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**Students with Disabilities Educational Outcomes and the Least Restrictive Environment**

by

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To the Graduate Faculty:

The members of the committee appointed to examine the thesis of SHAUNA D.  
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## Dedication

To Dale and our children who picked up way too many duties so that I could chase a dream.

## Acknowledgement

I would like to acknowledge Dr. Kellie Kirkpatrick and her unwavering belief in my ability to do more than I thought I could. Also, Dr. James Stoutenborough, who challenged my own implicit biases which has sent me in a direction I never thought I would go.

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# Students with Disabilities Educational Outcomes and the Least Restrictive Environment

## Thesis Abstract—Idaho State University (2020)

IDEA established that students with disabilities have a free and appropriate education (FAPE) in the least restrictive environment (LRE) that is appropriate. What constitutes the LRE is now debated by educators, parents, disability rights advocates, policymakers, and the judicial system. The consensus is that the LRE is Environment 1, which has students with disabilities being within the general education setting 80 percent or more each day with access to the same education as their non-disabled peers. But does the inclusion of students in general education lead to better educational outcomes as measured by their standardized test scores? An OLS regression of ISAT scores and LRE placement showed that being in Environment 2 had a negative impact on ISAT scores; however, being in Environment 1 had no impact. Low standardized test scores are not affected by the LRE, which suggests that other factors may be the cause.

Keywords: IDEA, least restrictive environment, inclusion, implementation, educational outcomes, students with disabilities, educational policy

## Introduction

Prior to 1972, the state of Pennsylvania excluded “retarded children” from the public education system if the child was deemed as “uneducable and untrainable.” They also indefinitely “postponed” the admission to a public school if a child had not reached the “mental age of five years” (Forte, 2017). In the settlement of *Pennsylvania Association for Retarded Children v. Pennsylvania* (1971), it was agreed that educational placements would include parental participation and a means to resolve disputes (Wright and Wright, 2012). The District of Columbia School District closed its doors to students with disabilities through the practice of suspending, expelling and excluding citing a lack of financial resources needed to educate students with disabilities (Forte, 2017; Wright and Wright, 2012). It was found in *Mills v. Board of Education* (1972) that the District of Columbia failed to provide a publicly supported education and training to students with disabilities. It was also found that the practice of excluding, suspending, expelling, reassigning, and transferring students with disabilities from the regular education classroom was done without affording the students due process (Wright and Wright, 2012). Both the *Pennsylvania Association for Retarded Children v. Pennsylvania* (1971) and *Mills v. Board of Education* (1972) extended the reasoning of *Brown v. Board* (1954) that segregated public schools were inherently unequal and deprived them of equal protection of the laws. It thus violated the due process clause of the Fifth Amendment and equal protection of the Fourteenth Amendment, to students with disabilities (Howe, Boele, and Miramontes, 2018; Schinagle and Bartlett, 2015; Szumski and Karwowski, 2012; Wright and Wright, 2012). In response to these rulings, Congress passed the Education for all Handicapped Children Act in 1975, which was later renamed to the Individuals with Disabilities Education Act (IDEA) with the latest authorization occurring in 2004 (U.S. Department of Education, 2007).

Through IDEA, importance on the access for students with disabilities to the same educational opportunities as their peers was established (Kirby, 2017). As a means to provide access for students with disabilities to educational opportunities, IDEA mandates that students with a disability are to be provided free and appropriate education (FAPE) in the least restrictive environment (LRE) to the “maximum extent appropriate” (Crockett, Kauffman, 2013; Douvanis and Halsey, 2002; Kirby, 2017). The ideas from *Brown v. Board* (1954) have driven the design of the LRE under IDEA to emphasize the placement of students with disabilities within a general education setting that includes their non-disabled peers. These ideas include that a decent formal education is necessary for a decent quality of life, that separating students is harmful to their self-concepts and leads to a reduction of academic achievement and that separate education facilities are “inherently unequal” (Howe et al, 2018). The goal of the IDEA’s LRE is to assure that students with disabilities are educated with same-age peers to prepare them for a future of inclusion through the destruction of barriers placed by exclusionary practices regardless of how their skills and abilities will affect their school performance (Howe et al, 2018; Kirby, 2017). However, the language in IDEA that addresses the LRE is deliberately brief and vague, which leaves it open to interpretation. This vagueness has led to numerous parental challenges through the federal court system with claims that their child has not been allowed to be in the least restrictive environment. Rulings from various district courts have developed numerous guidelines as to how the LRE for a student is to be determined. The Sixth District Court of Appeals developed a two-prong test for determining the appropriate LRE in their ruling of *Roncker v. Walter* (1982) while the Ninth District developed a three-prong test in their ruling of *Sacramento v. Rachel H* (1994) (Douvanis and Halsey, 2006) <sup>1</sup>.

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<sup>1</sup> A full discussion on the various court prong tests is done latter in the document.

Critics have contended that advocates for the inclusion of students with disabilities have erred by placing too much emphasis on the LRE and not enough focus on the quality of instruction and educational outcomes of students (Schinagle and Bartlett, 2015). Yet, to date, there has not been a randomly assigned research design with a control group to measure the effects of the LRE on students with disabilities (Kirby, 2017). With emphases placed the LRE by parents, the courts, and IDEA, does being educated in the LRE lead to successful outcomes of the education of students with disabilities?

Understanding whether students with disabilities are successfully educated is essential for future authorization of IDEA and the concept of the LRE. Schools are held accountable by policymakers and the public through student performance of standardized tests (Harris, 2011). This study seeks to examine the performance of students with disabilities as measured by the standardized testing used by the state of Idaho to measure if the LRE has an impact on student performance. In order to do this, the paper will proceed in five parts. First, I will explore the history of special education law and policy. Second, I will examine the justification for IDEA and the inclusion of students with disabilities within the general education classroom. Third, I will discuss what inclusion looks like in practice, along with what other studies have found as it relates to the LRE and educational outcomes. Fourth, I will discuss the methods used to analyze the Idaho Standards Achievement Test, known as ISAT, testing scores, and how the LRE influences them. Fifth, I will discuss the outcomes of the statistical model. Finally, I will discuss what the finding potentially demonstrates and where research could proceed from here.

### **History of IDEA**

In the 19<sup>th</sup> and early 20<sup>th</sup> century, states across the United States passed compulsory education laws requiring children to attend a public or state-accredited private school for a given

time each year (Find Law, 2016). With every child now legally required to attend school, challenges to the type of education given to various groups of children followed with the *Brown v. Board* (1954) ruling that separate educational opportunities based on race were not equal (Crockett and Kauffman, 2013). The disability rights movement used the reasoning set forth by *Brown v. Board* (1954) as it related to the due process clause of the Fifth Amendment and the due process and equal protection clauses of the Fourteenth Amendment. They sought to obtain the same educational protection for children with disabilities that had been extended to black students (Howe et al, 2018).

Before 1975, an estimated four million children with disabilities in the United States did not receive the necessary supports that they needed in school to access their education, with an estimated one million receiving no schooling whatsoever (Connor and Ferri, 2007).

*Pennsylvania Association for Retarded Children v. Pennsylvania* (1971) and *Mills v. Board of Education* (1972) are credited with spurring the passage of the 1975 Education for All Handicapped Children Act (EAHCA), later known as the Individuals with Disabilities Education Act (IDEA) (Crockett and Kauffman, 2013; Schinagle and Bartlett, 2015). EAHCA was built on the commitment of an equal opportunity for all individuals to have access to a decent public education due to the personal worth of a person, regardless of their personal ability or disability (Crockett and Kaufman, 2013; Howe et al, 2018).

IDEA is, in many aspects, classic liberal legalism with a focus on the individual rights of citizens along with procedures to enforce and protect those rights (Crockett and Kaufman, 2013). The presumptive right is the right of all students with disabilities to receive educational services with their non-disabled peers. A child with a disability is to be provided a free and appropriate education (FAPE) in the least restrictive environment (LRE) through a federal mandate that

attempts to address the successful integration of a historically excluded and disparate group of people (Kauffman and Hallahn, 2011; Crockett and Kaufman, 2013). *Brown v. Board* (1954) influenced the creation of IDEA with the ideals that a decent formal education will result in a decent quality of life along with the idea that separate education facilities are “inherently unequal” and harmful to students’ self-concepts that will result in lower achievement levels (Howe et al, 2018).

Despite this federal mandate to include students in the LRE and over 40 years of litigation, schools still struggle to provide the most appropriate LRE for some students with disabilities (Kauffman and Hallahan, 2011). The laws and policies that guide the implementation of IDEA are found in individual state laws where they must, at minimum, meet the standards established by IDEA though they may exceed it if they so choose (Crockett and Kauffman, 2013; Douvanis and Halsey, 2002). Case law has also evolved through court rulings from various Circuit Courts cases (Douvanis and Halsey, 2002). An uneven implementation has occurred due to these contradictory interpretations that apply in some areas but not in others while courts have interpreted IDEA in ways that may be different than what the original purpose of the law intended (Crockett and Kauffman, 2013; Douvanis and Halsey, 2002; Kauffman and Hallahan, 2011). Various courts around the country have interpreted what an LRE is, thus causing a patchwork of judicial interpretation. Location does matter as local school districts attempt to meet the legal standards of placing a student in the correct LRE. As of this time, the Supreme Court has refused to hear any case addressing the LRE, thus allowing the current patchwork to continue (Douvanis and Halsey, 2002; Underwood, 2018).

## Case Law

Under IDEA, parents have procedural rights that are enforceable in the court system to enable them to be equal players in the development of their child's IEP. If a parent feels that their child is not receiving an appropriate education, they may file a complaint with the state and request a due process hearing. An independent hearing officer oversees this hearing, and the outcome may be appealed to the federal district court by either party (Pudelski, 2013). Special education due process appeals has come to represent an ever-increasing percentage of the education-related litigation in the federal court system (Hoagland-Hanson, 2015). The rulings from these cases have developed an extensive case law that is used in the implementation of IDEA policy and procedures. As Congress did not define LRE, the courts have been allowed to shape the definition (Douvani and Halsey, 2002).

The Sixth Circuit Court ruled on the first LRE case in *Roncker v. Walter* (1983) and established a two-prong test to determine if the LRE was appropriate. The first prong was to determine if the educational services provided to the student in the resource room was superior to that offered in a non-segregated, or the general education, setting. The second prong held that the student needed to be mainstream in a general education setting to the maximum extent possible (Douvani and Halsey, 2002). The Ninth Circuit Court set forth a three-prong test in their ruling on *Sacramento v. Rachel H* (1994). Known as the Holland Test, this three-prong test holds that the education benefits of general education classroom with supplemental aids and services must be compared to the education benefits of a special education classroom. Second, the nonacademic benefits of interacting with peers must also be considered when determining the LRE. Lastly, the effect of the student's presence on the teacher and their peers must also be considered (Douvani and Halsey, 2002). The third prong of this test is also seen in the Ninth

Circuit ruling in *Clyde K v. Puyallup* (1997), where it was found “Disruptive behaviors that significantly impairs the education of other strongly suggests a mainstream placement is no longer appropriate” (Douvani and Halsey, 2002).

The Fourth Circuit developed its three-prong test with its findings in *Hatmann by Hartman v. Loudoun County Board of Education* (1997). This test states that to be placed in a more restrictive environment, there must be no educational benefit for the student in a mainstream setting. It was also held that the marginal benefits of mainstreaming were significantly outweighed by benefits that only could be obtained in a separate environment and that the disruption that a student brings to the general education classroom must be considered (Crockett and Kauffman, 2013). In 1989, they further ruled in *DeVries v. Fairfax County School Board* that mainstreaming is not appropriate for every child. If it is to occur, it must be contingent upon the individual appropriateness for the student (Crockett and Kauffman, 2013).

The Fifth Circuit developed a two-prong test in *Daniel R. R. v. State Board of Education* (1989). This test is based on two questions. One, can an appropriate education in a general education setting with aids and services be achieved satisfactorily? Two, if the student is in a more restrictive environment, is the student integrated into the general education setting to the maximum extent possible? (Douvani and Halsey, 2002). Academic achievement is not the only consideration when deciding to mainstream a student, and mainstreaming cannot be denied because it might affect the progress of other students in the classroom (Crockett and Kauffman, 2013). The Fifth Circuit ruling resulted in FAPE becoming secondary to mainstreaming when FAPE and the LRE conflict (Crockett and Kauffman, 2013).

In the Eleventh Circuit Court, the court found that the school failed to consider any other less restrictive settings before they decided placement in *Green v. Rome* (1991). They also



introduced the concept of a “continuum of placement option,” that the least restrictive environment must be considered before moving to consider a more restrictive placement (Dauvanis and Halsey, 2002).

The Eighth Circuit took a different approach in its 1994 ruling in *Light v. Parkway*. They ruled that “A student who is violent, dangerous, and disruptive of the education of others is never properly placed in a regular classroom setting.” This ruling turned away from the belief that including a student with a disability in the general education classroom is a right and moved towards the idea that all circumstances surrounding a student must be taken into account when determining the LRE (Dauvanis and Halsey, 2002).

In *Oberbi v. Clementon*, (1993), the Third Circuit Court moved away from the idea of mainstreaming and towards inclusion, thus making inclusion a judge-made law in this court district (Dauvanis and Halsey, 2002). The ruling made inclusion a right and not a privilege for the selected few. Determining that one goal of IDEA was the inclusion of individuals with disabilities within society, the Court acknowledged that special education does not necessarily enable individuals to function successfully in an integrated society (Dauvanis and Halsey, 2002).

A few standards are shared from all circuit court decisions. First, there is a preference or a presumption that the student should be placed in the regular classroom. Second, the cost of this placement, which some courts took into consideration by acknowledging the potentially prohibitive cost for the placement of a disabled student in a classroom. Third, the disruptive effect a student might have on the education of other students learning opportunities if they were placed in a general education classroom. And lastly, is the placement appropriate or will it provide sufficient educational benefit for the student in question (Underwood, 2018).

## **Funding Statute**

IDEA is a funding statute that specifies how states will receive money from the federal government to be used in the education of students with disabilities (Crockett and Kauffman, 2013). In order to obtain federal funding, states must disclose how the money will be disbursed to local school districts and have a policy in place to ensure that FAPE is provided. They must also provide a plan that will provide educational opportunities for students with a disability. The plan must include a timetable for the meeting of various goals that will provide educational opportunities and a description of how students with disabilities will be found.<sup>2</sup> What facilities will be provided for this education and the personnel and services that will be needed must also be addressed (Crockett and Kauffman, 2013). The Office of Special Education Programs states that “a) Each [school district] shall ensure that a continuum of alternative placements is available to meet the needs of children with disabilities for special education and related services b) The continuum required must: (1) include the alternative placements; and (2) make provisions for supplementary services to be provided in conjunction with regular class placement” (IDEA Regulations, 34 C.F.R. § 300-551).

There is an acknowledgment that it is more expensive to educate children with disabilities. Special education services cost tax the traditional organization structure and resources of the public school system (Howe et al, 2018). However, it is believed that over the lifetime of the individual, the money spent to support a child in the public school system will decrease the amount needed later to support them financially as adults (Crockett and Kaufman, 2013). Special Education also taxes the general education teacher’s knowledge and skills to

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<sup>2</sup> This is known as child find in IDEA.

address the unique needs of students with different disabilities that are enrolled in their class (Howe et al, 2018).

### **Education Today**

By 1992, 94 percent of students with disabilities were enrolled in public schools, with one-third of them educated within the general education classroom and two-thirds in a resource room (Crockett and Kauffman, 2013). The general education classroom is considered to be the least restrictive environment for a student with a disability as they are included in a setting with their non-disabled peers. The resource room is typically a self-contained setting within the school where students with disabilities are educated segregated from their non-disabled peers and are considered to be a more restrictive environment (Crockett and Kaufman, 2013). An assumption inherent to this separate environment is that a different curriculum will allow for individualized instruction from specially trained educators that will address learning difficulties for the student (Kirby, 2017). An inherent paradox in IDEA and policy for special education services is the dual desire to ensure that a student has access to the specialized services and individualized education necessary for them to be successful in school while at the same time guaranteeing that the same student will have greater access to the general education classroom through the LRE (Connor and Ferri, 2007). IDEA is built on the idea that access to education is of the utmost importance and that it is best achieved when students with disabilities are educated with their non-disabled peers. Policymakers placed the importance of including students in the general education classroom and crafted the IDEA to promote this practice (Kirby, 2017). The language of IDEA encourages the inclusion of students with disabilities in general education classrooms and commits to the destruction of barriers that occur by exclusionary practices (Kirby, 2017).

The education philosophy of special education is based on the idea that every child can be educated. The ultimate purpose of educating students with disabilities is to enable individuals with disabilities to fully participate in the communities in which they lived (Crockett and Kaufman, 2013). It is believed that by using individualized instruction with a sequenced series of education tasks, along with an emphasis on the stimulation of senses, the learning environment may be arranged to enable all students with disabilities to learn (Crockett and Kaufman, 2013). Instruction in behavior management and tutoring the student in functional skills are also included in the realm of special education (Crockett and Kaufman, 2013). A special education plan is developed for each student identified with a qualifying disability through a legal document known as an Individual Education Plan (IEP). Within the IEP, goals are set to enable a student to make yearly progress in academic and behavioral areas that are negatively impacted by the student's disability. The purpose of these goals is to provide an educational target to drive instruction for the upcoming year. Decisions made for special education have lifelong ramifications, and it has been found that IEP goals often underestimate the student's performance, which may be contributing to the lack of academic progress for students with disabilities (Crockett and Kaufman, 2013; Howe et al, 2018).

Special education has become the tool for a governmental policy that promotes social equality by addressing the civil rights of individuals with disabilities (Crockett and Kaufman, 2013). Special education also eases the cultural discomfort that occurs when students have substantial differences in their education performance (Crockett and Kaufman, 2013). Most educators would agree that special education can positively impact students, though examination of outcomes raises questions about these assumptions (Kirby, 2017). Students who are educated through special education have reduced rates of graduation. In 2012, 63.9 percent of students

with disabilities graduated from high school, with 39.6 percent receiving a standard high school diploma (Kirby, 2017). These graduation rates, along with adverse academic and socio-emotional effects, raises questions about the efficacy and appropriateness of the structure of special education (Kirby, 2017).

### **Concerns About Placement of Students with Disabilities**

There are several concerns about the education of a student with a disability within the general education classroom.

Parents are concerned about the potential adverse effects that diversity might have on their child (Braunsteiner and Mariano-Lapidus, 2014). One concern is what academic achievement will their child gain within a diverse classroom, or will they continue to fall behind their peers academically. They are also concerned that their child will no longer receive special education services due to the parents seeing special education as a place within the school and not a service provided by the school (Braunsteiner and Mariano-Lapidus, 2014).

The type of disability that a student has raises concerns for teachers. Children with an emotional disability demonstrate extremely challenging behaviors that distance them from their peers, inhibit their communication, interferes with academic performance, and contributes to an overall negative self-image (Gal, Schreur, and Engle-Yeger, 2010). Students with attention deficit hyperactivity disorder (ADHD) may have many of the same problems as their emotionally disabled peers. In addition, they struggle with inattention, impulsiveness, hyperactive, difficulty fulfilling assigned tasks, or following directions. Many lack the social skills required to get along with their peers, which interferes with relationships and their education (Gal et al, 2010). Teachers find themselves trying to meet the needs of these students,

along with the needs of the other students in the classroom who are affected by the exhibited behaviors (Gal et al, 2010).

Separate schools and classrooms for students with disabilities create different, often less robust, educational experiences while policy still determines the “worth” of a student by having them take the same standardized test taken by their non-disabled peers (Braunsteiner and Mariano-Lapidus, 2014). Educational systems, in theory, should be decreasing the impact of a student’s disability on their academic performance. However, when teachers hold lower expectations for students with disabilities, they not only exacerbate the effect of the disability but also contribute to the stigma of special education (Kirby, 2017). It has been empirically demonstrated that factors such as local education policy, teachers’ beliefs about students with disabilities, solutions previously adopted by the school, or financial restraints affect the placement of students with disabilities (Szumski et al, 2012).

Another issue that might be contributing to the lack of academic progress for students with disabilities is that teachers are often less concerned with the student’s knowledge acquisition and more concerned with if they demonstrate an interest in the classroom and the lessons taught along with the discipline problems that they might bring to the classroom (Crocket and Kaufman, 2013). As a student age, the focus changes on what a school addresses as it relates to the student with a disability. In the elementary grades, kindergarten through fifth, the focus is on social acceptance and self-esteem. Content coverage and discipline become the focus for the middle school grades of sixth through eighth. High School focuses on fairness as it relates to the accommodations that the student receives that allows them to access their education and if these accommodations make the student stand out from their non-disabled peers. There is also a focus on if the student will be prepared for life after graduation (Crocket and Kaufman, 2013).

## **The Importance of Understanding the Impacts of LRE**

There are implicit assumptions about disabilities in society, and these assumptions are reflected in implicit assumptions about special education. (Kirby, 2017). Americans with disabilities have faced exclusion in education, including the outright refusal of an education. The exclusionary practices of special education, public policy, and legislation reflect these perceptions (Kirby, 2017).

### **Social Justice**

The deficit-based model for disabilities attributes disability-related disadvantages to a deficit inherent in the individual (Marsh, 2011). From this point of view, children with disabilities face constraints that result from their physical, emotional, and cognitive limitations that reside within the individual (Gal et al, 2010). These constraints are seen as problems that need to be fixed (Kirby, 2017; Marsh, 2011). The medical model of disabilities also sees disabilities as an inherent flaw within a person that needs to be addressed (Kirby, 2017; Marsh, 2011). This model is used as a justification for legislative decisions that creates public policies that favor the placement of students with disabilities in special education to remedy the perceived area of weakness (Kirby, 2017).

Social interpretations of disabilities are based on the idea that some, if not all, disability-related disadvantages are caused by society (Marsh, 2011). Disabilities occur when there is an interaction between an individual with an impairment and the individual's environment (Marsh, 2011). It is not the unavoidable consequence of having a characteristic that is deemed an impairment (Marsh, 2011). The recognition of the right for educational inclusion of students with disabilities entails the identification of ability status as a social phenomenon comparable to race, gender, class, and sexual orientation (Marsh, 2011). The imposed barriers and oppression for

individuals with disabilities are rooted in historical contexts and the emergence of capitalism and the rise of individualism (Kriby, 2017). When seen in this way, it is apparent that the exclusion of students with disabilities is an anti-discrimination issue and not a decision based on the deficient of the student (Marsh, 2011). The disability rights perspective is used to establish impairments as characteristics that exist on a spectrum of human traits and disabilities result when society fails to accommodate the full range of human traits (Marsh, 2011).

The segregation of students based on disability historically rests on the assumption that some students cannot learn in or benefit from participating in a regular education classroom (Kurth, Morningstor, and Kozleski, 2014). It is held that instruction in smaller class sizes with effective teaching at a level that is appropriate to the student makes segregation from the general education classroom a benefit for the student (Kurth et al, 2014). The assault to the self-esteem of the student with a disability is prevented as there is no opportunity to be compared with students without disabilities in a “normal” classroom (Kurth et al, 2014). Adrienne Asch stated that “[m]uch of the daily discrimination faced by people with disabilities is not the overt hostility of being shot at or lynched...rather, it is the experience of being denied the opportunity to play the social roles expected of one’s nondisabled age peers” (Marsh, 2011).

An implicit assumption about students with disabilities is that special education, specifically the resource room, is the only place to teach students with disabilities successfully (Kirby, 2017). This assumption is reflected in teachers’ and parents’ views of inclusive education and students being educated outside of the resource room and within the general education classroom (Kirby, 2017). These assumptions might have roots in the favoring of normative abilities, which allow for the nondisabled to express profound and sincere sympathy for those with disabilities while keeping them in a position of social and economic subordination (Kirby,



2017). Thus, the nondisabled are able to act as protectors, guides, leaders, role models, and intermediates for the disabled who are assumed to be helpless, dependent, asexual, economically unproductive, physically limited, emotionally immature, and acceptable only when they are unobtrusive (Kirby, 2017).

## **Inclusion**

While IDEA may have drawn upon *Brown v. Board* (1954), there is a distinction between the two. *Brown v. Board* (1954) sought integration to promote racial balance. The cornerstone of the disability rights movement is the right to be included in the broader community is, and an issue advocated for by the disability rights theorist. For this group, the right to inclusion is an anti-discrimination issue (Marsh, 2011). At the 1994 World Conference on Special Needs Education it was said, “regular schools with [an] inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving education for all” (Obiakor, Harris, Mautua, Ratatori, and Algozzine, 2012). IDEA functions as part of the disability anti-discrimination effort by protecting the rights of students to be included within the general education at the school that they would attend if they did not have a disability (Marsh, 2011).

Inclusion is often seen as a fundamental human right of all children and adults to participate fully and contribute in all aspects of life and culture without any restrictions or the threat of marginalization (Braunsteiner and Mariano-Lapidus, 2014; Gal et al, 2010). While the most radical of advocates for disabilities rights favors inclusion, there is an acknowledgment that separate settings for some with needs that require specific intervention is necessary, thus presenting an ethical challenge (Crockett and Kauffman, 2013; Howe et al, 2018). At what point do the needs of a student prevent them from being included in the mainstream? Special education was not designed to be exclusionary as the framers of IDEA promoted the access of

students with disability to public education, and there is an implicit assumption that special education is a service provided to a student, not a physical location (Crockett and Kauffman, 2013; Kirby, 2017; Obiakor et al, 2012). If there is a location for students with disability inclusion would mandate that place would be in the general education classroom.

Inclusion is a philosophical stance that schools may adopt as a practice where students with disabilities will spend the majority of their time at school in the general education environment (Kauffman and Hallahn, 2011). It is built on the principle that all students should be valued for their exceptional abilities and included as members of the school community. In many aspects, it is an entitlement guaranteed by federal law (Obiakor et al, 2012). Under the reauthorization of IDEA in 2004, the trend continues towards more inclusion as students with disabilities are to participate in statewide assessments along with the emphasizing of inclusive practices for students (Kirby, 2017). Under this authorization, each state is now required to report how much time a student spends in general education. The concept of LRE from IDEA is not synonymous with inclusion even though they are used interchangeably, nor does IDEA expressly require inclusion (Kauffman and Hallahn, 2011; McGovern, 2015; Obiakor et al, 2012). What IDEA does require is that a student will have a free and appropriate education in the least restrictive environment possible (Crockett and Kauffman, 2013; Kauffman and Hallahn, 2011).

Educational reformers of the 1980s and 1990s argued for the unfettered integration of students and challenged the efficacy and appropriateness of separate classes (Kauffman and Hallahan, 2011). With no strong empirical evidence, they argued that separate classes and resource rooms were ineffective, stigmatizing, exclusionary and that students with disabilities were best served in the general education classroom (Crockett and Kauffman, 2013; Kauffman

and Hallahan, 2011). Madeline Will, the Assistant Secretary in the Office of Special Education and Rehabilitative Services in 1986, introduced the Regular Education Initiative (REI). This initiative proposed the merger of regular education and special education to facilitate the successful inclusion of students within the general education classroom (Santoli, Sachs, Romey, and McClurg, 2008). The placement of students in general education offers a qualitatively different learning experience than that of a segregated setting, as it appears to increase the learning expectations for students (Kurth, Morningstar, and Kozleski, 2014). Analysis of national data indicated that pulling students with disabilities out of the mainstream was not effective in meeting the educational needs of the students and that when students are included, there is a better academic outcome (Braunstiner and Mariano-Lapidus, 2014; Kirby, 2017; Santoli et al, 2008). Inclusion does appear to improve post-school outcomes as a higher percentage of students who have been included have passed state exams, completed high school, attended college, obtained a job, and live independently (Braunstiner and Mariano-Lapidus, 2014). Inclusion also improves the social acceptance and peer relationship for students with disabilities, along with increasing their self-esteem (Braunstiner and Mariano-Lapidus, 2014). Within an inclusive classroom, a student with disabilities has access to a meaningful, rigorous general education curriculum in contrast to the specially designed instruction that is found in the special education classroom (Obiakor et al, 2012).

Inclusion occurs when a student with a disability receives their entire academic curriculum within the general education setting regardless of their unique learning and/or behavior needs (Crockett and Kauffman, 2013; Idol, 2006). It is seen as an act of removing barriers so that individuals with disabilities may be fully participating and equal members of the broader community (Marsh, 2011). Inclusion is different from mainstreaming with the emphasis

being on the improvement of student performance (Crockett and Kauffman, 2013; Idol, 2006; McGovern, 2015). Part of the issue with inclusion is it varies from markedly from setting to setting and can include situations where a student is placed full-time or a significant portion of the times in general education classes (Crockett and Kauffman, 2013; Marsh, 2011). Inclusion can be an indication that students with disabilities are members of the general education community and not just visitors for specific activities during the day, even if that is the only time they spend with the general education community (Marsh, 2011). There is no agreement about whether the term “inclusion” refers to both partial and full inclusion or whether all students with a disability should be included in the general education setting without exceptions (Kauffman and Hallahan, 2011). Inclusion is a judgment based on civil rights arguments where advocates perceive it to be a form of legal evenhandedness, a type of impartial justice, a human value, and part of an emotionally driven belief system (Kauffman and Hallahan, 2011).

### **Inclusion in Practice**

The education of students with disabilities within a separate facility and outside the general education classroom is seen as contradictory to the goal of inclusion and LRE (Obiakor et al, 2012). The critical feature of successful inclusion is that what services a child receives is more important than where it occurs (Obiakor et al, 2012; Kirby, 2017). Yet the extent to which students with disabilities should be integrated into the general education classroom remains controversial as it seems to benefit some students while damaging others (Kauffman and Hallahan, 2011; Schinagle and Bartlett, 2015). Some have contended that rigid adherence to the placement of students in general education errs by placing too much emphasis on the place and not enough emphasis on the quality of instruction and education outcomes (Schinagle and Bartlett, 2015). There is an ongoing need to balance the extent to which a student is educated in

the general education classroom while still emphasizing student IEP outcomes (Schinagle and Bartlett, 2015).

### **Least Restrictive Environment**

Several interchangeable terms are used when discussing LRE, but each has different concepts. The first is LRE itself, which is an IDEA mandated policy to educate students in the least restrictive environment with their non-disabled peers as is appropriate (Douvani and Halsey, 2002; McGovern, 2015). LRE has been interpreted as having access to the general education curriculum and should vary by students based on their educational needs and rights (Howe et al, 2018). The term inclusion is a more comprehensive education practice where the placement of students with disabilities with their peers is a right, and this right is absolute (Douvani and Halsey, 2002; McGovern, 2015). In an inclusion setting, support services are brought to the child, and the child only needs to benefit from being in the classroom, not in keeping up with what is taught (McGovern, 2015). Mainstreaming refers to the placement of students with disabilities in classrooms with their peers when appropriate and is not necessarily exclusive (Douvani and Halsey, 2002; McGovern, 2015). Students who are mainstreamed receive an education without supplementary aids and services, and they are expected to perform at a similar level to that of their non-disabled peers within the general education classroom (McGovern, 2015). The All Handicapped Children's Act of 1975 and IDEA of 1990, 1997, and 2004 focused on inclusive practices but in practice, both inclusion and mainstreaming have been used to fulfill the LRE requirement (Idol, 2006; McGovern, 2015; Obiakor, Harris, Mutua, Ratatori, and Algozzine, 2012).

IDEA guarantees accessibility to an education within a public school for children with a broad range of disabilities, with the focus on accomplishing that goal being the LRE (Douvani

and Halsey, 2002). IDEA does not define what LRE is, nor does it use the term mainstream. What it does state is that students with disabilities should be educated in the least restrictive environment to the “maximum extent appropriate” (34 CFR 300.550(b)(1)). In theory, this means that the student with a disability will be in the general education classroom to the greatest degree that will satisfactorily provide a meaningful educational benefit (Douvani and Halsey, 2002; Gal, Naomi, and Engle-Yeger, 2010; Kauffman and Hallahan, 2011). The presumptive nature of LRE allows for the possibility that it will be applied more narrowly than the framers intended and may result in the unjustified exclusion of students with disabilities from the general education classroom (Crockett and Kauffman, 2013). Guidance is given in that when “selecting the LRE, consideration is given to any potential harmful effect on the child or on the quality of services that he or she needs” (34 CFR 300.552 (d) (1)). The principle of the LRE suggests that students with more severe disabilities that require more significant specialist support should receive their education in a more segregated condition to address their individual needs (Crockett and Kauffman, 2013; Gal et al, 2010; Kauffman and Hallahn, 2011; Marsh, 2011; Szumski and Karwowski, 2012). However, “least” puts a value on the extent to which a student with a disability has access to their peers and does idealize the general education classroom with any other option being more restrictive (Howe et al, 2018; Kauffman and Hallahan, 2011).

How to address the LRE is open to interpretations due to the deliberate briefness and vagueness in the policy. There is a presumption that students with disabilities have the right to be educated within a general education classroom at the school they would attend if they did not have a disability and the removal of this would place children with a disability on an unequal footing with their non-disabled peers (Crockett and Kauffman, 2013; Kauffman and Hallahan, 2011; Marsh, 2011). There is a requirement that a variety of placement options be available to

choose from and it is left up to the IEP team to choose what the appropriate LRE is for each individual student based on what services are determined to be needed (Kauffman and Hallahan, 2011). The IEP team cannot choose an option that is not appropriate because it will occur with the student's non-disabled peers, nor can they choose a setting that is more segregated due to being able to provide a more appropriate education (Crocket and Kauffman, 2013).

Decisions by the IEP that relate to the LRE are often based on the type and severity of the disability that a student has and what accommodations they will need. Sensory and motor disabilities are classified based on the severity of the disability with "mild" to "moderate" disabilities not requiring extensive instruction from special education and related services and thus are easily managed in the regular education environment (Gal, Schreur, and Engle-Yeger, 2010). Mobility barriers, such as the need for transfers or the need to learn sign language or Braille, may result in a placement outside of the general education environment (Gal, Schreur, and Engle-Yeger, 2010). From the general education perspective, there is a concern about the ability of a general education teacher to meet the needs of students with individual health and personal care needs (Gal, Schreur, and Engle-Yeger, 2010).

There are traditionally four options available for placement that are seen as increasingly more restrictive (Obiakor, Harris, Mautua, Ratatori, and Algozzine, 2012). The least restrictive is where the students participate fully in the general education curriculum and receive special education services needed with their non-disabled peers. Resource rooms are used to pull a student out from the general education classroom to receive needed special education services. Students with disabilities who remain in and receive services in a special education classroom for the majority of the day are considered to be in a self-contained classroom. There are also alternative placements where students with disabilities received services outside of the general

public school system. IDEA does recognize that “special classes, separate schooling, or other removal of children with disabilities from the regular education environment” can occur (IDEA, 20 U.S.C. § 1412 (612)(5)(B)) but that these are exceptions based on the nature or severity of the disability (Kauffman and Hallahan, 2011). The “rebuttable presumption” is that schools are first responsible for supporting a student with supplementary aids and services in the general education environment before considering moving the student to a more restrictive setting (Kauffman and Hallahan, 2011). When a student cannot be successfully educated in the regular classroom due to the severity of the disability, the school is obligated to provide the appropriate education in a more restrictive setting (Kauffman and Hallahn, 2011).

The framers of the Disability Rights Movement have petitioned for access not exclusion (Kirby, 2017). This petition for access is based on the idea that when individuals with disabilities are excluded from the broader community, they are excluded at times to places that are restrictive in that they do not resemble family or community settings (Marsh, 2011). The perception of what is the least restrictive placement is often little more than a reflection of individual values and emotional judgments and not based on any scientific fact (Kauffman and Hallahan, 2011). The questions as to what constitutes LRE must address if a more restrictive placements lead to academic or social gains beyond what would be achieved within the general education setting and if the quality of this separate setting is the same as the general classroom (Connor and Ferri, 2007; Marsh, 2011). Students with disabilities are now seen as being capable of achieving more than what was believed possible a generation ago which is leading to changes in how the LRE mandate is interpreted with a growing emphasis on the need to educate students with disabilities within the general education classroom (Schinagle and Bartlett, 2015).



The reauthorization of IDEA in 1997 emphasized that students with disabilities must have access to the general education curriculum (Kauffman and Hallahn, 2011; Santoli, Sachs, Romey, and McClurge, 2008; Schinalge and Bartlett, 2015). This emphasis on access was further strengthened by the passage of the No Child Left Behind Act of 2001 with the need to demonstrate adequate yearly progress for all students, including those with disabilities (Santoli et al, 2008; Schinalge and Bartlett, 2015). As teachers, principals, superintendents, school boards, and state boards of education are now all held accountable for the academic progress of students with disabilities, including students with disabilities is no longer just an option for the student with a disability to be within the general education classroom but an ideal that needed to be implemented effectively (Santoli et al, 2008). The reauthorization of IDEA in 2004 specified that states must monitor the implementation of IDEA with the intent of improving the education results and functional outcomes outcome for children with disabilities with the tracking of 20 different indicators known as Part B indicators (Kurth, Morningstar, and Kozleski, 2014). Indicator 5 of these indicators measure the participation of children with disabilities in the general education setting, or the LRE. This measurement is broken down into three main categories. Category A is where the child is within the general education setting 80 percent or more of the school day and is seen as the least restrictive environment. Category B has the child within the general education setting 40-79 percent of the school day. Category C is considered to be the most restrictive environment, with children educated less than 39 percent of the day in the general education setting, educated in a separate school, residential facilities, or in a homebound or hospital placement (Kurth, Morningstar, and Kozleski, 2014).

## **Statewide Testing**

Teachers correctly predicted that their average class score on the statewide test would be affected by special education students in their room (Idol, 2006). Historically students with disabilities had been exempted from statewide examinations which may have contributed to the poor academic results from the special education classroom (Connor and Ferri, 2007). Of students with disabilities who did take the statewide test, only a small number met the requirements for minimal test mastery, with a few passing the test (Idol, 2006).

## **Studies**

The research on inclusions has not had a randomly-assigned research design with a control group to measure the effects of inclusion and results do not indicate that one type of placement is more adapt to lead to maximum academic and social benefits (Kauffman and Hallahn, 2011; Kirby, 2017). What has been explored in existing research relates to a child's unique needs with techniques used in instructing students in special education being validated using one-to-one instruction and small groups, not inclusion. (Gal et al, 2010). Team teaching, consulting teachers, and cooperative learning have yet to be validated for students with disabilities in the regular education classroom (Crocket and Kauffman, 2013). Research has shown that an inclusive experience is a critical predictor of both in school and postschool outcomes (Kurth, Morningstar, and Kozliski, 2014).

In a study done with students who had a diagnose of a specific learning disability, it was found that those who were educated in the inclusive classroom had higher reading and writing scores than students in a self-contained classroom (Kirby, 2017). This trend continued into middle school as 8<sup>th</sup>-grade students with a specific learning disability in inclusive settings had significantly higher scores in math academic achievement tasks and in their self-concept (Kirby,

2017). It should be noted that students who are in self-contained classrooms tend to have higher needs than most students with a specific learning disability, which may cause the comparison between the two groups to be suspect. In contrast, a study that reintegrated students with specific learning disabilities into the mainstream from the resource room found that there were no academic gains once they were placed in a regular classroom (Crocket and Kauffman, 2013).

The only certainty in regard to studies on the effects of class placement is that there is no consensus (Fore, Hagan-Burke, Burke, Boon, and Smith, 2008). In research done by Carlberg and Kayale (1980), students with severe learning disabilities and emotional and behavioral disorders were found to have achieved more academically in the special education classroom. A study done by Holloway (2001) found that students with disabilities might achieve more academically in programs that combine the inclusive model with the resource model as opposed to either model on its own. In multiple studies, it has been found that inclusive versus non-inclusive placements produced no difference in the academic achievement of students with disabilities (Affleck, Madge, Adams, and Lavenbraun, 1988; Manset and Semmel, 1997; Waldron and McLeskey, 1998). While another study found that there is no significant difference in academic performance in math and reading for students with a specific learning disability as it relates to class placement (Waldron and McLeskey, 1998). This finding was consistent with previous research that class placement did not correlate with academic achievement (Fore et al, 2008).

A study done by McLeskey and Waldron (2011) found that students with specific learning disabilities would make significant gains when provided with high-quality pull-out instruction and that these gains are significantly higher when compared to peers who are educated in inclusive classrooms as well as the resource classroom. They found that the intensive

instruction provided in small groups in the pull-out setting allowed students with specific learning disabilities to receive the intensified instruction they needed on specific concepts and skills, a type of instruction that rarely occurs within the general education classroom. When McLeskey and Waldron (2011) summarized research that had been done on inclusive education programs' effectiveness for elementary students with specific learning disabilities, they found that studies consistently found that some students obtained better achievement results in full inclusion. At the same time, other fared better when part-time resource support was provided. Most studies have concluded that the variability between student outcome is due to the unevenness in the quality of instruction offered to the students and that both inclusive and pull-out settings can improve academic outcomes if there is high-quality instruction in either setting.

In a study that measured teachers' attitudes towards students with disabilities, many teachers saw it as a privilege for students with disabilities to be included with their peers in the general education classroom (Kriby, 2017). Furthermore, any success that a student with a disability had in a general education classroom was seen as a result of the physiological traits of the students and not what they learned in the classroom (Kirby, 2017). This belief might cause some teachers to feel absolved from the responsibility of educating students with disabilities and further reinforce the notion that some students can only be educated within the resource classroom (Kirby, 2017). Another study about teacher attitude found that 98.2 percent were willing to make adaptations for students with disabilities but that 76.8 percent did not believe that students with disabilities, regardless of the level of the disability, could be educated within their classroom (Santoli, Sachs, Romey, and McClurg, 2008). It was also believed that behavioral disorders and cognitive impairments were areas that should not be educated within the general education classroom (Santoli et al 2008). Of the teachers surveyed, 80 percent

indicated a belief that students with disabilities lacked the skills needed to master regular education course content (Santoli et al, 2008). Teachers' views on inclusion may be seen as a compromise that needs to be made between academic versus social gains (Kirby, 2017). Any social benefits for the student with a disability is a tradeoff for access to the skills and expertise of the special education teacher within the resource room (Kirby, 2017). Further, when compared with similar achieving peers without a disability, teachers had reduced expectations for the students with disabilities including their ability to obtain a bachelor's degree (Kirby, 2017).

While the majority of students with a specific learning disability do spend their day within the general education with 49 percent spending 80 percent or more of their day within general education setting, there are still students spending time in special education classroom due to the implicit assumption that the special education classroom is the best place to teach students with disabilities (DeSimone and Parmar, 2006; Kirby, 2017). This project seeks to add to the conversation by examining which education environment is best suited for successful outcomes of educating students with disabilities.

## **Methods**

In order to answer the question of which educational environment is best suited for the successful outcome of educating students with a disability, I analyzed data from Idaho's Department of Education for the 2017-2018 school year. The dependent variables are based on Idaho Department of Education ISAT results. All Idaho students in third, fourth, fifth, sixth, seventh, eighth, and tenth grade are required to take the ISAT for English Language Arts (ELA) and math in the spring of each school year. Tests for science are administered in the fifth, seventh, and tenth grades. Test results are available on Idaho's Department of Education website. This data includes the overall results reported by percent of students who scored Advanced,

Proficient, Basic, and Below Basic for each district along with a breakdown of results by school. Also, it is broken into various demographic categories, including students with disabilities. Results from the 2017-2018 school year were obtained from the Idaho State Department of Education website (Idaho State Department of Education, 2018). As it has redacted data to protect the privacy of students, most useable information is at the district level. Even then, data from smaller districts were still redacted and not available for analysis. This data was used to create three sets of models with four dependent variables, for a total of 12 dependent variables. The first set of models looks at ISAT scores for math. The four dependent variables include the percent of students with disabilities who scored Advanced in Math, who scored Proficient in Math, who scored Basic in Math and who scored Below Basic in Math in each district. The second set of models looks at ISAT scores in English Language Arts (ELA). The four dependent variables include the percent of student with disabilities who scored Advanced in ELA, Proficient in ELA, Basic in ELA, and Below Basic in ELA in each district. The final set of models looked at ISAT scores for Science. The four dependent variables in this set include the percent of students with disabilities who scored Advanced in Science, Proficient in Science, Basic in Science and Below Basic in Science. As noted earlier, testing for the ISATs begins in the third grade for math and ELA and continues for every grade up to and including the eighth grades. Students are also tested in the tenth grade. ISAT testing in science begins in the fifth grade and during the seventh and tenth grades. To pass the ISAT, students must score Proficient or Advanced. Students who score Basic and Below Basic are seen to have demonstrated that additional academic support is needed to meet grade-level standards. Based on the 12 dependent variables, I ran 12 OLS regression models with robust standard errors.

The data from Idaho's report of Indicator 5, the time a student with a disability spends within the general education class, are the primary independent variables. Under IDEA policy guidelines, each state is to report to the U.S. Department of Education data as it relates to seventeen compliance indicators. Compliance Indicator 5 requires states to report the percent of children with IEPs up to age 21 that are removed from general education classes less than 21 percent of the day; removed from general education classes greater than 60 percent of the day; or who are served in public or separate private schools, residential placements, or homebound or hospital placements (US Department of Education, 2009). The source for this data is the data collected for reporting under section 618 of the Annual Report of Children Served. Idaho collects this data through their Idaho System of Educational Excellence (ISEE), a K-12 Longitudinal Data System with data collected from districts five times throughout the school year and as an end of year report (Idaho State Department of Education, 2020; Idaho State Department of Education, 2019). At the district level, data for the ISEE report as it relates to percent of time students with IEPs are in the general education classes is gathered from every IEP where one of the requirements is to state the percent of time a student with disabilities will be in the general education classroom.

Through a public record request to Idaho's Department of Education, I obtained data that reported for every school in Idaho, the number children at each age, 6 through 21, who were in Environment 1 Placement (in general education classes 80 percent or higher each day), those who were in Environment 2 Placement (in general education classes 40-79 percent each day), and those in Environment 3 Placement (less than 40 percent of the day is spent in general education classes) for the 2017-2018 school year. Each Environment had a total number served per Environment at each school, and each district had a total number served per Environment for

the entire district. Due to privacy issues, the report was heavily redacted with many fields noting that there are students served in this grade at this school, but with no actual number given. In many smaller schools, the total number of students served at each Environment for all grades was still redacted. Due to this redaction, I determined to work at the district level as it provided the most usable data. However, it should be noted that even at a district level, for small school districts, the data was still redacted. Environment 3 data of the number of students served was redacted for most districts due to the overall small number of students served at this Environment, thus preventing the use of the data for analysis. Thus, the two primary independent variables included in the models are the percentage of students per district in Environment 1 and the percentage of students per district who were in Environment 2.

This data was obtained from the Idaho Department of Education which hosts a website where demographic information on school districts available for public searches. This site provides the location of the district, the number of students enrolled, the percent of students broken down by race, percent of students from low-income families, and the percent of students with disabilities (Idaho State Department of Education, 2019). For each district in the state, data from this site was gathered to determine the total number of students in the district as a base for determining the percent of students with disabilities at each LRE level. Using the total number of students in a district along with the total number of students with disabilities in the three Environments, a percentage was generated that allowed for the identification of the percent of students with disabilities served in each district. It is expected that students with disabilities in districts with a higher percentage of students in Environment 1 will have higher ISAT test scores.

Which Environment a student is educated in is not the only factor that might influence ISAT scores. Local funding, economic factors, location in the state, race, and public versus



charter school may also contribute to high or low ISAT scores. Thus, I included several different control variables that would likely affect district ISAT scores.

The first set of control variables looks at various demographic and economic factors that are likely to impact district ISAT scores. The first of these factors is whether a school district is considered rural or urban because this is likely an indicator of the opportunities and services available to families due to access availability. For instance, an urban area near Boise will likely have more services available than a rural area near the Frank Church Wilderness Area. Idaho's Department of Education website hosts data that identifies whether a district is a rural or urban. Each district was coded as "0" if they were located in an urban area and a "1" if they were located in a rural area. It is expected that districts located in urban areas will have higher ISAT scores.

The Idaho Department of Education data also indicates whether a district is a traditional public-school district or a charter school district. Due to the demographic makeup of charter schools having fewer students with disabilities, this was used as a control variable coded as a "1" if they were a charter and "0" if they were a public school. The educational experience of students at a charter is different enough that controlling for this discrepancy was appropriate. It is anticipated that charter schools will have higher ISAT scores.

Publicly available data on Idaho's Department of Education website also lists the percent of students for each district that receive free and reduced lunch. This data was used to account for the social economic status of a district as a percentage (Idaho State Department of Education, 2018). Students from poverty are more likely to perform poorly on a standardized test, and thus this data was used as a control variable (Payne, 2019).

The final economic control variable is the presence of supplemental tax levy funding for a district. Before 2006, Idaho school districts had the authority to raise revenue through maintenance and operations (M&O) property tax levies without needing voters' approval. The state funding formula accounted for these local revenues by distributing high amounts of General Fund revenue to districts with less property wealth to tax (Idaho Center for Fiscal Policy, 2019 June). However, in 2006, property tax revenue was replaced with sale tax revenue leaving districts short of the necessary monetary resources needed to fulfill their responsibility to educate students. The 2006 decision to replace property tax revenue for sales tax revenue dismantled the primary tool designed to ensure that a child's education did not depend on local property values (Idaho Center for Fiscal Policy, 2019 June). To address this shortfall, 93 of the 115 school districts in Idaho have voter-approved supplemental levies (Idaho Center for Fiscal Policy, 2019 February). Supplemental levees come from property taxes at the local school district and are directly related to the location and wealth of the district. Wealthier districts can provide more educational opportunities than districts with lower property values (Idaho Center for Fiscal Policy, 2019 June). To account for this funding discrepancy, the financial summaries for the districts in Idaho were used to identify which districts had voter-approved supplemental levees and which did not (Idaho State Department of Education, 2018). If a district had a supplemental levee, it was coded as a "1," otherwise, it was coded as "0." It has been shown that school finances have a statistically significant correlation to student scores on standardized test scores and thus this was also used as a control variable (Lewis, 2009)

Second, I included district racial demographic makeup of each district. Using the same data from the Idaho Department of Education website, I collected data on the percent of students

identified by race for each district.<sup>3</sup> The races analyzed were White, Hispanic, and Native American due to the demographics of the state of Idaho. Race was used as a control variable as there are variations in standardized testing data when race is taken into account.

The final set of control variables is the educational region in which the district resides. The state has been broken into six regional locations by the Department of Education. Each region has its own unique characteristics based on Idaho's diverse geography. Thus, I included a control variable for which region each district is a part of to determine if being a part of a particular region influences ISAT scores. Thus, each district was coded as a separate variable. Districts were coded as "1" if they were a part of that region and a "0" if not a part of that region. This was done for Regions 1, 3, 4, 5, and 6. Region 2 was excluded as a baseline.

As previously noted, the above data was analyzed with twelve OLS regressions models. Data that was redacted was left blank. It is expected that LRE Environment 1 will have a positive impact on higher ISAT scores, while Environment 2 will have an impact on lower ISAT scores.

## **Results**

### **Math**

The results for the analysis on how LRE levels impact ISAT scores in math can be seen in Table 1. As you can see in Table 1, districts with more students with disabilities in Environment 2 are less likely to have more students score Advance in math while Environment 1 did not have an impact on ISAT scores in math with a probability of the model being 0.0083 and an F-test of 3.44. The same model was run for students with disabilities with Proficient math scores on the ISAT with the same control variables and seen in Table 1 there are no strong

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<sup>3</sup> See Appendix A for Code Book.

factors for this score with a probability of the model at 0.2613 and an F-test of 1.36. For districts with more students with disabilities in Environment 2 they were less likely to score Basic while students with disabilities in Environment 1, there was no impact with a model probability of 0.0137 and F-test of 2.50. District with more students with disabilities in Environment 2 were more likely to score Below Basic in math while there was no impact on Below Basic scores for math for districts whose students were in Environment 1 with a model probability of 0.0149 and an F-test of 2.29.

The three of the four models for ISAT math scores demonstrated that districts whose students with disabilities were in Environment 2 were more likely to score Below Basic and less likely to score Advanced, or Basic. They also demonstrated that districts whose students with disabilities were in Environment 1 had no significant impact on their math ISAT scores. The models for students with disabilities who scored Advance have a probability and F-test scores that indicates that the model may be unreliable with results being presented for transparency. None of the other control variables had an impact on the math scores.

**Table 1: Influence of Educational Environment on ISAT Scores for Math**

	<b>Advanced Math</b>		<b>Proficient Math</b>		<b>Basic Math</b>		<b>Below Basic Math</b>	
	<b>Coefficient</b>	<b>Prob.</b>	<b>Coefficient</b>	<b>Prob.</b>	<b>Coefficient</b>	<b>Prob.</b>	<b>Coefficient</b>	<b>Prob.</b>
<b>Educational Environment</b>								
Students in Environment 1	-.172 (.301)	.574	-.645 (.459)	.176	.490 (.400)	.228	-.127 (.876)	.885
Students in Environment 2	-1.82 (.622)	.009	-2.85 (1.07)	.016	-1.21 (.582)	.043	3.24 (1.38)	.023
<b>Demographics/Economics</b>								
Low Income	.165 (.622)	.060	.072 (.089)	.426	.011 (.100)	.909	-.098 (.127)	.023
Rural	1.53 (1.05)	.162	2.66 (1.78)	.151	1.3 (1.34)	.339	.876 (2.47)	.725
Levies	-7.77 (4.9)	.130	-3.7 (4.14)	.382	-3.93 (3.8)	.307	1.7 (7.75)	.827
Charter	Omitted		Omitted		Omitted		9.59 (10.12)	.348
<b>Race</b>								
White	.093 (.190)	.629	.151(.231)	.521	.086 (.207)	.680	-1.06 (.744)	.160
Hispanic	-.046 (.172)	.794	.10 (.232)	.673	.024 (.204)	.906	-.717 (.714)	.319
Native American	.269 (.185)	.165	.586 (.240)	.024	.4 (.295)	.184	-1.07 (.762)	.167
<b>Educational Regions in Idaho</b>								
Region 1	-.234 (2.91)	.937	5.10 (2.73)	.076	4.02 (2.64)	.135	-6.72 (7.04)	.344
Region 3	-1.78 (2.63)	.507	2.05 (2.26)	.376	3.5 (2.74)	.209	-4.81 (6.80)	.483
Region 4	-1.22 (2.96)	.685	2.44 (2.96)	.419	3.98 (4.03)	.329	-1.32 (8.37)	.875
Region 5	-2.35 (3.28)	.483	5.99 (5.12)	.255	2.55 (3.17)	.427	-3.36 (7.5)	.655
Region 6	.038 (2.78)	.989	2.32 (2.02)	2.65	.995 (2.83)	.727	-3.08 (8.30)	.713
Constant	5.00 (21.7)	.821	3.87 (24.2)	.875	9.42 (21.3)	.661	163.9 (72.78)	.028
Number of observation	32		34		53		69	
F-test	3.44	.0083	1.36	.2613	2.50	.0137	2.29	.0149
R square	.6932		.5601		.3811		.3251	
Root MSE	3.2909		4.5861		5.0841		13.178	

Note: Models were estimated using OLS Regressions. Robust standard errors in parentheses. The dependent variables are the percent of students in each district who scored Advanced in Math, Proficient in Math, Basic in Math and Below Basic in Math for each district.

## **English Language Arts (ELA)**

The results for the analysis on how LRE levels impact ISAT ELA scores can be seen in Table 2. As you can see in Table 2, for districts whose students with disabilities were in either Environment 1 or Environment 2, there was a limited impact in scoring Advance in ELA with a probability of 0.0590 and a F-test of 2.25. For districts whose students with disabilities scored Proficient for ELA, the model suggests that there are no strong factors for this score as the probability is 0.1808 and the F-test is 1.58. Again, it is worth noting that there is a possibility that districts whose students with disabilities who are in Environment 2 are less likely to score Proficient. The same model showed no significant impact on Basic and Below Basic scores regardless of the Environment they were in with the Basic model probability of 0.0925 and an F-test score of 1.72. The model did not report a probability or an F-test for Below Basic. It is worth noting that districts in Region 1 students with disabilities were less likely to score Below Basic.

The four models for ISAT ELA scores demonstrated that districts with students with disabilities in Environment 2 were less likely to score Advance. For the scores of Proficient, Basic, and Below Basic, the Environment had no significant impact and the results are reported for transparency. None of the control variables had an impact on the ELA scores except districts in Region 1, where students were less likely to score Below Basic.

**Table 2: Influence of Educational Environment on ISAT Scores for English Language Arts (ELA)**

	Advance ELA		Proficient ELA		Basic ELA		Below Basic ELA	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
<b>Educational Environment</b>								
Students in Environment 1	.09 (.276)	.753	.332 (.508)	.522	.684 (4.58)	.143	-.184 (.625)	.770
Students in Environment 2	-.733 (.426)	.104	-1.85 (1.05)	.095	.138 (.525)	.794	.578 (.757)	.448
<b>Demographics/Economics</b>								
Low Income	.015 (.036)	.678	.059 (.125)	.642	-.031 (.071)	.668	.026 (.087)	.763
Rural	.644 (.865)	.467	1.59 (2.28)	.495	-3.53 (2.31)	.134	2.53 (2.64)	.290
Levies	-1.55 (1.75)	.388	.264 (4.26)	.951	-2.84 (3.27)	.390	2.5 (4.123)	.546
Charter	----		----		----		-27.4 (7.71)	.001
<b>Race</b>								
White	.002 (.140)	.991	.269 (.377)	.483	-.313 (.393)	.429	-.248 (.339)	.468
Hispanic	-.009 (.118)	.943	.203 (.3)	.507	-.564 (.374)	.349	-.047 (.346)	.892
Native American	.079 (.157)	.620	.35 (.335)	.310	.098 (.237)	.682	.067 (.346)	.848
<b>Educational Regions in Idaho</b>								
Region 1	2.52 (1.27)	.064	5.95 (3.98)	.152	4.91 (3.77)	.2	-8.47 (4.9)	.089
Region 3	1.42 (.993)	.171	3.5 (3.6)	.343	.414 (3.64)	.910	-.566 (4.56)	.902
Region 4	.38 (1.20)	.755	1.94 (3.68)	.604	1.61 (4.2)	.705	-.046 (5.24)	.993
Region 5	2.0 (1.0)	.061	9.13 (6.96)	.206	8.17 (6.13)	.190	-3.35 (5.00)	.505
Region 6	.803 (.964)	.416	.478 (3.3)	.886	-1.23 (3.61)	.734	4.74 (4.33)	.278
Constant	5.64 (14.7)	.707	-17.7 (37.07)	.639	49.9 (37.2)	.187	82.3 (33.8)	.018
Number of observations	31		32		55		74	
F-test	2.25	.0590	1.58	.1808	1.72	.0925	-----	-----
R Squared	.4380		.5017		.3571		.4020	
Root MSE	1.9107		5.1078		6.5736		8.7429	

Note: Models were estimated using OLS Regressions. Robust standard errors in parentheses. The dependent variables are the percent of students in each district who scored Advanced in ELA, Proficient in ELA, Basic in ELA and Below Basic in ELA for each district.

## Science

The results for the analysis on how LRE levels impact ISAT scores in science can be seen in Table 3. As you can see in Table 3 districts whose students with disabilities who are in either Environment 1 or Environment 2 scoring Advance or Proficient on the science, the model suggests that there are no strong factors as neither model reported a probability or an F-test. Districts with students with disabilities in Environment 1 are more likely to score Basic with Environment 2 having no impact with a probability of 0.0447 and F-test of 2.16. There is also no impact for districts with students in either Environment 1 or Environment 2 for the Below Basic scores in science with a probability of 0.0046 and an F-test of 2.86.

The four models for ISAT science scores demonstrated that districts with students with disabilities in Environment 1 or Environment 2 were less likely to score Advance but more likely to score Basic if they were in Environment 1. For the scores of Proficient and Below Basic, the Environment had no significant impact on the students in the district. The results of the ISAT science test scores are suspect due to the low observation caused by the redaction of data in this area of the data.



**Table 3: Influence of Educational Environment on ISAT Scores for Science**

	Advance Science		Proficient Science		Basic Science		Below Basic Science	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
<b>Educational Environment</b>								
Students in Environment 1	-4.53 (.178)	.025	-.225 (.517)	.685	1.63 (.709)	.029	-.244 (.541)	.654
Students in Environment 2	-2.22 (.042)	.012	.398 (1.82)	.837	.996 (1.177)	.405	.699 (.754)	.359
<b>Demographics/Economics</b>								
Low Income	-.172 (.006)	.023	.044 (.125)	.743	-.1397 (.059)	.026	.241 (.094)	.013
Rural	15.77 (.502)	.020	4.52 (5.22)	.435	-1.3 (2.38)	.589	1.33 (3.057)	.666
Levies	15.16 (.629)	.026	9.72 (6.34)	.200	-7.317 (5.279)	.177	2.72 (3.84)	.483
Charter	-----		-----		-----		-----	
<b>Race</b>								
White	-2.76 (.106)	.024	1.53 (1.34)	.285	.183 (.310)	.559	.236 (.442)	.596
Hispanic	-2.33 (.087)	.024	1.19 (1.16)	.363	.294 (.275)	.296	.268 (.435)	.540
Native American	.402 (.009)	.014	.673 (.705)	.394	.708 (.447)	.125	-.3935 (.413)	.346
<b>Educational Regions in Idaho</b>								
Region 1	10.10 (.646)	.041	-5.23 (8.00)	.549	5.76 (3.797)	.141	-7.14 (5.67)	.215
Region 3	8.53 (.449)	.003	2.53 (7.02)	.737	5.438 (4.306)	.217	-.5007 (6.2)	.936
Region 4	3.37 (.311)	.059	-5.94 (8.186)	.508	4.0525 (4.293)	.354	2.24 (6.141)	.717
Region 5	8.4 (.505)	.038	-2.93 (8.17)	.738	4.284 (3.923)	.284	-.403 (5.4)	.941
Region 6	21.3 (1.07)	.032	-5.84 (10.35)	.603	-.134 (3.927)	.973	2.79 (5.61)	.621
Constant	265.5 (9.62)	.023	-127.7 (109.8)	.310	6.48 (30.318)	.832	13.73 (43.06)	.751
Number of observation	15		18		41		58	
F-test	----	----	----	----	2.16	.0447	2.86	.0046
R Squared	1.0000		.7866		.3919		.4260	
Root MSE	.06108		4.7013		6.5232		8.3535	

Note: Models were estimated using OLS Regressions. Robust standard errors in parentheses. The dependent variables are the percent of students in each district who scored Advanced in Science, Proficient in Science, Basic in Science and Below Basic in Science for each district.

## **Discussion**

The philosophical foundation for special education is based on the idea of an equal opportunity for all to receive a public education and that this education will enable all individuals to participate in their communities (Crockett and Kauffman, 2013). It is commonly held that students with disabilities will receive a “better” education within the general education environment than outside of it. Many districts have policies that push students into general education classes rather than pulling them into special education classrooms. These policies have been developed with the idea that exposure to the curriculum that they will be tested on by state standardized tests will increase their test scores and performances. It is also felt that the more time spent outside of the general educational environment, the lower their scores will be on standardized tests. The results of the models do not support many of these beliefs and policies.

The results of this analysis show that being in Environment 1 had no impact on the math ISAT scores for students with disabilities. For Environment 2, the effect on ISAT scores held to expectations in that they were less likely to score Advance and more likely to score Basic and Below Basic. The impact on being able to score Advance in the ELA ISAT test was negative if the students were in Environment 2. However, the Environment did not affect any other scores for the ISAT ELA. It is worth noting that students with disabilities in districts located in Region 1 in the panhandle of Idaho, were less likely to score Below Basic on the ELA ISAT scores. The reason behind this is unknown but might be reflective of all students’ ELA scores or how the needs of students with disabilities are being addressed within this Region.

The ISAT science test is only administered in the fifth, seventh, and tenth grades, which limits the number of observations. In addition, the redaction of data had a substantial impact on the results of the science ISAT scores. Science is also an area where students are not typically

instructed within the special education environment as they are with math and ELA. More often than not, they are attending general education science classes. The results from the models demonstrated that students with disabilities are less likely to score Advance and more likely to score Basic in they were in the Environment 1 category. There was no other impact. It is worth noting that students tend to be exposed to the general education curriculum in this area, and yet their scores are not higher because of it.

The results of the analysis done to determine if the educational environment placement had an impact on ISAT test scores in Idaho was inconclusive. While it was found that being outside of the general education environment more than 80 percent of the day did have a negative impact on scores in that they were more likely to be Basic or Below Basic for all three areas assessed, there was not found a correlation that being inside of the general education environment 80 percent or more during the school day had any impact on ISAT scores. ISAT scores remained low regardless of where a student with a disability was educated. Thus, the environment in which a student is taught is not key to raising standardized test scores for students with disabilities.

Implementation had been defined as “the carrying out of a basic policy decision, usually incorporated in a statute but which can also take the form of important executive orders or court decisions” (Mazmanian and Sabartier, 1989, p. 28). Three variables have been identified that can affect the implementation process: (1) tractability of the problem, (2) the ability of statute to structure implementation, and (3) nonstatutory variables that will affect implementation (Mazmanian and Sabartier, 1989). IDEA and the concept of the LRE have implementation issues in all three areas.

While they are identified as a group, students with disabilities are not diverse, with fourteen identified eligibility categories in the state of Idaho ranging from Autism Spectrum disorder to Visual Impairments Including Blindness (Idaho State Department of Education, 2018). Each category of disability has differing criteria for eligibility and will need different services provided by the district, with each IEP team determining what individualized services will be required for each student. Mazmanian and Sabartier (1989) found that the smaller and more definable the targeted group is, the higher the probability for achieving a successful implementation of the statute. Students with disabilities are a small minority of students in the public school system. Still, they are not definable due to the vast diversity of disabilities that make up the whole.

Mazmanian and Sabartier (1989) identified seven areas that could influence the structure implementation of a statute. One is the need for the statute to have clear and consistent objectives, which the LRE in IDEA does not have having been written deliberately vague, leaving it open to interpretation. Another addresses the initial allocation of financial resources.

IDEA is a funding statute that is to provide 40 percent of the average per-pupil expenditure in the United States multiplied by the number of special education students in each state, a level of funding that has yet to meet by the federal government (Griffith, 2015). During the 2013-2014 school year, the average expenditure amount per-pupil was \$12,052. For the federal government to meet its commitment, it would have had to provide to the states \$4,823 per pupil rather than the \$1,743 it did provide, or 14.5 percent of the average expenditure per general education student (Griffith, 2015). In 2015 dollars, to meet the 40 percent funding commitment would have required more than \$20 billion in additional funds (Griffith, 2015). While federal

funding has not been provided, states have still been required to provide educational services for students with disabilities by funding the additional cost out of state and local district's budgets.

Under the social construction theory developed by Schneider and Ingram (1993), individuals with disabilities are part of the dependent population who are seen as powerless, helpless, and needy. The social construction of disability creates a dichotomy between ableism and disablism (Kirby, 2017). Ableism is the favoring of normative abilities and is used to justify discrimination against individuals with disabilities and results in a paternalism relationship (Kirby, 2017). This paternalistic relationship allows for the non-disabled to see themselves as protectors, guides, leaders, role models, and intermediates for the disabled. This disabled are often assumed to be helpless, dependent, and acceptable only when they are unobtrusive. This construct enables the non-disabled to express profound and sincere sympathy for the disabled while keeping them in a position of social and economic subordination (Kirby, 2017). As a dependent group, it is one that officials want to be seen as aligned with and to show concern. Still, due to their lack of power, there is no political need to allocate resources and interferes with the implementation of IDEA (Schneider and Ingram, 1993). Lack of support by the public, as indicated by a supermajority who do not believe that students with a disability should be held to the same standards as their non-disabled peers, further erode the ability to implement this statute (Mazmanian and Sabatier, 1989; Rose and Gallup, 2007).

There is an implicit assumption about disability in a society that is reflected in the special education environment that is based on a medical model of disability (Kirby, 2017; Marsh, 2011). The medical model of disability holds that a disability is an inherent flaw within an individual that needs to be remedied. This need to remediate is seen as a justification for the need for special education, which then leads to an implicit assumption that the special education

environment is the only place to teach students with disabilities successfully. This assumption is reflected in the view of many teachers and parents (Kirby, 2017). The segregation of students with disabilities has historically rested on the assumption that some students cannot learn in or benefit from participating in a general education classroom (Kurth et al, 2014). It is felt by many that students with disabilities benefit from instruction received in smaller classes and at a level that is appropriate to the student. In addition, there is not an assault to the self-esteem of the student as they are not compared to their non-disabled peers (Kurth et al, 2014). These attitudes and implicit biases towards the inclusion of students with disabilities may be one factor that leads to lower achievement scores.

Also related to implicit biases is a teacher's attitude and beliefs towards students with disabilities as some teachers saw it as a privilege for students with disabilities to be included with their peers in a general education classroom and held lower expectations for them (Kirby, 2017). For many teachers, inclusion is potentially seen as a compromise between academic and social gains with any social benefits of being in a general education setting a tradeoff for the skills and expertise of the special education teachers in the resource room (Kirby, 2017). The idea that some students with disabilities can only be successfully educated in a special education setting may also absolve a teacher from feeling responsible for the education of students with disabilities (Kirby, 2017). A teacher attitude study found that while 98.2 percent of teachers surveyed were willing to make adaptations to what they taught in their classroom, 76.4 percent did not believe that students with disabilities, regardless of the level of the disability, could be educated within their classroom (Santoli, Scachs, Romey, and McClurg, 2008).

But it is not only teachers who believe that students with disabilities should not be held to the same standard as students without a disability. In a survey conducted on behalf of Phi Delta

Kappa in 2007 seeking to understand the public's attitudes toward public schools, 72 percent of respondents in 2007 stated that no, students enrolled in special education should be required to meet the same academic standards as all other students (Rose and Gallup, 2007). How the belief and attitude that students with a disability should not be held to the same standards as their non-disabled peers needs further exploration to fully understand the scope of the issue and the potential negative impact it has on the education of students with disabilities.

While most educators would agree that special education can positively impact students, the examination of outcomes raises questions about this assumption (Kirby, 2017). The National Longitudinal Transition Study-2 (NLTS2) is a 10-year-long study of a nationally representative sample of youth with disabilities who received special education services on December 1, 2000 (Sanford, Newman, Wagner, Cameto, Knokey, and Shaver, 2011). The study found that young adults with disabilities who have ever enrolled in a post-secondary school, only 38.4 percent graduated or completed a program of study compared to 51.2 percent of their non-disabled peers (Sanford et al, 2011). The percent of young adults with disabilities who were employed was similar to their non-disabled peers, with a 71.1 percent employment rate for those with a disability compared to 70.7 percent for the non-disabled. However, their mean hourly wage was \$9.40, while their non-disabled counterparts' mean hourly wage was \$13.20 (Sanford et al, 2011). While the employment rate for young adults is similar to their non-disabled peers, they are more likely to earn less money than their peers. It is worth noting that the wage figures are pre-2014, which is when the Workforce Innovation and Opportunity Act (WIOA) was signed into law. WIOA is intended to improve employment services for individuals with disabilities, including greater access to competitive employment, or employment that pays the federal

minimum wage and not a sub-minimum wage that was often found in sheltered workshops for the disabled (U.S. Department of Labor, 2020).

Another factor that could account for the wage disparity and attendance at a post-secondary school is high school graduation requirements that vary from state to state. For 27 states, all students are pace an exit exam to graduate from high school (Johnson, Thurlow, Cosio, and Bremer, 2020). For students with disabilities who do not pass, they may be able to retake the exam or petition for an exemption that will allow them to receive a standard diploma. Otherwise, they are granted an alternative completion diploma, which will not allow them to go to a post-secondary school or training opportunity (Johnson et al, 2020). Not being able to further their education or training does limit the jobs individuals with disabilities are qualified for and wages that they can earn.

One argument for the expense of educating students with disabilities is that if the total amount of money allocated for individuals with disabilities was spent early on their public education, it would decrease the amount needed to support them later in their lives (Crocket and Kauffman, 2013). With the gap between young adults with disabilities and their non-disabled peers when it comes to post-secondary education and wages, there arises a question if there is a decrease in expenditures latter. More longitudinal studies may be needed to determine if the assumption holds or not.

### **Policy Recommendations**

IDEA needs to be fully funded as promised. One of the critical assumptions of inclusion is that the services a student with a disability requires to access their education will be brought to them. The brining of services to a general education classroom is cost-prohibitive for most districts. Having the students come to the service needed brings providing the service to



economic scale and financially cost-effective. Until Congress fully funds IDEA, the vision of inclusion cannot be fully implemented. With full funding, the cost of bringing services to students may be funded, and the vision of IDEA might be achieved.

The idea of IDEA needs to be revisited. The diversity of disabilities now served through IDEA has grown over time. The disability populations of the original plaintiffs of *Pennsylvania Association for Retarded Children v. Pennsylvania* (1971) and *Mills v. Board of Education* (1972) are now a small percent of the students with disabilities served by IDEA. Special Education has a lasting impact on the lives of the students that are served within it, and not always in positive ways. Students from lower social-economic backgrounds and minorities are more likely to be identified with disabilities and receive special education services (Losen and Orfield, 2002; Payne, 2019). It is time to step back and reevaluate the purpose of IDEA and determine if the current policies and practices address the purpose.

The implicit biases against students with disabilities need to be addressed. With 72 percent of the public believing that students with disabilities should not be held to the same standards as their non-disabled peers, there is a perception that individuals with disabilities are not as capable as those without a disability. Also, by not being held to the same standards as their peers, students with disabilities are placed at an economic disadvantage due to the possibility of not qualifying for a standard high school diploma, which will enable them to attend a post-secondary education opportunity. Future reauthorizations of IDEA need to mandate training for education personal to address this implicit bias against students with disabilities.

The preservice training of teachers needs to include more than one class that addresses special education needs and practices. Teachers need to have the training knowledge to address the variety of needs of the students in their classrooms.

## **Conclusion**

After analyzing the models to determine if the LRE has an educational impact on the ISAT scores for students with disabilities, it was found that there is no educational impact on students. Districts, where students with disabilities spent a large percent of their day in Environment 1, did not perform any better than their peers in districts where students spent their day in Environment 2.

IDEA was created to more fully integrate students with disabilities into their community by placing them in the least restrictive environment appropriate. Over time through case law, state policies, and changes that have occurred during the reauthorizations of IDEA lobbied for by disability rights advocates, this has come to mean the inclusion of students with disabilities within the general education classroom. However, there is no consensus as to which environment provides the most successful educational outcome for students with disabilities. By using data from the state of Idaho of the ISAT scores for students with disabilities and the percent of students placed by districts in Environment 1 or Environment 2, an OLS regression developed twelve models that demonstrated that while Environment 2 did negatively impact a student with disabilities ISAT test scores, making it less likely that they will score Advance or Proficient, Environment 1 had no impact on ISAT scores. Thus, while being in Environment 2 does not lead to positive education outcomes, neither does Environment 1.

Students with disabilities continue to perform below their peers as measured by the ISAT. While part of this subpar performance can be caused by being in Environment 2, it is not the only factor as being in Environment 1 did not raise the scores. Other factors, such as implicit biases towards individuals with disabilities by society, maybe contributing. The impact of implicit biases toward students with disabilities by teachers, parents, and school staff needs to be

explored more fully to understand what impact this is having on students with disabilities educational achievement.

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## Coding Scheme

Variable Name	Variable Description	Coding Scheme
Advanced in Math ISAT	The percent of students with disabilities in the district who score “Advanced” in Math on the ISAT exam.	Actual Percent
Proficient in Math ISAT	The percent of students with disabilities in the district who score “Proficient” in Math on the ISAT exam.	Actual Percent
Basic in Math ISAT	The percent of students with disabilities in the district who score “Basic” in Math on the ISAT exam.	Actual Percent
Below Basic in Math ISAT	The percent of students with disabilities in the district who score “Below Basic” in Math on the ISAT exam.	Actual Percent
Advanced in ELA ISAT	The percent of students with disabilities in the district who score “Advanced” in ELA on the ISAT exam.	Actual Percent
Proficient in ELA ISAT	The percent of students with disabilities in the district who score “Proficient” in ELA on the ISAT exam.	Actual Percent
Basic in ELA ISAT	The percent of students with disabilities in the district who score “Basic” in ELA on the ISAT exam.	Actual Percent
Below Basic in ELA ISAT	The percent of students with disabilities in the district who score “Below Basic” in ELA on the ISAT exam.	Actual Percent
Advanced in Science ISAT	The percent of students with disabilities in the district who score “Advanced” in Science on the ISAT exam.	Actual Percent
Proficient in Science ISAT	The percent of students with disabilities in the district who score “Proficient” in Science on the ISAT exam.	Actual Percent
Basic in Science ISAT	The percent of students with disabilities in the district who score “Basic” in Science on the ISAT exam.	Actual Percent
Below Basic in Science ISAT	The percent of students with disabilities in the district who score “Below Basic” in Science on the ISAT exam.	Actual Percent
Students in Environment 1	The percent of students in each district who are in general education classes for 80 percent or more of each day.	Actual Percent
Students in Environment 2	The percent of students in each district who are in general education classes for 40-79 percent of each day.	Actual Percent
Low Income		
Rural		1 = Rural 0 = Urban
Levies		1 = Levy 0 = No Levy

Charter		1 = Charter 0 = Not Charter
White	The percent of students in each district who are White.	Actual Percent
Hispanic	The percent of students in each district who are Hispanic.	Actual Percent
Native American	The percent of students in each district who are Native American.	Actual Percent
Region 1		1 = Region 1 0 = All Others
Region 3		1 = Region 3 0 = All Others
Region 4		1 = Region 4 0 = All Others
Region 5		1 = Region 5 0 = All Others
Region 6		1 = Region 6 0 = All Others