portfolio.du.edu/SusanHarter/page/44210

Roberts, C. M. (2010). *The dissertation journey: A practical and comprehensive guide to planning, writing, and defending your dissertation.* Thousand Oaks, CA: Corwin.

Rose, S. L., & Abakar, M. (2018, January). "Students in research." CITI Modules.

Rose, D. H., & Meyer, A. (2002). *Teaching every student in the digital age: Universal design for learning.* Alexandria, VA: Association for Supervision and Curriculum Development.

Santos, G. D., Sardinha, S., & Reis, S. (2016). Relationships in inclusive classrooms. *Journal of Research in Special Educational Needs, 16*(1).

Schwab, S. (2019). Friendship stability among students with and without special educational needs. *Educational Studies, 45*(3), 390-401. doi: 10.1080/03055698.2018.1509774

Schwab, S., Sharma, U., & Hoffmann, L. (2019). How inclusive are the teaching practices of my German, Maths and English teachers? Psychometric properties of a newly developed scale to assess personalisation and differentiation in teaching practices. *International Journal of Inclusive Education*, doi: 10.1080/13603116.2019.1629121

Schwab, S., Sharma, U., & Loreman, T. (2018). Are we included? Secondary students' perception of inclusive climate in their schools. *Teach. Teacher Education. 75*, 31-39. doi: 10.1016/j.tate.2018.05.016

Schwab, S., Zurbriggen, C. L. A., & Venetz, M. (2020). Agreement among student, parent and teacher ratings of school inclusion: A multitrait-multimethod analysis. *Journal of School Psychology, 82*, 1-16.

Sciuchetti, M. B. (2017). Addressing inequity in special education: An integrated framework for culturally responsive social emotional practice. *Psychology in the Schools, 54*(10), 1245-1251.

Scott, T. M., Hirn, R. G., & Alter, P. J. (2014). Teacher instruction as a predictor for student engagement and disruptive behaviors. *Preventing School Failure, 58*(4), 193-200.

Sharma, U., & Sokal, L. (2016). Can teachers' self-reported efficacy, concerns, and attitudes toward inclusion scores predict their actual inclusive classroom practices? *Australasian Journal of Special Education, 40*(1), 21-38. doi:10.1017/jse.2015.14

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

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

Shoulders, T., & Krei, M. (2016). Rural secondary educators' perceptions of their efficacy in the inclusive classroom. *Rural Special Education Quarterly, 35*(1), 23-30.

Sinclair, J., Hansen, S. G., Machalicek, W., Knowles, C., Hirano, K. A., Kolata, J. K., ... Murray, C. (2018). A 16-year review of participant diversity in intervention research across a selection of 12 special education journals. *Exceptional Children, 84*(3), 312-329. doi: 10.1177/0014402918756989

Theoharis, G., & Causton, J. (2016). "He won't get anything out of this!" Intersections of race, disability, and access. *Journal of Cases in Educational Leadership, 19*(1), 40-50.

Tjernberg, C., & Mattson, E. H. (2014). Inclusion in practice: A matter of school culture. *European Journal of Special Needs Education (29)*2, 247-256. doi: 10.1080/08856257.2014.891336

Venetz, M., Zurbriggen, C. L. A., Eckhart, M., Schwab, S., & Hessels, M. G. P. (2015). The Perceptions of Inclusion Questionnaire (PIQ). English Version. Retrieved from www.piqinfo.ch.

Venetz, M., Zurbriggen, C. L. A., & Schwab, S. (2019). What do teachers think about their students' inclusion? Consistency of students' self-reports and teacher ratings. *Frontiers in Psychology*, *1*(1637). doi: 10.3389.2019.01637

Webster, R., & Blatchford, P. (2018). Making sense of 'teaching', 'support' and 'differentiation': The educational experiences of pupils with education, health and care plans and statements in mainstream secondary schools. *European Journal of Special Needs Education,* 1-16. doi: 10.1080/08856257.2018.1458474.

Wei, X., Wagner, M., Yu, J. W., Hudson, L., & Javitz, H. (2014). The effect of general education inclusion on college enrollment rates among youth with autism spectrum disorder. Grantee Submission.

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity.* Cambridge, MA: Cambridge University Press.

Wenger, E., McDermott R. A., & Snyder, W. (2002). *Cultivating communities of practice: A guide to managing knowledge*. Boston, MA: Harvard Business School Press.

Wilson, J. D. (2013). Ecological education for children with disabilities. In C. R. Reynolds, K. J. Vannest, & E. Fletcher-Janzen (Eds.), *Encyclopedia of special education: a reference for the education of children, adolescents, and adults with disabilities and other exceptional individuals* (4th ed.). Hoboken, NJ: Wiley.

Zurbriggen, C. L. A., Venetz, M., Schwab, S., & Hessels, M. G. P. (2017). A psychometric analysis of the student version of the Perceptions of Inclusion Questionnaire (PIQ). *European Journal of Psychological Assessment, Published*. (1-9). doi:10.1027/1015-5759/a000443

Appendix A: Teacher Survey

Planning

	Not true at all	Somewhat not true	Somewhat true	Certainly true
My teaching is planned to support learning rather than deliver the curriculum	○	○	○	○
The curriculum & materials I use reflect the backgrounds, experience, and interests of all learners	○	○	○	○
My lessons start from a shared experience that can be developed in a variety of ways	○	○	○	○
My lessons extend the learning of all students	○	○	○	○
My lessons encourage a view of learning as continuous (rather than completed with particular tasks)	○	○	○	○
My unit and lesson planning reflects on and attempts to minimize barriers to learning and participation for particular students	○	○	○	○
I examine ways to reduce the need for individual support of students (i.e. minimizes the necessity for separate modifications/accommodations)	○	○	○	○
My daily lessons provide opportunities for paired, small group, individual, and whole group work	○	○	○	○

	Not true at all	Somewhat not true	Somewhat true	Certainly true
My daily lessons include a variety of activities involving speaking, listening, reading, and writing (i.e. choice reading, shared reading, pair and share, verbal share out, etc.)	○	○	○	○
My curriculum is adapted for variance in student academic ability and background	○	○	○	○
My lessons are adapted so students with diverse learning needs can develop skills and knowledge	○	○	○	○
I recognize and build in the additional time (in class or across days in my unit) required by some students with disabilities to engage in or complete tasks	○	○	○	○

Learning Activities

	Not true at all	Somewhat not true	Somewhat true	Certainly true
My lessons build on differences in student knowledge and experience	○	○	○	○
My lessons pay attention to the social, emotional, and intellectual aspects of learning	○	○	○	○
The written materials (i.e. books, articles, etc.) and oral information in my class include options that are accessible to all students each day	○	○	○	○
My lessons encourage dialogue between staff and students as well as between students themselves	○	○	○	○

	Not true at all	Somewhat not true	Somewhat true	Certainly true
My daily lessons encourage the practice and development of a language for thinking and talking about learning	○	○	○	○

Student Involvement

	Not true at all	Somewhat not true	Somewhat true	Certainly true
My classroom environment, displays, and resources (i.e. anchor charts, daily agenda, slides, tools/handouts, book choices, etc.) equip students for independent learning	○	○	○	○
The support I give to students helps them develop in their learning while drawing on the knowledge and skills they already possess	○	○	○	○
I teach my students to use the classroom resources, materials, and technology independently	○	○	○	○
My daily lessons have students personally practice making connections (i.e. between content, class materials, to their work, to their lives, etc.)	○	○	○	○
My daily lessons have students practice sharing their learning (in spoken, written, and other forms), including individually and/or in groups	○	○	○	○
My daily lessons encourage students to summarize what they have learned verbally and in writing	○	○	○	○
I involve students in finding ways to overcome their own and each other's difficulties in learning	○	○	○	○
My daily lessons give students choice over activities	○	○	○	○

	Not true at all	Somewhat not true	Somewhat true	Certainly true
My daily lessons value and draw upon the skills acquired by students independently and their interests and knowledge	○	○	○	○

Assessment

	Not true at all	Somewhat not true	Somewhat true	Certainly true
I take responsibility for the progress of all students in my lessons and throughout my units	○	○	○	○
The assessments I use within my units are directed at what is important to learn	○	○	○	○
My assessments (including daily, formative, and summative) lead to modifications in my teaching plans and practice	○	○	○	○
The feedback I provide to students indicates what they have learned and what they might do next	○	○	○	○

Inclusive Teaching Practice Scale

	Not true at all	Somewhat not true	Somewhat true	Certainly true
I take the academic achievement of my students into account.	○	○	○	○
I take the feelings of my students into account.	○	○	○	○
I take the interests of my students into account.	○	○	○	○
I explain the rules clearly.	○	○	○	○
I use a variety of ways to deal with the learning content (text, videos, pictures, etc.).	○	○	○	○
I use a variety of assessment methods.	○	○	○	○
I use a variety of grouping strategies.	○	○	○	○
I vary learning activities to promote different learning styles.	○	○	○	○
I create a learning environment that encourages me to explore the topic.	○	○	○	○
I encourage my students to take risks and make mistakes to enhance learning processes by trial and error.	○	○	○	○
I use different lesson formats (e.g. lecture, free work, station work, etc.).	○	○	○	○
I use different presentation techniques (e.g. white board, flipchart, power point presentation).	○	○	○	○
I collaborate with colleagues (e.g. learning team or another teacher).	○	○	○	○
I give individual feedback	○	○	○	○

Appendix B: Teacher Communication and Informed Consent

Introduction:
Dear teacher,
You are invited to participate in an anonymous study regarding the use of inclusive teaching practices in high school English classes. I hope to learn more about the instructional factors related to positive academic and social outcomes for students with and without disabilities and across racial and cultural groups.

Procedures: You were selected as a possible participant because you are a high school English teacher in school district 196 with three or more students with disabilities in an English 9 or English 11 course. The study will involve completion of a self-report survey; then students within your class will be sent an online survey. This research is part of a doctoral dissertation study in the K-12 Educational Leadership program at Bethel University, located in St. Paul, Minnesota.

The teacher survey includes 46 survey items using a Likert scale (30 classroom practice items, 14 optional items on inclusiveness, and two demographic items). The survey is estimated to take less than five minutes to complete. Participants will be notified when the student survey window has opened and will asked to remind students to check their school district email.

Confidentiality: Any information obtained in connection with this study that can be identified with you will remain confidential. All responses will be de-identified so no individual participant responses, either teacher or student, will ever be identified in the analysis of the data. There is no connection to any teacher that is collected or stored. In any written reports or publications, no one will be identified or identifiable and only aggregate data will be presented. There are no risks for participation in this study.

Your decision whether or not to participate will not affect your future relations with Bethel University or Independent School District 196 in any way. If you decide to participate, you are free to discontinue participation at any time without affecting such relationships.

Incentives: Participants who complete the survey will have the option to enter into a drawing for one of four $25 Amazon gift cards (odds of receiving a gift card are one in eight). Once the survey is submitted, there will be an option to click on a link to provide an email address to be entered into the random selection for the gift card. It is done this way to ensure that no identifying information can be connected to survey results.

Contacts and Questions: This research project has been approved by my research advisor in accordance with Bethel's Levels of Review for Research with Humans and ISD 196 policies on data for research and approval for research. If you have any questions about the research and/or research participants' rights or wish to report a

research related concerns, please contact Jen York (jey43474@bethel.edu) or Dr. Annette Ziegler (Dissertation Advisor at annette-ziegler@bethel.edu).

By completing this online survey here, you are granting consent to participate in this research.

Follow this link to the Survey:

Or copy and paste the URL below into your internet browser:

Thank you!
Jen York

Follow this link to opt out of this study:

Appendix C: Student Survey

Really True for Me A	Sort of True for Me B	Some kids are *sure* that they are pretty smart in school	BUT	Other kids are *not* so sure they are all that smart in school	Sort of True for Me C	Really True for Me D

A B C D

Really True for Me A	Sort of True for Me B	Some kids feel that they are just as smart as others their age	BUT	Other kids *aren't so sure* and wonder if they are as smart	Sort of True for Me C	Really True for Me D

A B C D

Really True for Me A	Sort of True for Me B	Some kids are *not* very good learners in school	BUT	Other kids *are* good learners in school	Sort of True for Me C	Really True for Me D

A B C D

Really True for Me A	Sort of True for Me B	Some kids feel kind of *dumb* when it comes to doing their schoolwork	BUT	Other kids feel they are pretty *bright* when it comes to doing their schoolwork	Sort of True for Me C	Really True for Me D

A B C D

Really True for Me A	Sort of True for Me B		BUT		Sort of True for Me C	Really True for Me D
		Some kids feel that they are *very good* at their schoolwork		Other kids *worry* about whether they can do the schoolwork assigned to them		

A B C D

Really True for Me A	Sort of True for Me B		BUT		Sort of True for Me C	Really True for Me D
		Some kids *can* read most stories and books pretty easily		Other kids have a *hard time* reading stories and books		

A B C D

Really True for Me A	Sort of True for Me B		BUT		Sort of True for Me C	Really True for Me D
		Some kids are really good readers		Other kids have a *hard time* with their reading		

A B C D

Really True for Me A	Sort of True for Me B		BUT		Sort of True for Me C	Really True for Me D
		Some kids have *trouble* with their reading		Other kids do well in reading		

A B C D

Really True for Me A	Sort of True for Me B				Sort of True for Me C	Really True for Me D
		Some kids read pretty *fast*	**BUT**	Other kids are pretty *slow* readers		

A B C D

Really True for Me A	Sort of True for Me B				Sort of True for Me C	Really True for Me D
		Some kids can write good stories or papers pretty easily	**BUT**	Other kids find it *hard* to write good stories or papers		

A B C D

Really True for Me A	Sort of True for Me B				Sort of True for Me C	Really True for Me D
		Some kids can easily write good sentences and paragraphs to make a good story	**BUT**	Other kids have *trouble* writing sentences and paragraphs in order to make a good story		

A B C D

Really True for Me A	Sort of True for Me B				Sort of True for Me C	Really True for Me D
		Some kids find it *hard* to write good stories or papers	**BUT**	Other kids can write good stories or papers		

A B C D

Really True for Me A	Sort of True for Me B				Sort of True for Me C	Really True for Me D
		Some kids have a *hard time* writing good sentences and paragraphs	**BUT**	Other kids *can* write good sentences and paragraphs		

A B C D

Really True for Me A	Sort of True for Me B				Sort of True for Me C	Really True for Me D
		Some kids find it *hard* to make friends	**BUT**	For other kids it's pretty easy		

A B C D

Really True for Me A	Sort of True for Me B				Sort of True for Me C	Really True for Me D
		Some kids know how to make classmates like them	**BUT**	Other kids *don't* know how to make classmates like them		

A B C D

Really True for Me A	Sort of True for Me B				Sort of True for Me C	Really True for Me D
		Some kids don't have the social skills to make friends	**BUT**	Other kids do have the social skills to make friends		

A B C D

Really True for Me A	Sort of True for Me B	Some kids understand how to get peers to accept them	BUT	Other kids do *not* understand how to get peers to accept them	Sort of True for Me C	Really True for Me D

A B C D

Really True for Me A	Sort of True for Me B	Some kids know how to become popular	BUT	Other kids don't know how to become popular	Sort of True for Me C	Really True for Me D

A B C D

I like going to school.

Not at all true | Somewhat not true | Somewhat true | Certainly true

I have a lot of friends in my class.

Not at all true | Somewhat not true | Somewhat true | Certainly true

I am a fast learner.

Not at all true | Somewhat not true | Somewhat true | Certainly true

I have no desire to go to school.

Not at all true | Somewhat not true | Somewhat true | Certainly true

I get along very well with my classmates.

Not at all true | Somewhat not true | Somewhat true | Certainly true

I am able to solve very difficult exercises.

Not at all true | Somewhat not true | Somewhat true | Certainly true

I like it in school.

Not at all true | Somewhat not true | Somewhat true | Certainly true

I feel alone in my class.

Not at all true | Somewhat not true | Somewhat true | Certainly true

I do well in my schoolwork.

Not at all true | Somewhat not true | Somewhat true | Certainly true

School is fun.

Not at all true | Somewhat not true | Somewhat true | Certainly true

I have very good relationships with my classmates.

Not at all true	Somewhat not true	Somewhat true	Certainly true
○	○	○	○

Many things in school are too difficult for me.

Not at all true	Somewhat not true	Somewhat true	Certainly true
○	○	○	○

Inclusive Teaching Practice Scale

	Not true at all	Somewhat not true
My teacher takes my academic achievement into account.	○	○
My teacher takes my feelings into account.	○	○
My teacher takes my interests into account.	○	○
My teacher explains the rules clearly.	○	○
My teacher uses a variety of ways to deal with the learning content (text, videos, pictures, etc.).	○	○
My teacher uses a variety of assessment methods.	○	○
My teacher uses a variety of grouping strategies.	○	○
My teacher varies learning activities to promote different learning styles.	○	○
My teacher creates a learning environment that encourages me to explore the topic.	○	○
My teacher encourages me to take risks and make mistakes to enhance my learning processes by trial and error.	○	○
My teacher uses different lesson formats (e.g. lecture, free work, station work, etc.).	○	○
My teacher uses different presentation techniques (e.g. white board, flipchart, power point presentation).	○	○
My teacher collaborates with colleagues (e.g. learning team or another teacher).	○	○
My teacher gives individual feedback	○	○

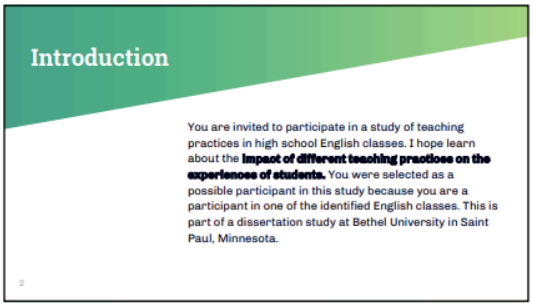
Appendix D: Student Communication and Informed Consent

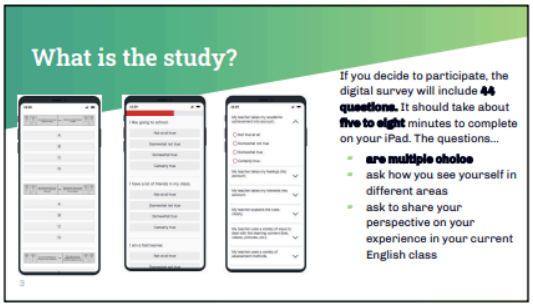
Informed Consent

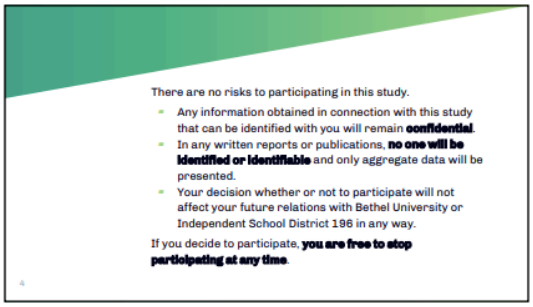
You are invited to participate in a study of teaching practices in high school English classes.

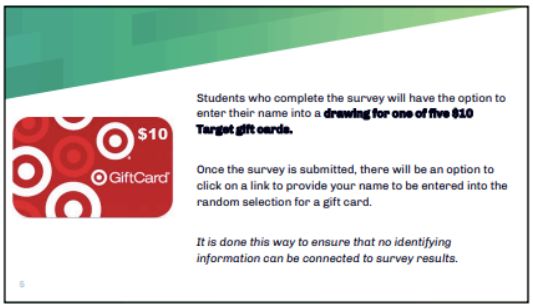
Please watch this 2 1/2 minute video about the study OR read the same information written below.

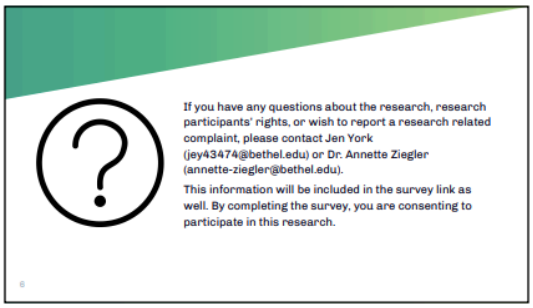
Visuals from the video:











Information from the video, if you want to read it instead:
You are invited to participate in a study of teaching practices in high school English classes. I hope to learn about the impact of different teaching practices on the experiences of students. You were selected as a possible participant in this study because you are a participant in one of the identified English classes. This is part of a dissertation study at Bethel University in Saint Paul, Minnesota.

If you decide to participate, the digital survey will include 44 multiple choice questions. It should take about five to eight minutes to complete on your iPad. The questions will be multiple choice and ask how you see yourself in different areas and to share your perspective on your experience in your current English class.

There are no risks to participating in this study. Any information obtained in connection with this study that can be identified with you will remain confidential. In any written reports or publications, no one will be identified or identifiable and only aggregate data will be presented. Your decision whether or not to participate will not affect your future relations with Bethel University or Independent School District 196 in any way. If you decide to participate, you are free to stop participating at any time.

Students who complete the survey will have the option to be enter their name into a drawing for one of five $10 Target gift cards. Once the survey is submitted, there will be an option to click on a link to provide your name to be entered into the random selection for the gift card. It is done this way to ensure that no identifying information can be connected to survey results.

If you have any questions about the research and/or research participants' rights or wish to report a research related complaint, please Jen York (jey43474@bethel.edu) or Dr. Annette Ziegler (annette-ziegler@bethel.edu). This information will be included in the survey link as well.

By completing and returning the survey, you are granting consent to participate in this research.

Do you consent to participating in this study?

- ○ Yes
- ○ No

What learning model did/do you participate in?
Please answer with the learning model that you started the year in.

- ○ Hybrid (cohort A or B)
- ○ Digital Academy

Survey Directions:
Please watch this 2 1/2 minute directions video:

Visuals from Directions video:

Survey Directions

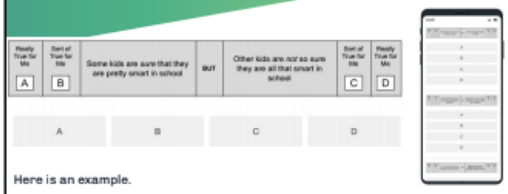
As you fill out the survey, think especially about how you feel in your current English class.

This is a survey, not a test, so there are no right or wrong answers. The first part of the survey is about you, and what you think you are like.

2

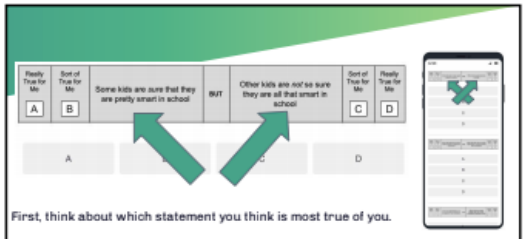
First Question Type

18 survey items.
These have a unique format, please follow the directions on how to respond.



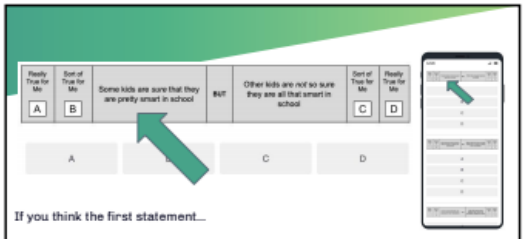
Here is an example.

4



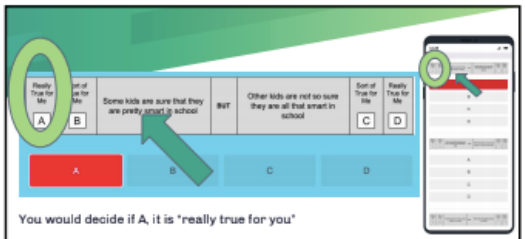
First, think about which statement you think is most true of you.

5



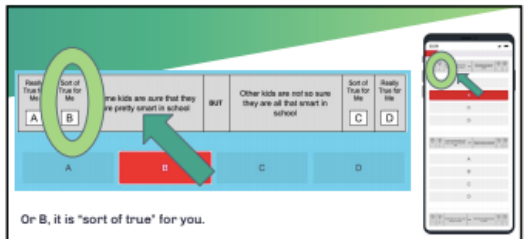
If you think the first statement...

6



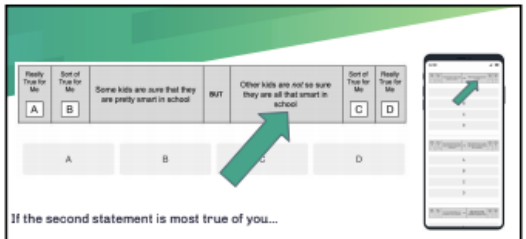
You would decide if A, it is "really true for you"

7



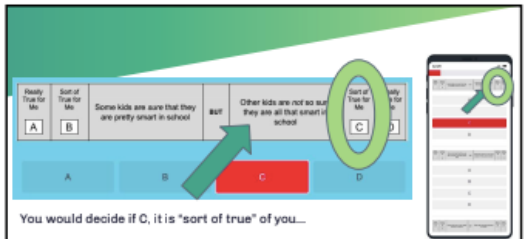
Or B, it is "sort of true" for you.

8



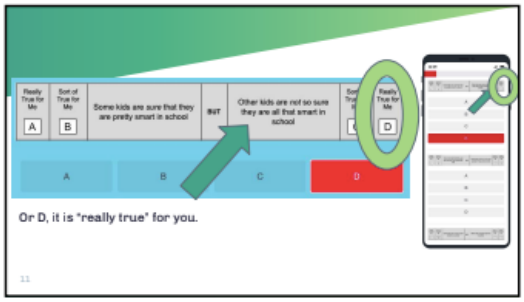
If the second statement is most true of you...

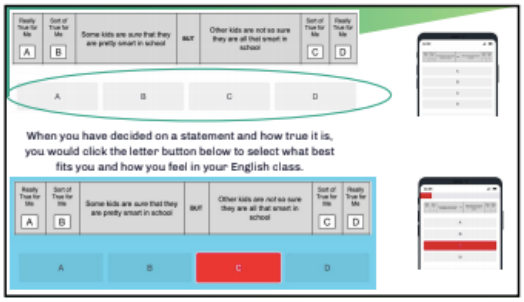
9



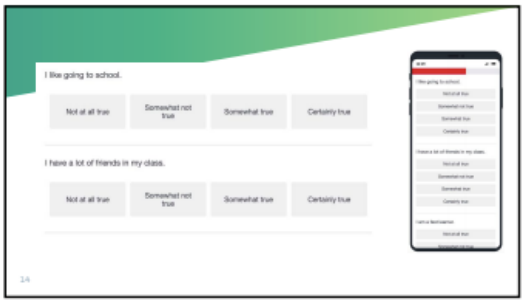
You would decide if C, it is "sort of true" of you...

10

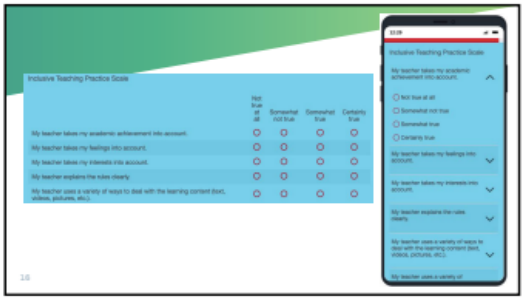

Really True for Me
A
Sort of True for Me
B
Some kids are sure that they are pretty smart in school
BUT
Other kids are not so sure they are all that smart in school
Really True for Me
D
A
B
C
D
Or D, it is "really true" for you.
11


Really True for Me
A
Sort of True for Me
B
Some kids are sure that they are pretty smart in school
BUT
Other kids are not so sure they are all that smart in school
Sort of True for Me
C
Really True for Me
D
A
B
C
D
When you have decided on a statement and how true it is, you would click the letter button below to select what best fits you and how you feel in your English class.
A
B
C
D


Second Question Type
12 survey items


I like going to school.
Not at all true
Somewhat not true
Somewhat true
Certainly true
I have a lot of friends in my class.
Not at all true
Somewhat not true
Somewhat true
Certainly true
14


Third Question Type
14 survey items


Inclusive Teaching Practice Scale
Not true at all
Somewhat not true
Somewhat true
Certainly true
My teacher takes my academic achievement into account.
My teacher takes my feelings into account.
My teacher takes my interests into account.
My teacher explains the rules clearly.
16

Appendix D: Parental Consent Letter

Hello,

Your high school student at ISD 196 is invited to participate in a study of teaching practices in high school English classes. I hope to learn about the impact of different teaching practices on the experiences of students. Your student is invited to participate as they are a member of one of the identified English classes in the study. This is part of a dissertation study at Bethel University in Saint Paul, Minnesota.

Procedures: If you agree to allow your student to participate in the study, they will be asked to watch a brief video providing information on the study and explaining the survey and complete a five to eight-minute online survey. The survey will include 30 items regarding their academic and social self-perception, and 14 optional items regarding the inclusiveness of their classroom experience.

Risks/Benefits: There are no perceived risks to the students participating in this study. The indirect benefits to students will be contributing information to the professional learning and practice of English teachers in Independent School District 196. The results will be helpful in informing classroom practices in English classes in Independent School District 196.

Incentives: Participants who complete the survey will have the option to be enter their name into a drawing for one of five $10 Target gift cards. Once the survey is submitted, there will be an option to click on a link to provide their name to be entered into the random selection for the gift card. It is done this way to ensure that no identifying information can be connected to survey results.

Confidentiality: Any information obtained in connection with this study that can be identified will remain confidential. In any written reports or publications, no one will be identified or identifiable and only aggregate data will be presented.

Voluntary Participation: Participation in this study is voluntary. Your student's decision whether or not to participate will not affect their future relations with Bethel University or Independent School District 196 in any way. If you do not wish your student to take the survey as a part of this study, please indicate your desire to opt out on the link provided below. Even if you decide to allow your student to participate, they are free not to answer any question or to withdraw from participation at any time without penalty.

Contacts and Questions: This research project has been approved by my research advisor in accordance with Bethel's Levels of Review for Research with Humans and ISD 196 policies on data for research and approval for research. If you have any questions about the research and/or research participants' rights or wish to report a research related concerns, please contact Jen York (jey43474@bethel.edu) or Dr.

Annette Ziegler (Dissertation Advisor at annette-ziegler@bethel.edu).

Thank you,
Jen York

Follow this link to indicate whether or not you consent for your student to participate:

Or copy and paste the URL below into your internet browser:

Follow the link to opt out of future emails:

Appendix E: Agreement to Conduct Research in District 196

INDEPENDENT SCHOOL DISTRICT 196
Rosemount-Apple Valley-Eagan Public Schools
Educating our students to reach their full potential

Series Number 801.9P Adopted September 1990 Revised August 2009

Title Request to Conduct Research in District 196

Name Jen (Jenifer) York Phone 612 223 4920
(please print)

Email jen.york@district196.org Fax

Address 1173 Ottawa Avenue, West St Paul, MN 55118

Title of research project The Relationship Between Inclusive Classroom Practice & Student Self-Perception Outcomes

Research institution Bethel University

School(s) or populations being studied Students in High School ELA Classes

Anticipated beginning date August 2020 Ending date December 2020

On a separate sheet of paper, describe:

- Purpose of research;
- Planned use of results;
- Your qualifications;
- How the rights and privacy of human subjects will be protected, and
- How the research will benefit District 196 and/or will contribute to the advancement of education in general.

2. Attach all curriculum, forms, handouts, letters, etc. you plan to use in the study.

Jenifer York
signature

8/3/2020
date

Request approved M. Bohnsack

Request denied _____

Date request received
Aug 17, 2020

Does this research require access to private identifiable student data? ☐ yes ☑ no
If yes, the study must be for the purposes of developing, validating or administering predictive tests, administering student aid programs or improving instruction, and the researcher and the district must enter into an agreement pursuant to section 2.5 of 801.9AR, Use of Students, Employees and /or District Data for Research by completing page 2 of this procedure.

Rationale

Michael Bohnsack
signature of director

8/17/20
date

c: Superintendent
Principal(s) affected
District director(s) affected

AGREEMENT TO CONDUCT RESEARCH IN DISTRICT 196
Note: This agreement is only necessary if the Researcher requires access to private, personally identifiable student data

This Agreement to Conduct Research in District 196 is made between Independent School District 196 and Jen York ("Researcher"). The purpose of this Agreement is to allow Researcher to conduct research using student data, subject to certain limitations described in this Agreement. The parties agree as follows:

1. Purpose – The purpose of the research is to (check one):
   - ☐ develop, validate or administer predictive tests; or
   - ☐ administer student aid programs, or
   - ☒ improve instruction.

2. Use of data – The research will require the Researcher to access the following types of student or parent data: (describe the nature and scope of data to be accessed by the researcher)

   Demographic & contact information for students in identified HS classes

   Student or parent information will only be used as necessary to meet the purpose of the research.

3. Term – The term of the research project will be: (describe the duration of the project)

   Survey data collected over a span of approximately 8 weeks

4. Privacy – The Researcher understands and agrees that student information is classified as private data under the law and the Researcher agrees to conduct the research in a manner that does not permit personal identification of students or parents by anyone other than the Researcher or those within the Researcher's organization with legitimate professional interest in the information. All data collected from District 196 shall be governed by the Minnesota Government Data Practices Act and, if applicable, by the federal Family Educational Rights and Privacy Act (FERPA) and the Researcher agrees to comply with these laws. The Researcher also agrees to destroy or return to District 196 all personally identifiable student or parent information collected by the Researcher when the information is no longer needed for the purposes for which the research was conducted, in no event later than one year after the conclusion of the term of this Agreement. The Researcher's obligation to return or destroy data shall survive the termination of this Agreement.

5. Incorporation of Documents. The parties agree that Procedure 801.9P and its attached documentation shall be incorporated into and made a part of this Agreement.

Independent School District 196	[Name of Researcher/Organization]
Michael Bolsmi	Jen York/Bethel University
signature of director	title Doctoral Candidate
date 8/17/20	date 2/8/2020