

BEST PRACTICES IN EDUCATION: A LOOK INTO THE
EDUCATIONAL DELIVERY MODELS THAT PRODUCE THE
BEST OUTCOMES FOR CHILDREN WITH DISABILITIES

by

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Education is a fundamental right for all individuals. Yet, students with disabilities often face significant barriers to achieving their full potential. Various methodologies and modalities of educating this diverse population exist; thus, it is difficult to select one that produces successful outcomes consistently. This research aims to understand which model of education elicits the best outcomes for students with disabilities. By reviewing existing literature, this study seeks to highlight evidence-based practices that not only enhance academic achievement but also promote social and emotional development in the child. As such, the findings of this research will strengthen efforts to create a more inclusive and welcoming environment for those with disabilities. This research seeks to answer the question: What educational delivery model produces the best outcomes for students with disabilities and how can we implement these methods into the classroom?

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Table of Contents

Key Terms	5
Introduction	7
Objectives	7
Background and History	7
What is disability?	7
A Note on Language	9
Legislation and Principles	11
Education for All Handicapped Children Act	11
Individuals with Disabilities Education Act (IDEA)	11
Outcomes of IDEA	13
Individualized Education Plan (IEP)	14
Least Restrictive Environment	17
Limitations of IDEA	18
Models of Special Education Delivery	21
Inclusion	21
Special Education Classrooms	23
Resource Rooms	24
Special Day Classes (SDCs)	25
Effectiveness and Outcomes of Special Education Delivery Approaches	27
Inclusion	27
Special Education Classrooms	28
Resource Rooms	29
Special Day Classes (SDCs)	30
Discussion	32
References	37

Key Terms

general education - Curriculum that is broad and designed to meet the educational needs of most students, aligned with specific ages and grade levels.

special education (SPED) - Curriculum tailored to meet each student's unique needs; focuses on individualized goals based on the student's abilities, challenges, and IEP objectives.

inclusive education: The practice of educating students with disabilities alongside their non-disabled peers in general education classrooms.

Individualized Education Plan (IEP): A customized educational plan designed to meet the unique needs of a student with disabilities.

Universal Design for Learning (UDL): An educational framework that aims to improve and optimize teaching and learning for all people based on scientific insights into how humans learn.

assistive technology: Tools and devices that support students with disabilities in accessing the curriculum and participating fully in school activities.

Multi-Tiered System of Supports (MTSS): A framework that provides varying levels of support based on student needs, including academic and behavioral interventions.

Positive Behavior Interventions and Support (PBIS): A proactive approach to managing student behavior through positive reinforcement and support.

co-teaching: A model where general and special education teachers work together to plan, instruct, and assess students.

culturally responsive teaching: Instruction that recognizes and honors students' cultural backgrounds and incorporates them into the learning process.

collaboration: The process of working together with various stakeholders, including teachers, parents, and specialists, to support students with disabilities.

self-advocacy: Teaching students with disabilities to understand their own needs and to communicate those needs effectively.

pedagogy - The method and practice of teaching, especially as an academic subject or theoretical concept.

neurotypical - Describes someone who thinks and processes information in ways that are typical within their culture; tend to learn skills and reach developmental milestones around the same time as their peers.

Introduction

Objectives

The objective of this study is to review existing literature and determine which modality of education produces the best outcomes for students with disabilities. This research investigates the historical context of education for students with disabilities and highlights the current modalities in place for this population. We aim to add to existing literature on this topic, providing an understanding of the various models that are being used in special education and beyond. Creating an equal and fair society for all people starts by understanding how to establish this equality and fairness, especially in our most fundamental systems, like education. This thesis seeks to provide information about various modalities, the situations for which they are best suited, and how to apply them to best serve this population.

Background and History

What is disability?

Difficult to define and a highly contentious topic, disability can be defined uniquely depending on the person one asks. The Americans with Disabilities Act of 1990 defines disability as a physical or mental impairment that substantially limits one or more major life activities. A person with a disability can also be classified as disabled if they have a history or record of such an impairment or is perceived by others as having such an impairment. In this context, impairment is seen as the physical or mental condition that affects an individual's body or mind. The idea of a "substantial limitation" means that the impairment must significantly restrict the ability to perform major life activities, including but not limited to walking, seeing, hearing, speaking, learning, or working (Begon, 2021; Americans with Disabilities Act, 1990).

Disability is also influenced by the interaction between an individual and their environment, especially based on societal attitudes and/or physical barriers (Americans with Disabilities Act, 1990; Bigby, 2024).

Children with disabilities face particular difficulties, including, but not limited to, access to inclusive education, bullying and social isolation, lack of social inclusion, family dynamic struggles, health and physical activity complications, and inability to access necessary transition services. Children with disabilities often face barriers to accessing inclusive education. They may be placed in segregated settings or receive inadequate support in mainstream classrooms, which can hinder their academic and social development (Hehir et al., 2016). This lack of access to education that is well-suited for their needs puts a barrier between children with disabilities and their typically developing peers, which can feel isolating and lonely (Rose et al., 2011; Hehir et al., 2016). As such, children with disabilities are more likely to experience bullying and social isolation in school settings. This can negatively affect their self-esteem, mental health, and academic performance (Rose et al., 2011). Despite some efforts to include children with disabilities in regular classrooms that serve their needs, research shows that this population feels lonelier and less involved in their communities compared to their peers without disabilities (Kwan, C., Gitimoghaddam, M., & Collet, J. P., 2020); Guralnick et al., 2007). Beyond educational settings, the presence of a child with a disability can place significant emotional and financial strain on families, affecting sibling relationships, family dynamics, and overall wellbeing (Neely-Barnes & Dia, 2008). This strain affects all members of the family system; when a child with a disability is feeling isolated at school and at home, their feelings of loneliness and detachment only persist (Neely-Barnes & Dia, 2008, Rose et al., 2011). On top of these contributors to poor mental health, children with disabilities often have fewer opportunities

to participate in physical activities and sports, leading to higher rates of obesity and lower levels of physical fitness (Rimmer & Rowland, 2008). This is only complicated by the fact that access to specialized healthcare services can be limited for children with disabilities, impacting their overall health and development (Newacheck, P. W., Inkelas, M., & Kim, S. E., 2004).

Additionally, the transition from school to adulthood is a critical period for all children, but especially those with disabilities. This population often faces challenges in accessing transition services that prepare them for independent living, higher education, and employment (Carter et al., 2012).

A Note on Language

The language we use to describe people with disabilities has evolved significantly over time. Early terms like "handicapped" and "retard" are widely recognized as offensive and outdated. In the 1960s, person-first language emerged, emphasizing the individual before the disability (e.g., "person with a disability") to highlight personhood. Some communities, especially the autistic community, prefer identity-first language (e.g., "autistic person"), embracing the disability as an integral part of their identity. The term "special needs" is increasingly viewed as stigmatizing and misleading.

The evolution of language reflects broader societal changes in understanding and respecting people with disabilities. Promoting inclusive language in society involves raising awareness through education and public campaigns, leading by example, and listening to the preferences of individuals and communities. Implementing policies and guidelines in workplaces, schools, and organizations can support the use of inclusive language, while media representation plays a crucial role in shaping public perception. It's important to challenge and correct non-inclusive language politely, fostering a culture of learning and improvement. More

than anything, it's important to use language that aligns with the preferences of individuals and communities to promote dignity and inclusion. For the purposes of this study, I will use person-first language for all populations other than the autistic community, but I recognize that this may not be the preferred language for all people with disabilities.

Legislation and Principles

Education for All Handicapped Children Act

Before the enactment of the Education for All Handicapped Children Act in 1975, the majority of children with disabilities were excluded from public education. This landmark legislation mandated that public schools provide free appropriate public education (FAPE) in the least restrictive environment (LRE), fundamentally changing the educational landscape for students with disabilities. In 1970, U.S. schools educated only one in five children with disabilities, and many states had laws that explicitly excluded certain students, including those who were deaf, blind, emotionally disturbed, or had intellectual disabilities (History of the IEP, 2024). This is demonstrative of the urgency for a legal change in the system that was undermining the rights of people with disabilities.

The subsequent reauthorization and renaming of this act to the Individuals with Disabilities Education Act (IDEA) in 1990 further expanded these rights, emphasizing individualized education programs (IEPs) and early intervention services. Congress enacted the Education for All Handicapped Children Act in 1975 to support states in protecting the rights of, meeting the needs of, and improving results for infants, toddlers, children, and youth with disabilities and their families (Education for All Handicapped Children Act, 1975).

Individuals with Disabilities Education Act (IDEA)

In 1990, the Education for All Handicapped Children Act was reauthorized and renamed the Individuals with Disabilities Education Act (IDEA). This reauthorization significantly expanded the rights of children with disabilities and their families. IDEA emphasized the importance of individualized education programs (IEPs) and early intervention services, ensuring

that children with disabilities receive tailored educational plans that address their unique needs. The act also introduced procedural safeguards to protect the rights of children and their parents, including the right to participate in decision-making processes and the right to due process hearings. IDEA became the governing statute that the United States uses as a basis for education of individuals with disabilities. IDEA outlines that the education of children with disabilities can be made more effective by having high expectations for such children and ensuring that they have the most access possible to general education curricula; this allows them to meet developmental goals and be prepared to lead independent lives.

In 2004, the Individuals with Disabilities Education Act underwent significant revisions aimed at enhancing educational outcomes for students with disabilities. These changes included an emphasis on early intervention services for infants and toddlers, the requirement for special education teachers to be “highly qualified,” and the introduction of measurable annual goals in IEPs. The 2004 revision also streamlined the IEP process by reducing paperwork and the number of required meetings, while maintaining the importance of parental involvement. Additionally, the revision strengthened transition planning for students moving from school to post-school activities, such as higher education and employment, by requiring transition services to be included in the IEP starting at age 16. This revision required that special education teachers be “highly qualified,” meaning that teachers needed to meet specific state certification and licensure requirements, ensuring they were adequately equipped to teach students with disabilities (Individuals with Disabilities Education Act, 2004). The 2004 revision amended the IEP process by reducing paperwork and the number of required meetings, but maintained the importance of parental involvement, ensuring that parents remained full and equal partners in the development of their child’s IEP. This revision also required IEPs to include measurable annual goals and a

description of how the child's progress towards those goals would be tracked (Chambers, Shkolnik & Perez, 1999). The revision also detailed requirements on accountability under the No Child Left Behind Act (NCLB) and provided clearer guidelines on disciplinary actions for students with disabilities (Individuals with Disabilities Education Act, 2004). Finally, the 2004 amendment strengthened transition planning for students moving from school to post-school activities, such as higher education, vocational training, and employment; transition services were now required to be included in the IEP starting at age 16 as the student and family prepare to age-out of the K-12 educational system (Individuals with Disabilities Education Act, 2004). The 2004 changes were designed to create a more inclusive and effective educational environment for students with disabilities, promoting better academic and functional outcomes for this population. IDEA assists states and local governments in ensuring that children with disabilities have access to the highest level of education possible in the environment that is least restrictive to the individual (Individuals with Disabilities Education Act, 2004).

Outcomes of IDEA

One of the most notable implications of IDEA is the increased access to education for children with disabilities. Since the enactment of IDEA, over half a million children who were previously denied an appropriate education have gained access to public schooling. Today, more than 66% of students with disabilities spend 80% or more of their school day in general education classrooms, reflecting the act's emphasis on inclusion and the least restrictive environment (U.S. Department of Education, 2019). This increased access has allowed students with disabilities to benefit from the same educational opportunities as their nondisabled peers, promoting greater equity and inclusion in the educational system (Individuals with Disabilities Education Act, 2004; West, J. E., McLaughlin, V. L., Shepherd, K. G., & Cokley, R., 2022).

This kind of access also means that children who would not have otherwise received an appropriate education are able to secure knowledge and skills important to their success. The Individualized Education Plan (IEP) seeks to outline services that contribute to this equitable education for all students.

Individualized Education Plan (IEP)

A significant component of IDEA was the integration of the Individualized Education Plan (IEP) as a requirement for students with disabilities. The IEP is the governing outline for the specific educational goals and support services for students with disabilities; it is a legally binding document that requires the school or school district to perform everything outlined within it (United States Department of Education, 2000). The IEP is both a document describing a child's entire educational program and part of the process used to create it (Siegel, 2014). All special education-qualifying public school students in the United States are required to have an Individualized Education Plan in accordance with their needs. Each IEP document is individual to the student; this ensures effective teaching and learning. The document guides the student's needs, thus improving educational results, helping the child develop further socially and academically. The IEP is a critical aspect for success for those who qualify for special education (United States Department of Education, 2000).

The IEP is created with a team of the parents or guardians of the student, teachers of the student, an individual who can interpret what the child's evaluation results mean, an individual representing the school system, representatives from transition service agencies, and individuals with knowledge or special expertise about the child (United States Department of Education, 2000; Friend, 2018).

The IEP must include a description of the child's current educational skills, including but not limited to, cognitive skills, linguistic ability, emotional behavior, social skills and behavior, and physical ability (Individuals with Disabilities Education Act). The IEP captures all the decisions made through the special education assessment, eligibility, and instructional planning procedures (Friend, 2018). This may be done through reflection and analysis of standardized tests, grades, reports, or anecdotal information, and must describe how the child's involvement and progress in the general curriculum is affected by their disability (Siegel, 2014).

Annual goals address the academic, functional, and behavioral areas for the child to achieve within the year. They are unique and meant to meet the student's needs as an individual (Individuals with Disabilities Education Act, 1997; Friend, 2018). The special education and related service section of the IEP references the special education services and related supports that the student will need to meet their annual goals and general needs. This can also include supplementary aids and services such as specialized instruction, accommodations, modifications, assistive and augmentative communication technology, speech therapy, occupational therapy, counseling, or more. As an extension, the participation section outlines the amount of time that the child will spend in the general education setting and the supports or modifications necessary for their participation for their participation in this setting. Some students may not participate in state- or school-wide standardized tests; if they do participate, any accommodations or modifications they may need will be outlined in the IEP. The IEP must also include when services will begin, how often they will be provided, and how long they will last, laid out in the dates and places section (Friend, 2018; Siegel, 2014). Starting at age sixteen, the IEP must outline the transition services to address post-school plans. Similarly, if the state transfers rights at the age of the majority, the IEP will include a statement that addresses any rights that will be

transferred to the student at that given age. IEPs include transition services starting at age sixteen, which help prepare students for post-secondary education, vocational training, and employment. This planning is crucial for ensuring that students with disabilities can lead independent and productive lives (Carter et al., 2012). The IEP must provide a synopsis that notes how the child's progress will be measured and how the parents or guardians will be informed of this.

The IEP is of particular importance in that it has significantly impacted the educational experiences and outcomes for children with disabilities. In terms of academic achievement, research indicates that students with IEPs often show improved academic performance due to tailored instructional strategies and accommodations. IEPs help address specific learning needs, leading to better engagement and understanding of the curriculum (Wilcox et al., 2021). As such, IEPs set measurable annual goals tailored to each student's unique needs, which helps in tracking progress and ensuring that students achieve their educational objectives (Friend, 2018; Wilcox, et al., 2021). Furthermore, IEPs affect social and emotional development by way of enhanced social skills and increased self-esteem. IEPs often include goals for social skills development, which can help children with disabilities improve their interactions with peers and build better relationships (Paul et al., 2022). Additionally, by providing appropriate support and accommodations, IEPs can boost the self-esteem and confidence of students with disabilities by helping them to feel more competent and included in the school environment (Lovett, 2021). Similarly, IEPs often include behavioral intervention plans that address behavioral challenges, leading to improved behavior and a more positive school experience (Kern et al., 2019; Mikami, Griggs, Lerner, Emeh, Rueland, Jack, & Anthony, 2012). IEPs have also been pivotal in preparing children with disabilities for a rich and fulfilling adulthood.

Least Restrictive Environment

The federal Individuals with Disabilities Education Act (IDEA) advocates for the education of students with disabilities alongside their neurotypical peers, requiring that education be provided in the Least Restrictive Environment (LRE) (Carson, 2015). This means that, to the maximum extent possible, public school districts must educate students with disabilities in general education classrooms with appropriate aids and supports, often referred to as supplementary aids and services, together with their nondisabled peers. For most students, the general education classroom is considered the least restrictive environment, provided that various levels of support are available as necessary (Underwood, 2018).

According to the U.S. Department of Education's National Center for Education Statistics (2016), 61.8% of students with disabilities spend more than 80% of their academic time in regular education classrooms. However, for some students, the mainstream educational environment might not be the best fit for them. The least restrictive environment does not require that all children be placed in an inclusive setting. It simply requires them to be in the least restrictive. For some, this is a might be a classroom that is better suited to the need for intensive support that can be disruptive or excessively expensive. In such cases, students may be placed in other settings, which are designed to provide a more structured and supportive environment tailored to their specific needs. These classes can offer smaller teacher-to-student ratios and specialized instruction, but may be costly (Lovett, 2021).

Educating students with disabilities in the least restrictive educational classroom can be excessively expensive for schools due to the additional resources required. These resources can include specialized instructional materials, assistive technology, and the need for additional staff such as special education teachers, paraeducators, and therapists. The costs associated with these

supports can place a financial burden on school districts. For example, hiring qualified special education teachers and aides to provide individualized instruction and support can be, while necessary, costly. These professionals are essential for implementing IEPs and ensuring that students with disabilities receive the appropriate education (Chambers et al., 2003). Providing assistive technology, such as communication devices, specialized software, and adaptive equipment can be expensive, but these tools are crucial for enabling students with disabilities to access the curriculum and participate fully in classroom activities (Ramdoss et al., 2012). Many students with disabilities require additional services such as speech therapy, occupational therapy, and physical therapy. These services are often provided by specialists who work with students individually or in small groups, adding to the overall cost (Harris & Handleman, 2000). While this need for extra resources is absolutely necessary for the success of the student, there is a significant funding gap. When IDEA was originally passed in 1975, Congress promised to cover 40% of the additional costs of special education. However, this promise has never been fully realized, and federal funding has consistently fallen short, often covering less than 20% of the costs (U.S. Department of Education, 2023). This funding gap leaves school districts struggling to provide the necessary services and support to students with disabilities. It is also worth noting that schools must also bear the costs associated with compliance and potential litigation under IDEA. Ensuring compliance with IDEA requires significant administrative effort and resources.

Limitations of IDEA

Despite its many successes, IDEA faces several limitations and challenges. One of the primary issues is the insufficient funding provided to schools. Although IDEA mandates that states provide a free appropriate public education to students with disabilities, the federal

government has historically underfunded the act. This funding gap often leaves schools struggling to provide the necessary services and support to students with disabilities. Additionally, there is significant variability in the implementation of IDEA across states and school districts, leading to inconsistencies in the quality of education and services provided (National Council on Disability, 1995; Hale et al., 2006; National Council on Disability, 2018).

The language of the Individuals with Disabilities Education Act (IDEA) has been criticized for being ambiguous and potentially harmful to students with disabilities (West et al., 2022). A significant point of contention is the phrase “to the maximum extent possible,” which has led to varied interpretations and inconsistencies in implementation. This phrase leaves the determination of what constitutes an “appropriate” education largely in the hands of state and local authorities, or even individual teachers. Consequently, when disputes arise, it falls to administrative legal justices to define what is “appropriate” on a case-by-case basis, as seen in the landmark case *Board of Education of the Hendrick Hudson Central School District v. Amy Rowley* (Henry and Johnson, 2018).

Additionally, IDEA has been criticized for perpetuating a form of “institutional ableism.” This term refers to the systemic practice of segregating students with disabilities if they cannot be easily accommodated within the existing educational framework (West et al., 2022; Beratan, 2006). Critics argue that this approach reflects an outdated medical model of disability, which focuses on what individuals with disabilities cannot do, rather than their capabilities and potential (Cornett and Knackstedt, 2020). This perspective can lead to exclusionary practices that undermine the goal of providing an inclusive and equitable education for all students. Another major limitation of IDEA is the use of standards-based measures (West et al., 2022; Mintrop & Sunderman, 2009; Hale et al., 2006). Standardization, by definition, requires a comparison to a

norm or average; however, these standards are problematic as they have historically been defined only by research done on students from white, middle-class backgrounds, thereby discriminating against students from underrepresented and minority backgrounds.

Models of Special Education Delivery

In this section, we will explore various models of special education delivery, examining the pedagogical elements and implementation strategies of each approach. Understanding these models is crucial for identifying the most effective methods for educating students with disabilities. This section seeks to explain the pedagogical elements underlying each model, which helps us understand how different educational approaches are designed to meet the diverse needs of students with disabilities. Additionally, I hope to illustrate how each model is practically implemented in educational settings, which includes discussing the resources, staff, and training required to effectively deliver each type of special education service.

Inclusion

Inclusion is a modality whereby students with disabilities are educated alongside their nondisabled peers in general education classrooms (Vaghrodia & Patel, 2022; Jardinez & Natividad, 2024). Inclusive education seeks to ensure that all students have access to involvement, engagement, and achievement in the academic setting. Its aim is to make education more accessible to all students, and it has elicited significant academic outcomes for students with and without disabilities (Molina Roldan, Marauri, Aubert, & Flecha, 2021; Vaghrodia et. al, 2022; Jardinez et. al, 2024; Wilcox, G., Conde, C. F., Kowbel, A., 2021). For students with disabilities, inclusion has proven successful as a means to improving academic success, social belonging, and overall happiness (Paul, T., Rezze, B. D., Rosenbaum, P., Cahill, P., Jiang, A., Kim, E. & Campbell, W., 2022; Florian, 2019; Young & Filler, 2015; Zakaria, 2017). For those without disabilities, education in an inclusive environment has been found to have generally positive effects as students learn to respect others, accept differences, and acknowledge diverse abilities, while also feeling empowered by helping others learn (Molina Roldan et al., 2021).

Educating students in the inclusive setting requires significant resources, support, and preparation, but this model produces meaningful outcomes for all students. An important aspect of applying inclusion is through the Universal Design for Learning (UDL), which involves creating flexible learning environments that can accommodate individual learning differences. This may include multiple means of representation, expression, and engagement to ensure all students can access and participate in the curriculum (Meyer, Rose, & Gordon, 2014). Furthermore, inclusion involves tailoring instruction to meet the diverse needs of students. Teachers may need to modify content, process, products, and learning environments based on students' readiness levels, interests, and learning profiles (Tomlinson, 2014). Another pedagogical element of inclusion is collaborative teaching, which requires general and special education teachers to work together to plan, teach, and assess students. This collaboration ensures that all students receive the support they need within the general education classroom alongside their typically developing peers (Friend, 2018). The implementation of UDL, individualized instruction, and collaborative teaching comes to fruition when educational settings utilize co-teaching models, assistive technology, and Positive Behavioral Interventions and Supports (PBIS). Co-teaching models may include team teaching (both teachers are fully involved in delivering the instruction at the same time), parallel teaching (the class is divided into two groups, and each teacher delivers the same instruction to half of the class), or station teaching (students and content are divided into three groups, and each teacher teaches one section of the content while the third section is based on independent practice activities), or some combination of them. These models allow teachers to share responsibilities and provide targeted instruction (Friend, 2018). Furthermore, assistive technology such as speech-to-text software, audiobooks, and communication devices can be used to support students with disabilities in

accessing the curriculum and participating in classroom activities (Dell, Newton, & Petroff, 2017). This assistive technology is key to implementing inclusion in the general education classroom because it aids in students accessing the content proactively and in an independent manner. PBIS is a proactive approach to behavior management that uses data-driven strategies to improve student behavior and create a positive school environment (Sugai & Horner, 2009).

Special Education Classrooms

Special education classrooms are separate classrooms specifically designed for students with disabilities, offering specialized instruction and resources. Students with disabilities are grouped into one classroom, but special education classrooms can be distinguished from special day classes in that there are students with various disabilities learning in one classroom, as opposed to those with the same disability. Pedagogical elements of special education classrooms include the successful implementation of IEPs. Because they include specific accommodations and modifications tailored to each student's needs, IEPs function really successfully in this model (Yell, Katsiyannas, & Bradley, 2013; Lovett, 2021; Lovett and Lewandowski, 2015; Kern, L., Hetrick, A. A., Custer, B. A., & Commisso, C. E., 2019). Another key pedagogical element is the use of evidence-based practices. Special education teachers use instructional strategies that are supported by research to be effective for students with disabilities. These include, but are not limited to, explicit instruction, task analysis, and systematic prompting (Cook & Cook, 2013). With various disabilities present in one classroom, it is important to ensure effective classroom management strategies to address diverse behavioral and learning needs. The use of strategies such as Functional Behavior Assessments (FBAs) and Behavior Intervention Plans (BIPs) are used in these classrooms to address challenging behaviors and promote positive conduct (Kern et al., 2019; Hoover, Patton, & Sacco, 2024).

These pedagogical elements can be implemented using small group instruction, specialized curriculum, and therapeutic services. Small group instruction is efficacious in this model because special education classrooms often have a low teacher-to-student ratio, allowing for more individualized instruction. This setting enables teachers to provide targeted support and closely monitor student progress (Lovett, 2021). Furthermore, the curriculum in special education classrooms is often adapted to meet the unique needs of students. This may include modified materials, alternative assessments, and individualized learning goals (Friend, 2018). Additionally, many special education classrooms provide access to related services such as speech therapy, occupational therapy, and physical therapy. These services can be easily integrated into the school day to support students' overall development (Harris & Handelman, 2000).

Resource Rooms

Resource rooms are a modality in which students spend part of their day in general education classrooms and the other part of the day in a resource room where they receive special, individualized instruction. Resource rooms provide a balance between inclusion and specialized support, allowing students to benefit from both environments. Resource rooms provide personalized instruction based on each student's IEP. This instruction focuses on specific skills and areas of need, such as reading, writing, or math. This approach can also help address individual learning challenges while promoting social-emotional gains and integration (Wilcox, et al., 2021). Another pedagogical element of resource rooms is flexible grouping. Students in resource rooms are often grouped flexibly based on their needs and progress, which allows for targeted instruction and the ability to adjust groups as students' needs change (Friend, 2018).

Furthermore, resource rooms emphasize skill-building activities that help students develop foundational academic skills and strategies for learning (Harris & Handleman, 2000).

There are many ways to implement this pedagogy in resource rooms. For example, in the pull-out model, students spend part of their day in the general education classroom and part of their day in the resource room. This allows them to receive specialized instruction while still participating in the general education environment (Wilcox et al., 2021). In the push-in model, special education teachers or aides provide support within the general education classroom. This model promotes inclusion while still providing targeted support (Friend, 2018). Furthermore, resource rooms are equipped with specialized materials and resources, such as manipulatives, visual aids, and assistive technology, to support student learning (Harris & Handleman, 2000).

Special Day Classes (SDCs)

In some cases, students with severe disabilities are placed in a segregated setting where they are separated from their peers. An SDC is the most restrictive environment for students with disabilities, and they provide services to students with more intensive needs than other modalities can meet. This model usually involves one curriculum for all students in the classroom that is specifically adapted to meet the needs of students with significant disabilities. This may include modified content, alternative assessments, and individualized learning goals (Lovett, 2021). Another pedagogical element of SDCs is life skills training. SDCs often focus on teaching life skills, such as communication, social skills, and daily living activities. This helps students develop the skills they need for greater independence (Friend, 2018). SDCs also provide intensive behavioral support, including the use of FBAs and BIPs (Kern et al., 2019).

To implement these pedagogical elements, SDCs typically have smaller class sizes, allowing for more individualized attention and support. This setting enables teachers to provide

intensive instruction and closely monitor student progress (Lovett, 2021). SDCs also have specialized staff who have training in working with students with significant disabilities. These staff members use evidence-based practices to support student learning and development (Cook & Cook, 2013). SDCs also often provide access to a range of related services, such as speech therapy, occupational therapy, and physical therapy. Like in special education classrooms, these services are integrated into the classroom to support students' overall development (Kern et al., 2019).

Effectiveness and Outcomes of Special Education Delivery Approaches

This section presents a comprehensive review of the literature on the effectiveness and outcomes of the provide special education approaches. This section seeks to provide a well-rounded understanding of how different models impact academic, social, and behavioral outcomes for students with disabilities.

Inclusion

Inclusion has been shown to improve academic performance for students with and without disabilities. A meta-analysis by Szumski, Smogorzewska, and Grygiel (2022) found that students with disabilities in inclusive settings had higher academic achievement compared to those in segregated settings. This study highlighted that inclusive education promotes access to the general curriculum and higher expectations, which contribute to better academic outcomes. Inclusion also positively impacts social interactions and peer relationships. Hehir et al. (2016) found that inclusive education supports the academic growth of students with disabilities, particularly in reading and math. Additionally, Florian (2019) found that inclusive settings foster social integration and acceptance among students with and without disabilities. This environment helps students with disabilities develop better social skills and a sense of belonging. Kart and Kart (2021) also noted that inclusion reduces fear, hostility, and prejudice while increasing tolerance and understanding among students. Furthermore, inclusive education can reduce behavioral issues by promoting positive peer interactions and providing consistent behavioral expectations. A study by Molina Roldán et al. (2021) showed that inclusive classrooms with well-implemented behavioral supports lead to fewer behavioral problems and improved classroom environment.

Limitations in effectiveness of inclusive settings include insufficient training for general education teachers, resource constraints, and classroom management. Many general education teachers may not have adequate training or experience in working with children with students with disabilities. This can lead to challenges in effectively implementing inclusive practices and providing necessary support for students with such a wide range of needs (Florian, 2019). Furthermore, inclusive classrooms often require additional resources, such as assistive technology, specialized instructional materials, and support staff. Schools may struggle to provide these resources due to budget constraints, impacting the quality of inclusion. Additionally, managing a diverse classroom with students of varying abilities can be challenging. Teachers may find it difficult to balance the needs of students with disabilities with those of their nondisabled peers, potentially leading to disruptions and reduced instructional time (Friend, 2018).

Special Education Classrooms

Special education classrooms provide tailored instruction that can significantly benefit students with specific learning needs. Cook and Cook (2013) found that evidence-based practices, such as explicit instruction and task analysis, lead to improved academic outcomes for students with disabilities. Additionally, a study by Ballis and Heath (2021) highlights that individualized educational support in special education classrooms can enhance academic achievement, particularly for students with severe disabilities. In terms of social outcomes, while special education can offer a supportive environment, they may limit opportunities for social interaction with typically developing peers. However, these settings can still promote skills development through structured social skills training and peer interaction within the classroom (Lovett, 2021; Mikami et al., 2012). Furthermore, special education classrooms often implement

individualized behavioral interventions that effectively address challenging behaviors. Kern et al. (2019) found that students in these settings showed significant improvements in behavior due to personalized behavior intervention plans.

Limitations of special education classrooms include social isolation, stigmatization, and the fact that they are quite resource intensive. Students in special education classrooms may have limited opportunities to interact with their nondisabled peers, leading to social isolation and reduced opportunities for social skill development (Lovett, 2021). Additionally, being placed in special education classrooms can stigmatize students with disabilities, affecting their self-esteem and feelings of how they are perceived by others. This can lead to negative psychological outcomes and a sense of exclusion (Cook & Cook, 2013). Special education classrooms also require significant resources, including specialized staff, materials, and facilities. Schools with limited budgets may struggle to provide these resources, impacting the quality of education (Chambers et al., 2003).

Resource Rooms

Resource rooms can also posit significant academic, social, and behavioral outcomes, but also have some serious limitations as well. In terms of strengths, resource rooms provide targeted instruction that can help students with disabilities improve specific academic skills. Wilcox et al. (2021) found that students who received instruction in resource rooms showed significant gains in reading and math skills compared to those who did not receive such support. Further research indicated that resource rooms enhance academic outcomes by providing a focused and structured learning environment tailored to individual needs. In terms of social outcomes, resource rooms offer a balance between inclusion and specialized support, allowing students to benefit from both environments. This model can help students develop social skills in a smaller, more controlled

setting before integrating them into larger classrooms (Wilcox, et al., 2021, Friend, 2018).

Additionally, the individualized attention in resource rooms can lead to better behavioral outcomes. Students receive more immediate feedback and support, which helps in managing and improving behavior (Harris & Handleman, 2000).

Limitations of resource rooms include fragmentation of instruction, stigmatization, and limited integration. The pull-out model used in resource rooms can lead to fragmentation of instruction, where students miss important content and activities in the general education classroom, which can create gaps in learning and social integration. Similar to special education classrooms, students who frequently leave the general education classroom for resource room support may feel stigmatized and different from their peers, affecting their self-esteem and social interactions (Friend, 2018). Furthermore, resource rooms may not fully integrate students into the general education environment, limiting their exposure to the general curriculum and interactions with nondisabled peers (Harris & Handelman, 2000).

Special Day Classes (SDCs)

Special day classes also provide compelling outcomes but have relevant limitations as well. Academically, special day classes provide intensive, individualized instruction that can be highly effective for students with significant disabilities. Lovett (2021) found that students in SDCs made substantial academic progress due to the tailored curriculum and low teacher-to-student ratios. Lovett (2021) also posits that SDCs offer a structured environment that supports academic growth through personalized learning approaches. On a social level, however, SDCs limit interaction with nondisabled peers, but they do give students the ability to develop social skills at their own pace. For example, structured social skills programs within SDCs can help students improve their social interactions (Friend, 2018). Additionally, SDCs are equipped to

handle severe behavioral issues with specialized staff and individualized behavior plans. These settings can provide the necessary support to manage and improve challenging behaviors (Kern et al., 2019).

Limitations of this model are significant and include, but are not limited to, segregation, high resource requirements, and limited access to general curriculum. Special day classes can segregate students with disabilities from their nondisabled peers, limiting opportunities for social interaction and inclusion. This segregation can reinforce negative stereotypes and reduce the likelihood of students developing social skills in a diverse environment (Lovett, 2021). SDCs also require significant resources, including specialized staff, materials, and facilities. Schools with limited budgets may struggle to provide these resources, impacting the quality of education (Chambers et al., 2003). Additionally, students in SDCs may have limited access to the general education curriculum, which can affect their academic progress and readiness for post-secondary education or employment (Friend, 2018).

Discussion

There is research to suggest that special education classrooms, resource rooms, and special day classes may produce positive outcomes for students with disabilities (Lovett, 2021; Goddard, Ammirante, & Jin, 2023). However, inclusion consistently produces academic and social outcomes that are above other modalities of special education for children with disabilities (Florian, 2019; Friend, 2018; Paul et al., 2022).

The review of various special education delivery models reveals distinct strengths and limitations for each approach. The effectiveness of these models varies based on academic, social, and behavioral outcomes for students with disabilities. In terms of inclusion, strengths include the fact that this model promotes higher academic achievement, better social integration, and improved behavioral outcomes. Inclusive settings foster a sense of belonging and acceptance among students with and without disabilities. On the other hand, limitations include insufficient training for general education teachers, resource constraints, and difficulties in classroom management. However, the risks of these limitations of inclusion can be mitigated. The success of inclusion depends on adequate training, resources, collaborative teaching, positive behavioral supports, and strong family and community engagement. By committing to these best practices, schools can create inclusive and supportive learning environments that enable all students to thrive academically, socially, and behaviorally (Florian, 2019; Hehir et al., 2016; Friend, 2018; Sugai & Horner, 2009; Paul et al., 2022).

Special education classrooms are strengthened by their use of tailored instruction and individualized support, which leads to significant academic and behavioral improvements. These settings are beneficial for students with specific learning needs. However, in special education classrooms, there is a potential for social isolation and stigmatization and high resource

demands. These limitations are difficult to overcome in that they are fundamental to the model itself – special education classrooms are founded on the idea that children are not fully integrated into the general education classroom, which is likely to lead to isolation and stigmatization. High resource demands can be alleviated through adequate funding, but this is often done through fundraising or lobbying, which is dependent on people, schools, and districts having the time and funding to do so (Hehir et al., 2016).

Resource rooms do offer targeted instruction and support and balance inclusion with specialized assistance. They are also effective in improving specific academic skills and managing behavior. However, this model can lead to fragmentation of instruction as well as potential stigmatization. There is also limited integration into the general education environment. These limitations are difficult to mitigate because they are fundamental to the structure of the model; there are ways to do so, but they require more intensive labor on the part of educational staff members. With that said, coordinated scheduling, integrated curriculum, and collaborative planning do help mitigate risks of fragmentation of instruction (Wilcox et al., 2021; Friend, 2018; Harris & Handleman, 2000). Stigmatization can be helped by way of inclusive practices, peer support programs, and flexible grouping (Friend, 2018; Paul et al., 2022; Wilcox et al., 2021).

Special day classes have their own strengths and limitations as well. Strengths of SDCs include the fact that they provide intensive, individualized instruction and support for students with significant disabilities. They are also effective in managing severe behavioral issues. However, there is segregation from nondisabled peers, high resource demands, and limited access to the general curriculum. These risks are difficult to remedy, but it is able to be done through significant advocacy and commitment to change. Segregation can be mitigated through

inclusive activities, peer mentorship programs, and reverse inclusion, where nondisabled peers join SDCs for certain activities (Friend, 2018; Paul et al., 2022; Hanson, 2003). High resource demands may be able to be helped through resource sharing, professional development, and advocacy for funding (Chambers et al., 2003; Friend, 2018; Hehir et al., 2016). Limited access to general education curriculum can be mitigated through strategies such as curriculum alignment and collaborative planning (Lovett, 2021; Friend, 2018; Harris & Handleman, 2000). These strategies can help bridge the gap between SDCs and general education.

Ultimately, it is difficult to definitively discern which educational modality produces the best outcomes for students with disabilities. A number of methods may be applicable depending on the individual child, family, and/or circumstance. There is no one right answer. Best practices are what benefits the individual child utmost, so there are times when it is most beneficial for students with disabilities to be educated in special education classrooms, resource rooms, or special day classes because the general education classroom and/or inclusive environment may be too stimulating and not suit their needs (Lovett, 2021). With that said, research suggests that, with ample support, accommodations, and modifications, an inclusive model of education seems to produce the most positive academic and social outcomes for students with disabilities. The mere access to regular schools and general education classrooms is not enough to provide a high-quality education with valuable experiences for students with disabilities (Szumski, Smogorzewska, & Grygiel, 2022). While each special education delivery model has its merits, inclusive education emerges as the most effective approach for promoting positive outcomes for students with disabilities.

The success of inclusion depends on several critical factors, which are adequate training for teachers, sufficient resources, collaborative teaching models, positive behavioral supports,

and family and community engagement. Schools must invest in ongoing professional development for general and special education teachers. Training should focus on inclusive practices, differentiated instruction, and classroom management strategies (Florian, 2019). Furthermore, adequate funding is essential to provide the necessary resources, such as assistive technology, specialized instructional materials, and additional support staff. Schools should advocate for increased funding to meet these needs (Hehir et al., 2016). Implementing collaborative teaching models where general and special education teachers work together can also enhance the effectiveness of inclusive education. This collaborative model ensures that all students receive the support they need within the general education classroom (Friend, 2018). It is recommended that schools adopt Positive Behavioral Interventions and Supports (PBIS) to create a positive school climate and address behavioral issues proactively. PBIS uses data-driven strategies to improve student behavior and promote a supportive learning environment (Sugai & Horner, 2009). Finally, engaging families and the community in the educational process is crucial. Schools should foster strong partnerships with parents and community organizations to support students with disabilities both inside and outside the classroom (Paul et al., 2022).

While each model can produce positive outcomes for students with disabilities, inclusive education consistently demonstrates superior academic and social benefits. Inclusion promotes higher academic achievement, better social integration, and improved behavioral outcomes. Its success depends on adequate training for teachers, sufficient resources, collaborative teaching models, positive behavioral supports, and strong family and community engagement. Schools must invest in professional development, advocate for increased funding, implement co-teaching models, adopt Positive Behavioral Interventions and Supports (PBIS), and foster partnerships with families and communities.

Ultimately, the choice of the best special education delivery model depends on the individual needs of each student. While inclusive education emerges as the most effective approach for promoting positive outcomes, it is essential to complement it with quality indicators such as high academic achievement, positive peer relationships, and active participation in school activities. By committing to best practices and addressing the limitations of each model, schools can create inclusive and supportive learning environments that enable all students to thrive academically, socially, and behaviorally.

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