

Bethel University

Spark

All Electronic Theses and Dissertations

2023

Advantages and Disadvantages of Special Education Students in the Mainstream Classrooms

Nikki L. Evens
Bethel University

Follow this and additional works at: <https://spark.bethel.edu/etd>

Recommended Citation

Evens, N. L. (2023). *Advantages and Disadvantages of Special Education Students in the Mainstream Classrooms* [Master's thesis, Bethel University]. Spark Repository. <https://spark.bethel.edu/etd/980>

This Master's thesis is brought to you for free and open access by Spark. It has been accepted for inclusion in All Electronic Theses and Dissertations by an authorized administrator of Spark. For more information, please contact lfifro@bethel.edu.



ADVANTAGES AND DISADVANTAGES OF SPECIAL EDUCATION STUDENTS IN THE
MAINSTREAM CLASSROOMS

A MASTER'S PROJECT
SUBMITTED TO THE FACULTY
OF BETHEL UNIVERSITY

BY

NIKKI EVENS

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
MASTER OF ARTS

May 2023

BETHEL UNIVERSITY

ADVANTAGES AND DISADVANTAGES OF SPECIAL EDUCATION STUDENTS IN THE

MAINSTREAM CLASSROOMS

NIKKI EVENS

May 2023

APPROVED

Advisor's Name: Meghan Cavalier, Ed.D.

Program Director's Name: Katie Bonawitz, Ed.D.

Acknowledgments

I could not have undertaken this journey without my husband, Tim. His words of encouragement and support made this journey possible. I also express my most profound appreciation to Meg Cavalier for having faith in me and the motivation to continue this journey. Without these two people, my journey would not have been possible.

Abstract

This systematic review of the literature aimed to understand the advantages of placing special education students in mainstream classrooms and identify barriers to positive experiences among special education students. Findings from secondary data showed inclusion creates a stimulating learning environment, improves access to role models, and enhances self-respect and self-esteem. However, challenges like low self-esteem and resentment may contribute to feelings of exclusion among special education students. The findings of this study could be improved in the future by collecting primary data using surveys and interviews and recruiting a large sample to capture in-depth insights on the topic.

Table of Contents

| | |
|--|----|
| Chapter 1: Introduction | 1 |
| Rationale for Study | 3 |
| Definitions of terms | 3 |
| Research Questions | 5 |
| Chapter 2: Literature Review | 6 |
| Overview of Literature Reviewed | 6 |
| Conceptualization of Inclusion | 7 |
| Factors that Informed the Need for Inclusive Classrooms | 8 |
| Controversy About Inclusive Classrooms | 11 |
| Comparing Mainstreaming and Inclusion | 14 |
| Inclusion Models in Mainstream Classrooms | 16 |
| Positive Impacts of Inclusion in Mainstream Classrooms | 17 |
| Benefits of Inclusion for Students with Disabilities | 18 |
| Benefits of Inclusion for Regular Education Students | 20 |
| Benefits of Inclusion for Regular Education Teachers | 22 |
| Shortcomings of Inclusion in Mainstream Classrooms | 24 |
| Hurdles of Inclusion for Students with Disabilities | 24 |
| Challenges of Inclusion for Regular Education Students | 26 |
| Issues of Inclusion for Regular Education Teachers | 27 |
| Interventions to Address Barriers to mainstream classrooms | 29 |
| Summary | 32 |
| Chapter III: Application of Research | 33 |
| Professional Application | 33 |
| Project Explanation | 34 |
| Instructional Accommodations | 35 |
| Testing Accommodations | 36 |
| Audience Details | 38 |

| | |
|---------------------------------------|----|
| Resources Needed | 39 |
| Sustainability and Impact | 41 |
| Chapter IV: Discussion and Conclusion | 43 |
| Summary of the Literature | 43 |
| Professional Application | 45 |
| Limitations of the Research | 46 |
| Implications for Future Research | 47 |
| Conclusion | 47 |
| References | 50 |
| Appendix A | 64 |

List of Tables

Table 1: Types of Disabilities, Barriers, and Accommodations in Mainstream Classrooms (Dong, 2018; Gin et al., 2020; Parsons et al., 2021)

CHAPTER I: INTRODUCTION

Background to the Study

Over the last decade, the inclusion of special education students into mainstream classrooms has attracted growing research interest (Carter et al., 2022; Martin et al., 2021). Data from Individuals with Disabilities Education Act (IDEA) estimates that between 2020 and 2021, an estimated 66% of children with disabilities were in general education classrooms (IDEA, 2023). More than 80% were in their school day, while 363,000 toddlers and infants with disabilities received early intervention services (IDEA, 2023).

Recent data by the National Center on Educational Statistics (NCES) reported that 33% of learners in the United States receive special needs support in schools (NCES, 2022). In the fall of 2020, 95% of students with special needs were served under the Individuals with Disabilities Education Act (IDEA) and enrolled in mainstream schools (NCES, 2022). Another 3% of students with disabilities were in private or public separate schools, 2% in private schools, and less than 1% in hospitals, homebound, correctional facilities, or separate residential facilities (NCES, 2022). The findings show that the majority of students with special needs are in mainstream classrooms.

Between 2009 and 2020, the percentage of students with special needs were placed in mainstream classrooms rose from 59% to 80% (NCES, 2022; Nwoko et al., 2022). Yet, despite increased enrollment in regular schools, there is skepticism about the impact of including learners with special needs in mainstream classrooms (Alduais & Deng, 2022; Vetoniemi &

Kärnä, 2021). Across the world, the contention about the inclusion of special education students has revolved around the views shared by teachers, parents, and students (Nwoko et al., 2022; Xu & Cooper, 2022). Alduais and Deng (2022) conducted in-depth interviews to understand how inclusive education impacts regular education in China. Findings showed inclusion prepared students for integration into society and eliminated students' feeling of being segregated. However, the implementation of inclusion was hindered by a lack of resources and inadequate teacher preparation to help learners with special needs (Alduais & Deng, 2022).

In Finland, Vetoniemi and Kärnä (2021) reported that students expressed concerns that their social participation was negative because of the unsupportive learning environment. In Australia, a case study by Nwoko et al. (2022) of four schools assessed how teachers perceive the inclusion of special education learners in mainstream private schools. Findings from 11 participants showed that teachers lack formal education on special needs and only learned about inclusive learning via teaching experience (Nwoko et al., 2022). Similar concerns have been raised in other countries like Germany, where students feel less socially integrated and have negative teacher attitudes (Heyder et al., 2020), in Turkey due to negative attitudes, and across 31 European countries experiencing curriculum development problems, placement, and measurement of student progress (Ramberg & Watkins, 2020).

Along with the above literature findings, there are concerns regarding improving the experience of learners with special needs while reducing potential drawbacks within mainstream classrooms. Some of the recommendations to enhance the learning needs of these students include early teacher training on inclusive teaching and awareness creation to create positive

attitudes among teachers and typically developing learners (Carter et al., 2022; Martin et al., 2021). Additional interventions include changing barriers and mindsets to effective teaching, regular in-service training, creating tailored curricula, hiring enough human resources, as well as administrative support (Alduais & Deng, 2022; Vetoniemi & Kärnä, 2021). While such measures are likely to improve the experience of learners with special needs (Nwoko et al., 2022), the diversity of individual needs, changing learning settings, and different education policies in various countries hinder efforts to desired changes (Vetoniemi & Kärnä, 2021; Xu & Cooper, 2022).

Rationale

As more mainstream schools shift to include special education students, it is possible that many of the anticipated benefits that students with special needs expect are not fully realized (Alduais & Deng, 2022; Xu & Cooper, 2022). Alternatively, mainstream classrooms may be less favorable as most teachers in these settings claim to lack the training, preparation, and resources needed to support learners with special needs (Nwoko et al., 2022). As such, there is a potential knowledge gap in the extant literature in that while students with special learning needs continue to be enrolled in mainstream classrooms, there needs to be more consensus about whether the challenges they experience outweigh the perceived benefits.

Definitions of Terms

Inclusion: The National Center in Educational Restructuring and Inclusion (NCERI) defined inclusion as “providing all learners with support services and supplementary aids needed in age-appropriate general classrooms in their neighborhood schools to prepare them to

become productive members of society” (NCER, 1995, p. 11).

Mainstream Classroom: Nwoko et al. (2022) defined a mainstream class as a general or regular education classroom in which typically developing students without special needs are enrolled.

Mainstreaming: Xu and Cooper (2022) defined mainstreaming as a practice of educating learners with special learning needs in mainstream classrooms during specific times, often by pairing them with their non-disabled or typically developing peers.

Specific Education: Individuals with Disabilities Education Act (IDEA) defined special education as instructions developed to respond to the learning needs of students with disabilities regardless of the environment, whether at home, residential facilities, hospitals, mainstream schools, or private or public separate schools (Streett, 2019). The Education for All Handicapped Children’s Act, which was put into effect in 1975 (U.S. Department of Education, 2010), helped the federal government gain support for students with disabilities in the public education system. The Individuals with Disabilities Improvement Education Act (IDEA) replaced the Education for All Handicapped Children & Act, which was first passed in 1975 and is now known as the Education for All Handicapped Children & Act (EAHCA) (U.S. Department of Education, 2010). To guarantee that students with disabilities have access to a free and adequate education (FAPE) in their least restrictive environment (LRE), the United States Department of Education allocated federal funds through IDEA (IDEA, 2010).

Special Educational Needs: Vetoniemi and Kärnä (2021) observed that special education entails special educational needs for children who have learning disabilities or problems that hinder them to learn effectively when compared to peers the same age.

Typically Developing Students: The term means children who show normal progression as they grow older by acquiring and refining skills, behaviors, and knowledge (Alduais & Deng, 2022).

Research Topic

While research on inclusion of special education students in mainstream classrooms has been conducted over the years, little is known regarding the importance of inclusion practices and how to overcome existing challenges. Mainstream classrooms are yet to fully shape their educational spaces for the benefit of special education students (Vetoniemi & Kärnä, 2021). This study aimed to address this knowledge gap by understanding the advantages of placing special education students in mainstream classrooms, identifying barriers, and their positive experiences, then recommend strategies to address the identified barriers. Specifically, this review focuses on identifying factors in mainstream learning that teachers and special education students perceive as contributing to their positive learning experience. The study also explores aspects in mainstream classrooms perceived as contributing to negative learning experiences among special education teachers. Based on the findings, there is a need to recommend interventions required to address the barriers to positive experiences in mainstream classrooms for special education students.

CHAPTER II: LITERATURE REVIEW

The current chapter presents a literature synthesis of past findings on including special education students in mainstream classrooms. First, an overview of the reviewed literature is presented, including academic databases used to identify relevant resources and the keywords applied in the search process. Main themes are presented in subsequent sections, including conceptualization of inclusion practices, factors that necessitated inclusion in mainstream schools, and potential controversy surrounding inclusive classrooms. Subsequent sections are further used to detail the positive impacts of mainstream learning, shortcomings of inclusion in mainstream classrooms, and potential interventions to address the identified challenges.

Overview of Literature Reviewed

Information used in this study was extracted from different sources, including both academic databases and institutional websites. Academic databases included ERIC, Research Gate, Google Scholar, ProQuest, and EBSCOhost. Institutional websites included the US Department of Education, IDEA, and the federal department of education. The keywords used during the search process included “special education students,” “inclusive education,” “special educational needs in mainstream classrooms,” “benefits of special education in mainstream schools,” and “problems of special education in mainstream schools.” Additional keywords included “special education,” “mainstream classrooms,” “advantages of mainstreaming,” and “disadvantages of mainstream schools” for special needs students.

Conceptualization of Inclusion

Debate on inclusive education shows a lack of consensus in academia regarding what inclusion entails when meeting the needs of special education students (Dell'Anna et al., 2021; Florian, 2019). Initial efforts to conceptualize the word 'inclusion' were made in Salamanca, Spain during the 1994 World Conference on Special Needs Education. At the time, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) defined 'inclusion' as the process of enrolling learners with special needs in regular schools (UNESCO, 1994). In 2018, the Brussels declaration during the Global Education Meeting expanded the idea of inclusion. In elaboration, 'inclusion' entailed giving vulnerable children the right to quality, safe, and productive education in neighboring schools that they could have attended if they did not have any disabilities or special learning needs (UNESCO, 2018).

According to Florian (2019), the concept of inclusion relates to a philosophy meant to unite the community, learners, teachers, school administrators, and families in creating social institutions and schools based on fairness, trust, belongingness, and acceptance. Dell'Anna et al. (2021) observed that inclusion is observed in learning settings to create a nurturing, supportive, and collaborative climate for students to give accommodation and relevant services essential to meet their academic needs. Thus, inclusion entails giving students tailored attention to solving hurdles that impede access to their learning needs (UNESCO, 2018). Supporters of inclusion observed that the concept is not limited to children with special needs. Rather, when effectively implemented, inclusion can respond to and accommodate the needs of typically developing students in mainstream settings (Finkelstein et al., 2019).

Four principles have been used in exploring the concept of inclusion: diversity, individual needs, collaboration, and reflective practice (Salend, 2015). Diversity focused on including learners in the same classroom irrespective of their culture, sexual orientation, learning method, financial status, language, race, or learning ability (Salend, 2015). Diversity ensured children play together, take part in recreational activities as a team, engage in team learning, and socialize with peers (Salend, 2015). Such inclusive activities developed collaboration, equity, and acceptance thereby ensuring children grow up embracing diversity. Individual needs focused on ensuring students, teachers, and families are sensitive to each student's needs. In inclusive settings, every learner is considered an individual that can learn and contribute to society positively (Salend, 2015).

Reflective practice entailed assessing and modifying teaching methods, attitudes, and curricula to accommodate student needs. As such, teachers were responsive, flexible, and conscious of each student's needs (Dell'Anna et al., 2021; Salend, 2015). Collaboration ensured inclusion becomes effective in that learners, community, families, professionals, and educators engage to create a conducive environment (Hajisoteriou & Angelides, 2017; Salend, 2015). Collaboration entailed sharing resources, decisions, skills, and responsibilities, creating programs like workshops, and advocating the need for inclusion in classroom settings (Hajisoteriou & Angelides, 2017).

Factors that Informed the Need for Inclusive Classrooms

Societal pressure and movement to include students with special needs in mainstream classrooms were informed by various factors. These factors included education reforms,

disproportionate representation, segregation of special classes/schools, advocacy groups, litigation, the civil rights movement, advances in technology, early childhood education programs, deinstitutionalization, and normalization (Salend, 2015). Calls to reform education largely facilitated inclusive education in efforts to restructure programs, curriculum, and pedagogy to meet not only higher learning standards, but also those who have disabilities (Dell'Anna et al., 2021). The focus was to ensure learners are not segregated based on standardized achievement tests but provide students with regular education via unified special and regular education practices (de Bruin, 2019).

Disproportionate representation was another concern that resulted in the need for inclusive classrooms. Learners from linguistically and culturally diverse backgrounds were often enrolled in special education. Scholars and practitioners perceived inclusive classrooms as a way to address this problem (Carter et al., 2022). Cooc and Kiru (2018) observed that disproportionality in special education largely affected learners from minority settings who were largely represented or referred to segregated schools or classrooms, compared to the general population. Thus, there was an increasing need to ensure special needs learners were included in regular learning settings to reduce high referral and erroneous placement of minority students in special schools (Cooc & Kiru, 2018).

Third, the decline of institutionalization of persons with disabilities led to the rise of special classes and schools in the public sector. Such a trend sparked debate regarding the segregation of learners with special needs, and that such facilities were used as a form of tracking and homogenous grouping (Scourbys, 2019). Studies from the 1970s showed learners

labeled as 'mildly disabled' made substantial progress when in mainstream schools much like in special schools (de Bruin, 2019). Thus, segregation only served to reduce teachers' expectations of students and undermine a learner's self-concept (Göransson et al., 2022). Additional research raised concerns that disabled learners have low employment opportunities, and high incarceration and dropout rates, necessitating the need to include them in mainstream classrooms to address these problems.

Advocacy groups and the civil rights movement fueled calls for greater societal acceptance of students with special needs. These included calls by persons with disabilities, professionals, family members, and educational reformists lobbying state and federal lawmakers against policies of segregation and exclusion in the education sector (Sokal & Katz, 2020). Legal suits such as *Brown v. Topeka Board of Education* successfully confirmed the illegality of education segregation by race to be unconstitutional (Göransson et al., 2022). In this landmark judgment, the Supreme Court declared racial segregation of students in public schools to be unconstitutional. It overturned the & quot; separate but equal & quot; tenet established in the 1896 Plessy v. Ferguson case and marked the end of officially sanctioned racial segregation in American schools (Brown v. Board of Educ., 347 U.S. 483 (1954)).

Technological advances further informed the need for persons with disabilities to join mainstream education (Dalsen, 2017). Key among the changing technology included increased access, independence, and achievement in which assistive technologies allowed learners with sensory, learning, physical, and communication needs to gain more control over their environment and lives (Dalsen, 2017; Nepo, 2017).

The effectiveness of early childhood and early intervention programs also informed the placement of learners with special needs in regular classrooms. From birth to age six, early education programs have been a success in creating self-help skills, socialization, speech, language, cognitive, physical, and motor skills among children (Obiakor et al., 2019). Such programs ensured reduced cases of secondary disabilities, reduction in social dependency as adults, and empowered families to embrace the development of their children (Obiakor et al., 2019; Syring, 2018). Further, the deinstitutionalization of persons with special needs eliminated the stigma they used to face including exclusion from public space, being ridiculed, or being feared (Spain, 2017). Instead, growing awareness of the negative effects of such seclusion resulted in the creation of facilities to facilitate the needs of persons with special needs, which culminated in the need for mainstream education (Spain, 2017). As a result of this progress, there has been normalization that aims to provide social experiences and interactions that ensure society supports children and adults with special needs (Francisco et al., 2020).

Controversy About Inclusive Classrooms

A key issue that is debated across the academic cycles focuses on understanding why inclusion remains a contested and controversial issue. Francisco et al. (2020) noted that inclusion is one of the few topics that remain highly controversial as professionals tend to question the need to include learners with special needs in mainstream schools. Another concern that makes inclusion controversial regards the criteria to use when determining which students to include and how much time they need to spend in general education (Hajisoteriou & Angelides, 2017). Inclusion is part of the least restrictive environment discussion, which has been part of special

education law since 1975. LRE stipulates that a child who gets special education should learn alongside general education peers as much as possible (Hajisoteriou & Angelides, 2017). Proponents of inclusion advocate that every learner belongs to regular education all the time (Kauffman, 2017; Mihajlovic & Meier, 2022). Friend and Bursuck (2019) outlined considerations made by advocates who emphasize the need to include learners with special needs. These assertions include:

- (1) it is a basic human right for every student to attend school with peers and this is only possible in mainstream settings,
- (2) inclusive settings avail educational support necessary to benefit all learners,
- (3) excluding students from mainstream settings and sending them to special facilities stigmatizes them and their peers are likely to label them for being associated with disabilities,
- (4) some learners with special needs require assistance from various professionals, and this means a student will leave a classroom multiple times thereby losing valuable time while making transitions, and
- (5) instruction delivery in special settings is not significantly different from the one used in mainstream schools. (Friend & Bursuck, 2019)

By contrast, critics who oppose the concept of inclusion hold that learners who should be in mainstream settings need to meet predetermined standards, or prove to have certain scores in their academic progress (Kauffman, 2017). Scholars who are reserved about including special needs learners in mainstream settings have various perceptions and offer their arguments based on five concerns. These concerns are outlined below.

(1) Advocating for every learner to be in mainstream schools increases the risk of denying their unique traits (Friend & Bursuck, 2019). As a result of this denial, there is a risk that the education sector will stop creating and developing individualized curricula to meet their learning and future career needs (Mihajlovic & Meier, 2022).

(2) Most students who have disabilities have been referred to special education classes, especially learners with behavior and learning problems. Such relations often affected them from performing in the general education environment (Francisco et al., 2020). Yet, most students require structured and specialized settings, which can only be available in special education classrooms (Friend & Bursuck, 2019; Mihajlovic & Meier, 2022).

(3) Debates about mainstream education being appropriate are unfounded since they are not always the least restrictive settings as perceived by proponents of inclusion (Dalsen, 2017; Nepo, 2017). Some support services provided in special settings cannot be achieved in mainstream classrooms without invoking differences in students, thereby disrupting the entire classroom (Friend & Bursuck, 2019).

(4) Teachers and general education settings are mostly under-equipped and lack resources to manage and facilitate the complex learning needs of learners with special needs (Göransson et al., 2022).

(5) Students with special education needs who are relocated to mainstream classrooms require support and assistance. The teachers in mainstream settings require relevant skills and support. In both cases, both students and teachers in mainstream schools lack this support (Friend & Bursuck, 2019; Salend, 2015).

Literature perceptions about the inclusion debate largely fall within the two extremes outlined above. Even so, most educators agree that over many decades, learners with special needs have been widely taught in isolated environments (Salend, 2015). Even so, most educators agree that over many decades, learners with special needs have been widely taught in isolated environments. Such isolations potentially reduce, instead of maximizing, the potential of these students. Even so, educators express concerns that the mainstream education environment is occasionally (and not always) the least restrictive learning environment due to inadequate resources, personnel, and other support material (Salend, 2015; Tahir et al., 2019). Salend (2015) reported that a least restrictive environment lacks support services, lacks specialist teachers, and students have limited contact with peers. Salend (2015) reported that a least restrictive environment lacks support services, lacks specialist teachers, and students have limited contact with peers. Key concerns for these LRE challenges include students with autism, deaf-blindness, deafness, hearing impairments, and intellectual disabilities (Salend, 2015).

Comparing Mainstreaming and Inclusion

According to Shaw (2017), the words mainstreaming and inclusion have regularly been used interchangeably. Inclusion largely emerged from mainstreaming and commonly shares its principles and goals, but the terms often have varied meanings to scholars and practitioners (Shaw, 2017; Salend, 2015). As a result of the inconsistencies in the use of the two terms, there was confusion among educators regarding what they consider to be the primary focus of inclusive practices in mainstream settings (Vetoniemi & Kärnä, 2021). Mainstreaming focused

on placing learners who have special needs in regular schools, provided they meet traditional academic anticipations in terms of minimal assistance (Martin et al., 2021).

Insights from the extant literature showed that the scope and definition of mainstreaming vary substantially from interaction with learners who have and who do not have disabilities, to specific learners in need of special support to be integrated into instructional and social activities in regular education settings (Carter et al., 2022). Supporters of mainstreaming alluded that students have to meet set criteria to get a chance of being included in mainstream classrooms such as having the ability to keep up with assigned tasks and completing activities assigned by a regular education teacher (Xu & Cooper, 2022). In terms of service delivery, such a form of inclusion was similar to the traditional learning concept.

Different from mainstreaming, "inclusion" presented a modern word to describe the process of assigning learners with special needs to mainstream education classrooms for all part of the day. Under inclusion, placement efforts focused on ensuring learners were assigned the maximum possible time in school and the classroom they could normally attend (Vetoniemi & Kärnä, 2021). Inclusion aligned with the need to bring services and support systems to students, as opposed to moving the learner to the services. The concept of inclusion advocates for learners to benefit from being in mainstream settings, and not struggle to keep up with peers in terms of academic performance and achievement (Carter et al., 2022). Scholars who supported mainstreaming perceive that students with special needs primarily belong to special education settings, and have to earn their way to mainstream settings (Carter et al., 2022; Salend, 2015). By contrast, researchers who supported inclusion hold that learners with special needs had to start

from mainstream schools and be shifted only when their specific needs cannot be availed there (Carter et al., 2022; Salend, 2015).

Inclusion Models in Mainstream Classrooms

The Universal Design for Learning (UDL) framework developed by the Center for Applied Special Technologies (CAST) helped identify aspects that should be considered when including special needs students in mainstream classrooms (CAST, 201). Considering that most schools are focused on implementing inclusive practices to meet the needs of students with learning needs, scholars observe that educators have used different models to facilitate inclusion. In special education and regular settings, the common models used include consultant, teaming, and co-teaching models (Firetto, 2023; Idol, 2018). The consultant model aligned with mainstream classrooms in which there was a low number of typically developing learners and few with special needs. In this situation, the school availed special education tutors to help the student(s) or reteach complex tasks, in addition to practicing newly learned skills (Smith & Sheridan, 2019). Consulting offers learners non-intrusive opportunities in which two teachers take part in solving curriculum challenges, using scheduled meetings (Smith & Sheridan, 2019).

The teaming model allocated weekly teaching opportunities to a special education teacher (Chitiyo & Brinda, 2018). The teacher focused on a single grade group of students and developed a planning period in which students were given instructions, tests, assignments, behavior modification activities, and other relevant instructions. The identified team holds workshops regularly and creates consistent communication (Chitiyo & Brinda, 2018). Teaming ensures a group working towards promoting the well-being of learners of special needs as

opposed to leaving all curriculum development and delivery to special education teachers (Tsybulsky & Muchnik-Rozanov, 2019). Rather, the entire team comprised of regular and special education instructors worked together, thereby broadening existing knowledge on inclusive practices (Tsybulsky & Muchnik-Rozanov, 2019).

Co-teaching denotes special and regular education teachers collaborating to teach learners with or without special needs in the same classroom (Bygballe & Swärd, 2019). In this case, special and regular education teachers each had a role in curriculum design and instruction, student discipline, assessment, and achievement (Carty & Farrell, 2018). During co-teaching, teachers design age-suitable curriculum content, modify instructions, and develop relevant support services. Co-teaching reduced scheduling problems and created continuous communication between teachers based on the type of collaborative model used: team teaching, alternative teaching, station teaching, parallel teaching, or one teacher and one-support method (DeMartino & Specht, 2018).

Positive Impacts of Inclusion in Mainstream Classrooms

First, the study was formulated to understand the following: What factors in mainstream learning do teachers and special education students perceive as contributing to their positive learning experience? Findings from the literature showed various factors related to mainstream learning contribute to positive learning experiences. These factors may be understood in terms of the advantages of inclusion to students with disabilities, regular education learners, and regular education teachers.

Benefits of Inclusion for Students with Disabilities

Ten studies identified advantages of inclusion for students with disabilities to contribute to the following: (1) stimulating learning environment, (2) access to role models, (3) making new friends, (4) self-respect/self-esteem, (5) self-efficacy/enhanced competency, and (6) cost-savings/time savings (Arcangeli et al., 2020; Armstrong, 2021; Brussino, 2020; Cavendish et al., 2020; Duque et al., 2020; Fage et al., 2018; Gibbs & Bozaid, 2022; Martin et al., 2021).

First, proponents of inclusive education argued that segregated education programs are detrimental to learners with disabilities (Arcangeli et al., 2020; Martin et al., 2021). Recent literature showed that mainstream learning had beneficial effects on learners' key among them exposure to a stimulating environment (Arcangeli et al., 2020). Unlike traditional classrooms in special schools, mainstream environments often resulted in enriched growth (both socially and academically) for special needs learners (Martin et al., 2021). According to Duque et al. (2020), learners with disabilities who were included in mainstream schools had prolonged and engaged instructional time, in addition to substantial exposure to academic tasks. Such engagement resulted in a stimulating environment, which is key to more engaging academic success.

Second, Armstrong (2021) observed that mainstream classes exposed special needs students to role models. Such role models act as mentors or counselors who facilitate social, communication, or adaptive intervention for students (Armstrong, 2021). Duque et al. (2020) added that regular education peers may help students with disabilities understand suitable social and classroom behavior. Such modeling occur naturally considering expectations in mainstream

education were often high (Armstrong, 2021). Thus, there is improved role modeling in regular education settings for students with disabilities, unlike in special education classrooms in which such expectations were lacking and learners were not exposed to such role modeling (Duque et al., 2020).

Third, exposure to mainstream classes presented opportunities for new friendships and shared experiences. Special needs learners access new types of learners they are not often subjected to in their special school environments (Brussino, 2020; Cavendish et al., 2020). New friendships may develop with peers resulting in greater acceptance within the school and in the community (Cavendish et al., 2020). Gibbs and Bozaid (2022) added that new socialization among peers resulted in reduced labeling and bullying. Thus, there was an improved connection between special needs and neurotypical peers resulting in enhanced working with a diverse population of people among disabled learners (Gibbs & Bozaid, 2022).

Fourth, self-esteem and self-respect also improved when students with special needs joined mainstream schools (Gibbs & Bozaid, 2022; Martin et al., 2021). Friendship and connection with regular education learners and teachers ensured special needs students start feeling a sense of belonging and self-worth (Martin et al., 2021). That is, they feel good about themselves and the general academic experience, and also anticipate accessing the same opportunities as their regular education peers (Gibbs & Bozaid, 2022).

Fifth, there is improved competence when special needs students join mainstream settings (Brussino, 2020; Cavendish et al., 2020; Duque et al., 2020). Insights from the literature showed learners with special learning needs could make substantial academic gains when exposed to

regular education classrooms with suitable support. Scholars observed improved performance in grades, mastery of individualized education plans, reading performance, and standardized test scores (Arcangeli et al., 2020; Armstrong, 2021; Fage et al., 2018). These findings showed that inclusive educational settings improve special students' approach to academic performance.

Odon et al. (2001) reported that the instructional costs for special education classrooms are higher than those in mainstream classes. Per hour, instructional costs for inclusion classrooms are 8% lower than traditional models. Inclusion settings in public main schools were least costly while expensive for Head Start programs (Odon et al., 2001). Fage et al. (2020) found similar findings in that the cost of managing learners in segregated education had been reported to be double compared to mainstream settings. Thus, mainstream classrooms for special needs learners were cost-effective, despite the achievement in language, math, and reading being almost the same in both settings (Arcangeli et al., 2020; Fage et al., 2018). The findings showed at a time when schools are experiencing budgetary cuts, there was a need to include special needs learners in regular education since it is more cost-effective and could address the challenge of budget deficits (Arcangeli et al., 2020).

Benefits of Inclusion for Regular Education Students

Seven studies identified that including learners with special needs in mainstream settings had advantages for regular students (Duque et al., 2020; Fage et al., 2018; Gibbs & Bozaid, 2022; Martin et al., 2021; Morley et al., 2020; Rangvid, 2022; Sumayang et al., 2022). The benefits included (1) mainstream students being accepting of differences among individuals, (2) being familiar with persons with disabilities, and (3) acquiring skills for adult lives. First,

mainstream settings allowed regular students to be appreciative of variations among learners by understanding existing differences, and varied needs of others, and embracing how to deal with other people's disabilities (Duque et al., 2020).

When in contact with other learners with special needs, there are concerns that regular education students are less likely to understand emotional, intellectual, and physical differences as part of their daily learning process (Sumayang et al., 2022). As such, through inclusion, it is possible that regular education learners would start to have exposure to diversity in society and also differences existing within classroom and school settings (Morley et al., 2020; Sumayang et al., 2022). Essentially, the acquired experience created respect and tolerance for every learner with diverse characteristics (Rangvid, 2022). Scholars observed that the concept of inclusive classrooms is anchored on individuals working in inclusive communities, working with persons from various religions, aspirations, races, and disabilities. In the process, students got to learn about the ideal world they live in (Rangvid, 2022).

Second, including learners with special needs enabled regular students to become familiar with peers that are differently enabled (Duque et al., 2020; Fage et al., 2018). In turn, this addresses the uneasiness that regular education students could feel concerning peers with learning disabilities (Gibbs & Bozaid, 2022; Martin et al., 2021). Therefore, regular students developed sensitivity to disabled peers concerning their limitations, and in the process showed empathy towards them in the classrooms, in school, and as well in society (Morley et al., 2020; Sumayang et al., 2022).

Third, inclusion contributes to skills essential for adult life (Gibbs & Bozaid, 2022; Martin et al., 2021; Morley et al., 2020). Some of the important skills regular education students acquire include self-esteem, self-empowerment, tutoring, mentoring, leadership, and a better ability to educate and help vulnerable members of society (Sumayang et al., 2022; Rangvid, 2022). Inclusive settings enabled regular learners to step into the role of teachers and assist peers with learning disabilities. As a result, this could make them feel good about their contribution and make a difference in the lives of disabled students (Duque et al., 2020). Most regular education learners readily assisted and supported peers with learning needs (Ruggiano & Perry, 2019; Sokal & Katz, 2020).

Benefits of Inclusion for Regular Education Teachers

Five studies reported that including students with disabilities in mainstream classrooms was beneficial to regular education teachers (Morley et al., 2020; Ramberg & Watkins, 2020; Sokal & Katz, 2020; Vetoniemi & Kärnä, 2021; Xu & Cooper, 2022). The benefits were experienced in terms of (1) awareness and appreciation, (2) acquiring new teaching methods, and (3) developing teamwork. First, including learners with special needs in regular classrooms contributes to teacher awareness and appreciation of differences among students (Vetoniemi & Kärnä, 2021). Ramberg and Watkins (2020) noted teachers began to recognize learners had strengths that could be important and beneficial to their classrooms. The strengths could be used to create a meaningful and satisfying school experience (Xu & Cooper, 2022).

Second, mainstream teachers got to learn new teaching methods to assist their students (Ramberg & Watkins, 2020). Traditional methods of teaching like note-taking and lecturing may not be suitable for learners with disabilities in regular settings. However, inclusion could allow regular education teachers to become creative with their methods of teaching, break the monotony, and embrace new methods of instruction delivery that were suited for every learner in the classroom (Vetoniemi & Kärnä, 2021; Xu & Cooper, 2022). Moreover, Xu and Cooper (2022) shared that inclusion could help teachers accept the need for direct individual instruction for every student, who is likely to get lost when generalized traditional teaching methods were used. In line with LRE, such an approach is essential since teachers need to ensure students have meaningful access to peers their own age who are not disabled. As such, teachers should think about offering any necessary assistance in integrated settings like general education classes (Xu & Cooper, 2022).

Third, teachers can develop teamwork skills when students with special needs were included in mainstream schools (Ramberg & Watkins, 2020; Sokal & Katz, 2020; Vetoniemi & Kärnä, 2021). Inclusion enabled regular education teachers to stay in contact with other professionals like school principals, specialists, special education teachers, and other regular education instructors (Vetoniemi & Kärnä, 2021). Taking into consideration all the players, it is possible teachers could become more creative in approaching and addressing issues related to inclusion (Sokal & Katz, 2020; Vetoniemi & Kärnä, 2021). Teaming with multiple players could facilitate problem-solving skills, present ways of addressing hurdles, and improve accountability,

and also ensured high morale and positive relationships among staff in assisting students with disabilities in mainstream settings (Ramberg & Watkins, 2020).

Shortcomings of Inclusion in Mainstream Classrooms

Second, this review of the literature also attempted to explore the following: What factors in mainstream classrooms do teachers and special education students perceive as contributing to their negative learning experience? Findings showed mainstreaming could present some potential challenges for students with disabilities, regular learners, and also regular education teachers.

The findings are further discussed in the subsequent sections.

Hurdles of Inclusion for Students with Disabilities

Six studies reported that inclusion could have a negative impact on students with disabilities in terms of (1) socialization, (2) unrealistic expectations, (3) skewed benefits, (4) low self-esteem, and (5) teasing by regular education students (Chitiyo & Brinda, 2018; Duque et al., 2020; Fage et al., 2018; Gibbs & Bozaid, 2022; Sumayang et al., 2022; Tahir et al., 2019). First, unrealistic expectations may result due to policy influences where schools may force all learners into similar learning outcomes (Sumayang et al., 2022). When poorly implemented, inclusion learning could have detrimental impacts on learners with special needs impacting their future skills and career development (Sumayang et al., 2022).

Second, the inclusion of students with special needs may contribute to socialization being prioritized over academic needs, which may be a priority determined by the IEP team (Fage et al., 2018). Such an approach may be a priority determined by the Individualized Education Plan

(IEP) team to ensure students with identified disabilities who are attending mainstream educational institutions receive specialized instruction and related services (Firetto, 2023).

Critics noted that inclusion should not focus on socialization alone without emphasis on academics as well (Gibbs & Bozaid, 2022; Sumayang et al., 2022). A key concern is that most inclusion settings tend to have learners with disabilities participate in regular education settings without much emphasis on whether there is learning taking place or not (Fage et al., 2018). Such an approach could have a negative impact on learners' academic progress as many critical skills could be taught at face value without benefiting learners with disabilities (Gibbs & Bozaid, 2022).

Third, inclusive learning could result in skewed benefits as learners have varied needs, with those with disabilities requiring more resources for maximum learning to occur (Duque et al., 2020; Fage et al., 2018; Gibbs & Bozaid, 2022). Some learners could require individualized programs, one-on-one instruction, and limited distractions to learning, while others require small size classrooms to acquire essential skills (Duque et al., 2020). Teachers may find it difficult to balance resources between regular students and those with special needs implying unmatched and unbalanced needs among different learners in mainstream schools (Duque et al., 2020; Gibbs & Bozaid, 2022).

Lastly, special education students may be exposed to low-self esteem and low self-concept due to isolation, ridicule, frustration, and fear (Sumayang et al., 2022; Tahir et al., 2019). Students with learning disabilities were exposed to their peers and learn what they can do, and cannot do. Such encounters could result in them feeling academically inadequate,

overwhelmed, and depressed in contrast to their non-disabled peers (Tahir et al., 2019). Another concern relates to teasing by regular education students and bullying when learners are not informed or ready to accept peers with special learning needs. Also, regular education learners may find students with disabilities as easy focus and targets for teasing, name-calling, and harassment resulting in added anxiety and stress for the students with disabilities (Chitiyo & Brinda, 2018; Duque et al., 2020).

Challenges of Inclusion for Regular Education Students

Three studies reported that inclusion could negatively affect regular education learners (Gibbs & Bozaid, 2022; Sumayang et al., 2022; Tahir et al., 2019). Common challenges for regular learners include increased activity in non-inclusive settings and increased concerns about resentment. First, inclusive settings are more active than traditional mainstream classes and this could be perceived as being disruptive by some regular education learners (Sumayang et al., 2022). Disruption may result due to having one or more lead teachers, or special education assistants, involuntary vocalizations by special education learners due to their condition, or coming and leaving the classroom by special needs students (Sumayang et al., 2022). Such disruptions could make it difficult for regular education learners to concentrate, potentially impacting their academic progress. Critics argued that it is counterproductive to disrupt an entire regular education classroom for the benefit of a few students with special learning needs (Gibbs & Bozaid, 2022).

Second, there may be increased resentment among regular students against special needs learners (Tahir et al., 2019). Normal education students may frequently become concerned about

why they are not receiving the same amount of special instruction or one-on-one attention as the students with disabilities when they see how much of those approaches the learners were receiving (Gibbs & Bozaid, 2022). The adapted assignments and assessments that the students with disabilities take may be visible to regular education students as well, as may be the fact that their workload is lighter than theirs (Tahir et al., 2019). All of these factors may cause envy and resentment toward their peers who have disabilities (Tahir et al., 2019). Thus, this can then lead to regular education learners bullying students with disabilities, sabotaging any potential constructive interactions between the two groups of students (Sumayang et al., 2022; Tahir et al., 2019).

Issues of Inclusion for Regular Education Teachers

Seven studies shared that inclusion settings could present potential concerns for regular education teachers (Alduais & Deng, 2022; Broomhead, 2019; Chitiyo & Brinda, 2018; Rangvid, 2022; Sokal & Katz, 2020; Spain, 2019; Vetoniemi & Kärnä, 2021). The continual worry is the primary drawback of integration for regular educators (Sokal & Katz, 2020). As fear is the most prevalent emotion, many teachers in regular education worry that they will not be able to implement inclusion in their classrooms effectively and appropriately (Alduais & Deng, 2022). They are aware that they are accountable for all of the pupils in their class even though they might not be qualified to teach and support those who have special needs. These anxieties frequently lead to a negative attitude toward inclusion, pupils with disabilities, as well as teachers' competency and instructional skills (Vetoniemi & Kärnä, 2021).

Second, the unwillingness and discomfort of normal education instructors to relinquish control of their classrooms is another drawback of the inclusion of special education learners in mainstream classrooms (Alduais & Deng, 2022; Broomhead, 2019). Many teachers in regular education rapidly realized that they cannot implement inclusion successfully on their own. Many regular education teachers, however, are unwilling to acknowledge that they lack all the knowledge and do not feel at ease delegating any degree of responsibility to another teacher within their class (Rangvid, 2022; Sokal & Katz, 2020). The view that regular education teachers should not have to modify what they are doing in their classroom to satisfy the requirements of only a small number of children or share control of their classroom with anybody else is shared by many opponents of inclusion (Broomhead, 2019; Chitiyo & Brinda, 2018; Vetoniemi & Kärnä, 2021).

The lack of support and training that many regular education instructors experience when instructed to change their classrooms into a space that promotes inclusiveness (Alduais & Deng, 2022; Spain, 2019; Vetoniemi & Kärnä, 2021) is the final drawback of inclusion for regular education teachers. Many regular education teachers received little or no training on how to teach children with disabilities or what teaching methods will best fulfill their requirements in the classroom. These abilities are frequently picked up on the fly and might be challenging to learn (Broomhead, 2019; Sokal & Katz, 2020;). Moreover, many general and special education instructors do not receive enough time for lesson planning and coordination (Chitiyo & Brinda, 2018; Rangvid, 2022). The combination of all these problems can frequently result in the regular education teacher being frustrated, which, in turn, can result in negative attitudes toward the

inclusion concept and the disabled kids who attend their school (Spain, 2019; Vetoniemi & Kärnä, 2021).

Interventions to Address Barriers to mainstream classrooms

Third, the current review of literature focused on identifying the following: What interventions are needed to address the barriers to positive experiences in mainstream classrooms for special education students? Findings from ten studies showed that existing challenges could be addressed through professional development, building positive relationships, improving communication, seeking support, setting realistic goals and targets, and creating a safe and engaging environment (Doenyas, 2021; Holmqvist & Lelinge, 2021; Morley et al., 2020; Ramberg & Watkins, 2020; Sokal & Katz, 2020; Spain, 2019; Tahir et al., 2019; Vetoniemi & Kärnä, 2021; Xu & Cooper, 2022). First, Doenyas (2021) emphasized the need to teach and educate mainstream teachers about mainstream classrooms and how to support students with disabilities in their classrooms. Scholars were largely in a consensus that teachers equipped with relevant skills are more willing to teach and support students with special needs in their classrooms (Doenyas, 2021; Holmqvist & Lelinge, 2021). By contrast, less skilled and equipped teachers are less supportive of inclusive practices due to feelings of low self-efficacy and lack of competency in instruction delivery in settings with special needs students (Holmqvist & Lelinge, 2021; Spain, 2019).

Second, there is a need to develop positive relationships among various players affected by inclusive learning including regular education students, families, school leaders, and teachers (Vetoniemi & Kärnä, 2021). Also, school psychologists should be included in creating essential

support teams to support learners with special needs while formulating appropriate evidence-based behavioral interventions (Armstrong, 2021). U.S. Department of Education outlines multidisciplinary approach based on two or more separate professions or disciplines with respect to how the child is evaluated under section 303.113 of IDEA in relation to evaluation, assessment, and non-discriminatory procedures, and the IFSP Team in IDEA sections 303.340 to involve parents and service coordinator (consistent with IDEA section 303.343(a)(1)(iv)) (U.S. Department of Education, 2017). Instructors should take the time to get to know their students, learning about their aspirations, interests, and academic strengths and weaknesses (Morley et al., 2020; Ramberg & Watkins, 2020). By doing this, regular education teachers could be in a position to personalize their teaching approach to meet the unique needs of each student, not only those of learners with special needs (Sokal & Katz, 2020).

Third, there should be regular communication between learners, teachers, school leaders, and parents (Morley et al., 2020; Ramberg & Watkins, 2020; Spain, 2019; Tahir et al., 2019). Parents are in charge of making sure that any advancements made in the classroom are continued at home (Morley et al., 2020). Parents and instructors may choose to communicate with one another once a week to make sure that both parties are aware of any concerns and to inform parents of any noteworthy growth or successes of their child to ensure that this is done easily and effectively (Tahir et al., 2019). Because homework is being completed at home to maintain with the progress made in class, teachers are better equipped to adapt their lesson plans and instructional method to each student's growth as a result (Ramberg & Watkins, 2020).

Fourth, some students with impairments and learning disabilities lack confidence in social and academic circumstances. Due to their limitations, such learners could be deterred from seeking assistance or posing queries as a result (Doenyas, 2021; Holmqvist & Lelinge, 2021). By providing ongoing reinforcement and encouragement, both parents and teachers can assist to overcome this by empowering students to speak up in class or seek their parents for additional support at home (Sokal & Katz, 2020; Spain, 2019; Xu & Cooper, 2022). Such an approach could reassure students with disabilities that their thoughts and feelings are valid since teachers take the time to listen, and it will be useful for parents or instructors to better understand how they acquire knowledge (Morley et al., 2020; Ramberg & Watkins, 2020; Tahir et al., 2019; Vetoniemi & Kärnä, 2021). There is also a need for a safe and engaging learning environment from harassment, bullying, and teasing to ensure students with disabilities are confident to attend mainstream classrooms.

Fifth, throughout the academic year, it is important to define reasonable goals and objectives (Xu & Cooper, 2022) at the annual Individualized Education Plan(IEP) meeting. Since kids with special needs have learning capacities that will differ for each child and be proportionately different from their peers, teachers must execute this strategy correctly (Xu & Cooper, 2022). According to Morley et al. (2020), this must be taken into consideration when creating expectations for learners with special needs. Instead of having academic goals and targets, it might be better for the student to have behavioral targets (Sokal & Katz, 2020). For instance, concentrating on paying attention in class, refraining from being disruptive, and

showing respect for other students and teachers could result in better goals and target expectations for learners with disabilities in mainstream classrooms (Sokal & Katz, 2020).

Summary

The literature has presented main themes from past studies related to the inclusion of special needs students in mainstream classrooms. The concept of inclusion has been discussed, followed by factors that influenced the need for education policy change toward including special education students in mainstream schools. Potential debates about inclusive classrooms have been discussed in addition to models of inclusion. The next chapter presents the methodology used in the study to collect relevant data in answering formulated research questions.

CHAPTER III: APPLICATION MATERIALS

Professional Application

The purpose of this literature review with application sought to collect insights that support the advantages of placing special education students in mainstream classrooms, identify barriers to their positive experiences, and then recommend strategies to address the identified challenges. Findings from the evaluated literature revealed a rising disagreement over whether students with special needs should be included in regular classrooms. In this chapter, the focus is to outline an application project informed by evidence-based practice on how schools could enhance the accommodation and inclusion/integration of special needs children in mainstream classrooms. See appendix A for Powerpoint.

Specifically, Universal Design of Learning (UDL) frameworks presented principles developed to give teachers relevant structure to create a curriculum that meets the needs of all learners (Edyburn, 2020). Universal Design of Learning is founded on four evidence-based principles that included the following: teachers should adopt (1) multiple methods of representation, (2) avail various means of student expression and action, (3) use different modes of student engagement, and (4) provide various forms of assessment. Regarding its four principles, multiple methods of representation seeked to ensure students with special needs have different methods of acquiring, building on and retaining knowledge (CAST, 2011a; 2011b).

Multiple means of student action and expression focused on giving learners alternative means to demonstrate concepts they have learned (CAST, 2011a). Different modes of engagement seeked to avail various methods that engaged learners, challenged their abilities,

developed their interests, and motivated them to learn (CAST, 2011a; 2011b). Assessment referred to availing testing accommodations for disabled students that change administration procedures or format of tests, without changing test measures or learning outcomes from that of the typically developing peers (CAST, 2011b).

Universal Design of Learning could help overcome the inclusion challenge in mainstream classrooms by including visual and oral presentations, as opposed to traditional written assessments (Dickinson & Gronseth, 2020). Given the results of the previous literature, it should be noted that the UDL framework will be crucial when used in this study to evaluate how to remove obstacles to inclusive learning, particularly for students with disabilities who require inclusion in mainstream classrooms (Dalton et al., 2020; Murphy, 2020). The significant role of UDL has been reported in the Higher Education Opportunity Act (HEOA) of 2008 (Rozeboom, 2021). In education settings, the UDL framework has been central to helping teachers build a model of teaching and learning that is equitable, and inclusive (Burgstahler & Russo-Gleicher, 2018), and guides the creation of accessible course materials (Basham et al., 2020; Xie & Rice, 2020).

Project Explanation

More than ever, mainstream school personnel are responsible for providing high-quality instruction to all learners in inclusive settings. Both the Individuals with Disabilities Education Improvement Act (IDEA) and Every Student Succeeds Act (ESSA) have increased the expectation that students with disabilities will participate in mainstream education classrooms, in addition to participating in district and state testing to the greatest extent possible (Dong, 2018).

Regrettably, students with disabilities often experience barriers and challenges that interfere with their ability to access and demonstrate desired learning. In this inclusive learning project, barriers to learning for special needs students can be associated with:

- The manner information is presented (e.g., lecture, text)
- The way a learner is required to respond (e.g., speech, writing)
- Features of mainstream classroom setting (e.g., lighting, noise)
- Scheduling and timing of instruction (e.g., duration of assignment, time of day) (Gin et al., 2020).

Mainstream teachers could address these barriers by providing students with disabilities with accommodations. In this project, accommodations are changes or adaptations in mainstream classrooms that enable students to overcome hurdles presented by their disabilities. In inclusive learning, accommodations could be used in two areas; instruction and testing (Kamis, 2020).

Instructional accommodations

These accommodations included changes to how curriculum instruction is delivered or learning materials. While instructional accommodations changed *how students learn*, they preserve and maintain *what students learn* (Parsons et al., 2021). Thus, these accommodations do not change the content standards or academic scope, implying that students with special needs learn the same things as their typically developing peers in mainstream classrooms (Miller et al., 2019).

Testing accommodations

These accommodations related to changing the test administration procedures or the format of tests. The specific focus of testing accommodations is to change *how* students are tested, but not *what* a test measures (Lovett, 2020). Testing accommodations can include assigning exams to a small group, permitting dictation or scribes, offering extended time, or having a test read aloud (Lazar, 2019).

In this project, the focus is to use testing and instruction accommodations to give students with disabilities opportunities to achieve similar outcomes in inclusive classrooms and obtain similar benefits to learners without disabilities. Accommodations create suitable access to learning opportunities by addressing hurdles or barriers in mainstream classrooms for students with disabilities. For some learners, inclusion barriers could be simpler to address than others. For example, learners who struggle to hold a pen or have fine motor skills problems might be given a pencil grip to assist them to write their answers. Or students with complex needs like visual disabilities and who need support with written materials could be given the assessment in Braille.

Table 1 presented some examples of accommodations in this application project to assist students with learning and special needs disabilities in mainstream classes (Lovett, 2020; Miller et al., 2019). The example accommodations only provided support to allow students with disabilities to achieve the same instructional goals as students without disabilities (Lazar, 2019). Moreover, it is important to note that accommodations do not alter expectations for learning

outcomes, do not reduce the task and curriculum requirements, and do not change what students with disabilities are required to learn (Kamis, 2020).

Table 1

Types of Disabilities, Barriers, and Accommodations in Mainstream Classrooms

| Disability Category | Barrier | Example Accommodations |
|---|--|--|
| Language/speech disabilities | Problems with voice strength or articulation | <ul style="list-style-type: none"> • Course substitutions • Alternative tasks for oral class reports • Computer with voice synthesizer or one-to-one presentation |
| Psychiatric Disabilities | Anxiety, mood swings, depression | <ul style="list-style-type: none"> • Extended time for exams • The distraction-free, quiet testing room • Divide the exam into segments with breaks |
| Visual impairment | Reading printed texts | <ul style="list-style-type: none"> • Braille materials • Large-print texts • Convert text to the audio version |
| Learning disabilities | Decoding texts | <ul style="list-style-type: none"> • Text-to-speech software • Audio textbooks |
| Attention-deficit/hyperactivity disorder (ADHD) | Creating and retaining focus | <ul style="list-style-type: none"> • Mark responses in the test booklet instead of the bubble answer sheet • Allow learners frequent break times • Fewer homework questions |

Orthopedic
impairments

Inability to hold
pencils and write
responses

- Avail speech-to-text software
 - Allow oral responses
 - Shorter assignment report
-

(Dong, 2018; Gin et al., 2020; Parsons et al., 2021)

Audience Details

The audience of this application project included general education teachers, school administrators, and special education teachers. As applied to general education teachers, the project sought to encourage them to integrate the needs of special needs students when creating their daily routines, developing lesson plans, and managing learners in their classrooms.

Mainstream teachers could use the UDL framework to identify different methods of delivering instruction, avail various means of student expression, give diverse engagement settings, and different examination and test assessments. Mainstream teachers could also work with special education teachers in collaborative classes, select teaching methods, and create procedures to assess student learning.

As applied to special education teachers, the focus of the project is to create inclusive practices of adapting instruction materials and lesson plans for special education students. Through co-teaching with mainstream teachers in the same classroom, special education teachers could work with mainstream teachers to share the planning, organization, delivery, and assessment of relevant instruction to meet students' needs. Special education teachers could also help suggest objectives and goals of Individualized Education Programs (IEP) for special needs

students in mainstream classrooms, monitor the academic progress of students with disabilities and monitor their behaviors.

In the case of school administrators and leaders like the board and principals, there is a need for support for inclusive practices. School administrators influenced resource allocation to facilitate the inclusion of students with disabilities in their mainstream schools. Resource allocation included financial support, training mainstream teachers on supporting special needs learners, and creating awareness among students without disabilities on inclusion. School administrators needed to avail resources like computer programs, a conducive learning environment, and other learning materials needed to accommodate the needs of students with disabilities.

Resources Needed

Successful inclusion of students with disabilities in mainstream classrooms requires relevant resources to be put in place. These resources included people, cost and budget allocation, and time. Involved people included mainstream education teachers, special education teachers, mentors/psychologists, school principals, administrators, and education policymakers. Teachers (both special education and mainstream educators) will play a central part in classroom management, developing instruction, and curriculum delivery. Involved teachers could work in a co-teaching partnership based on different models such as one teacher, one support; parallel teaching; alternative teaching; station teaching; or team teaching. Moreover, mentors/psychologists may provide needed psychological support and guidance to learners with special needs or students without special needs to understand the need and process of inclusive

learning. Counselors may be needed to offer emotional support and assist students with special needs to integrate into mainstream classrooms. School principals will be needed to oversee daily school operations, manage budgets, report on teacher performance, and research new techniques and resources to improve inclusive practices in mainstream schools. School administrators and education policymakers may help in planning school activities and programs, formulate policy guidelines on inclusive practices and pedagogy, formulate and execute educational policies, coordinate supervisory and administrative activities, evaluate inclusive school programs, and provide necessary inclusive leadership practices.

As applied to costs, the focus on resource allocation will be on facilitating teaching, training, equipping, and awareness creation. Since mainstream teachers lack professional skills in guiding and managing students with special needs, schools need to allocate a budget for teachers' skills and professional development in special needs programs. Such training could improve their competency and self-efficacy when integrating special needs students into their mainstream classrooms (Edyburn, 2020). Relevant training resources should be put in place to organize regular workshops, retreats, and educational conferences for teachers. Such meetings could help special education teachers and mainstream peers in developing common teaching programs for learners in their classrooms. Resource allocation should also be geared toward equipping mainstream schools with equipment like computers and software needed to facilitate learning. There should be awareness creation to enable mainstream students and teachers to appreciate the need for the inclusion of students with special needs in their schools. As applied to time, the implementation process for inclusive practice will be continuous. Teachers may need

short courses to prepare them, as students require continuous lesson plans to integrate them into mainstream classrooms.

Sustainability and Impact

The impact of exclusion and lack of accommodations for students with disabilities in mainstream classrooms could affect their academic performance and social relationships (Alduais & Deng, 2022; Broomhead, 2019; Chitiyo & Brinda, 2018). By providing relevant accommodations like extended time, materials, course substitutions, and text-to-speech software to teachers and students with disabilities alike, effective integration into mainstream classrooms can improve. Success of every intervention and accommodation will depend on commitment by school leaders and administrators to embrace inclusion in mainstream schools (Arcangeli et al., 2020). Long-term adoption and implementation of inclusive practice will rely on adequate resource allocation including teaching materials, textbooks, computer software for the visually impaired, and other financial support needed to train and equip mainstream teachers to facilitate relevant curriculum (Brussino, 2020; Cavendish et al., 2020). Close collaboration between mainstream teachers, special education educators, and school leaders is needed to formulate plans aimed at continuous support of students with disabilities in mainstream schools (Duque et al., 2020; Fage et al., 2018). Sustainable implementation will depend on how effective school leaders and teachers commit to avail required resources to integrate the needs of typically developing children and peers with special needs. Successful implementation will have a lasting impact for special education students in terms of being exposed to conducive learning environment, access to social support programs, improve their self-respect/ self-esteem, have a

sense of belong, and save on time and costs needed to enroll in special education schools (Armstrong, 2021; Gibbs & Bozaid, 2022; Martin et al., 2021).

CHAPTER IV: DISCUSSION AND CONCLUSION

Summary of the Literature

Over the decades, scholars have attempted to explore the benefits associated with placing special education students in mainstream classrooms (Fage et al., 2018; Gibbs & Bozaid, 2022). Yet, some educators continue to struggle with a lack of consensus regarding how to address the barriers of inclusion in mainstream classrooms (Carter et al., 2022; Martin et al., 2021). The objective of this systematic review of the literature was to understand the advantages of placing special education students in mainstream classrooms, identify barriers to positive experiences among special education students, and outline strategies to address identified hurdles (Chitiyo & Brinda, 2018; Tahir et al., 2019). Secondary research was conducted to collect relevant data related to the advantages and shortcomings of placing special education students in mainstream classrooms (Arcangeli et al., 2020).

Students with disabilities are general education students first. The student with the disability confers benefits from the general education environment by creating a stimulating learning environment, improves access to role models, enhances self-respect and self-esteem (Morley et al., 2020; Ramberg & Watkins, 2020). Regular education students also benefit in terms of accepting differences among students, becoming familiar with persons with disabilities, and preparing them with skills to support and assist persons from diverse backgrounds in society (Sokal & Katz, 2020; Spain, 2019). Regular education teachers also benefit from inclusion in terms of being more aware and appreciative of special needs students, acquiring new teaching methods, and developing teamwork in school (Martin et al., 2021). In the United States, general

education access is a legal right. Even so, pessimists without regard to IDEA continue to report that including students with disabilities makes schools focus more on socialization than academics, setting unrealistic expectations for disabled students, and skewed resource allocation for mainstream students (Tahir et al., 2019; Xu & Cooper, 2022).

Inclusion may also contribute to low self-esteem as disabled students could be concerned about their inability to execute some tasks compared to typically developing peers. Regular education students may also find disabled students to be disruptive in classrooms due to involuntary vocalizations (Armstrong, 2021; Brussino, 2020). Resentment among regular students may increase if peers with special needs are given more attention, assistance, and support resulting in teasing and bullying (Ramberg & Watkins, 2020). Existing challenges could be addressed through professional and skills development for mainstream teachers, building positive relationships between teachers and students, improving communication, seeking support, setting realistic learning goals and targets, and creating a safe and engaging learning environment (Doenyas, 2021; Martin et al., 2021). The findings of this study could be improved in the future by collecting primary data using surveys and interviews and recruiting a large sample of school stakeholders to understand the advantages and challenges of inclusion in mainstream classrooms.

Professional Application

Insights drawn from this study have important implications for professional application and positive social change. Areas for professional application in the future could be achieved at the levels of typically developing students, regular education teachers, and school administration. At the level of regular education students, there is a need for awareness creation about the need for inclusive learning in mainstream settings (Vetoniemi & Kärnä, 2021). A key hurdle for learners with disabilities relates to isolation, ridicule, frustration, and fear due to possible bullying from regular education students (Ramberg & Watkins, 2020). School administrators, leaders, and teachers may create awareness among mainstream learners on the negative impacts of teasing and why disabled students should be included in mainstream classrooms (Armstrong, 2021). Such an approach could improve understanding among mainstream students about the need to accommodate and work with peers with disabilities.

Second, at the level of regular education teachers, there is a need for professional development and skills training on how to assist learners with learning disabilities (Brussino, 2020; Gibbs & Bozaid, 2022; Sumayang et al., 2022). Professional development could help enhance regular teachers' self-efficacy about their teaching methods and measures to take in delivering instruction to special needs students. Besides, mainstream teachers could develop positive attitudes towards inclusive learning thereby contributing to its successful implementation in their schools (Gibbs & Bozaid, 2022; Sumayang et al., 2022).

Third, at the level of school administration, there is a need to avail resources needed to facilitate teachers' efforts when implementing inclusive learning. Key resources include

financing, learning materials, and availing career advancement opportunities to regular education teachers (Duque et al., 2020; Fage et al., 2018). Availing of learning opportunities to regular teachers could be key to enabling them to identify suitable teaching methods, classroom management, and curriculum development strategies tailored for diverse student populations in mainstream schools (Duque et al., 2020; Vetoniemi & Kärnä, 2021).

Limitations of the Research

There are potential limitations related to the current study that could affect the findings. First, all data used in the study was from secondary resources, which may be limited in helping answer specific research questions. The aim and objectives of the identified studies could be different from the primary focus of the current study resulting in partial findings (Alduais & Deng, 2022). Second, the data collected was limited to peer-reviewed articles published between 2018 and 2022. Studies published before 2018 were excluded including books, non-English articles, and other archive data that could help understand the topic. Thus, the collected insights about the current literature review may not be comprehensive but only limited to inclusive practices in schools for the past five years (Chitiyo & Brinda, 2018; Duque et al., 2020). Third, the data collected was largely qualitative and based on 22 resources (Cavendish et al., 2020; Duque et al., 2020). The sample size could be small and fail to comprehensively identify all issues critical to the inclusion of special needs students in mainstream schools (Vetoniemi & Kärnä, 2021).

Implications for Future Research

First, future researchers could improve on the current findings by collecting primary data using surveys, interviews, or focus group discussions. Primary data could supplement information from secondary resources to understand how mainstream teachers, regular students, and students with disability perceive inclusive learning (Alduais & Deng, 2022; Xu & Cooper, 2022). Second, there is a need to conduct a comprehensive analysis of the inclusive practices in mainstream schools by collecting data from the last decade, in addition to including other sources of evidence such as archival data, school reports, and books (Brussino, 2020). Such an approach could help capture key themes that might have been omitted in the current study since the focus was only limited to trends related to the mainstream in the past five years (Holmqvist & Lelinge, 2021). Third, since a small sample size of 22 studies was included in the study, future research could increase the power of findings by using more literature resources. The use of large sample sizes in the future could help achieve data saturation by identifying all relevant issues related to the inclusion of disabled students in mainstream classes (Chitiyo & Brinda, 2018; Duque et al., 2020).

Conclusion

The current systematic review of past literature attempted to understand the advantages and disadvantages of placing special education students in mainstream classrooms. Findings showed that for students with disabilities, mainstream classrooms are beneficial in terms of creating a stimulating learning environment, availing role models to learners, making new friends, contributing to self-respect and self-esteem, improving self-efficacy and enhancing

competency, and being cost-effective (Carter et al., 2022; Martin et al., 2021). In the case of regular education students, mainstreaming creates a sense of accepting differences among individuals, becoming familiar with persons with disabilities, and giving them essentials for adults living with persons from diverse backgrounds (Arcangeli et al., 2020; Duque et al., 2020; Fage et al., 2018). Regular education teachers also benefit from inclusion in terms of being more aware and appreciative of inclusive education, acquiring new teaching methods, and developing teamwork in school (Armstrong, 2021; Brussino, 2020; Cavendish et al., 2020).

Despite the advantages of mainstreaming, there are potential disadvantages. These disadvantages include a limited focus on academic work at the expense of socialization, setting unrealistic expectations for disabled students, and skewed benefits since more resources are tailored for mainstream students (Gibbs & Bozaid, 2022; Martin et al., 2021). Inclusion may also contribute to low self-esteem as disabled students could be concerned about their inability to execute some tasks compared to typically developing peers (Chitiyo & Brinda, 2018; Fage et al., 2018). Due to their condition, special education students may be teased and bullied by other learners resulting in their isolation and fear, potentially hindering their learning (Duque et al., 2020; Gibbs & Bozaid, 2022; Sumayang et al., 2022). Regular education students may also find disabled students to be disruptive in classrooms due to involuntary vocalizations. Resentment may also increase among regular education students if special needs peers are given more attention and support through various learning accommodations (Tahir et al., 2019).

Important accommodations for students with learning disabilities include course substitutions and alternative tasks for oral class reports for learners with language problems, or

extended time for those with psychiatric disabilities (Doenya, 2021; Spain, 2019; Xu & Cooper, 2022). Accommodations like the use of large-print texts could be offered to students with visual impairment, while audio textbooks or text-to-speech could be offered to those with learning disabilities (Holmqvist & Lelinge, 2021; Morley et al., 2020). These interventions should be integrated within the Universal Design of Learning (UDL) frameworks based on four principles based on: (1) presenting methods of teaching in mainstream classrooms, (2) availing different platforms for students to express themselves and take action, (3) availing different modes of student engagement, and (4) implementing different forms of academic assessment (CAST, 2011a; 2011b). Thus, challenges of inclusion in mainstream schools could be addressed through awareness creation among students on the need for a diverse learning setting (Tahir et al., 2019; Vetoniemi & Kärnä, 2021). School leaders need to provide career advancement and skills development for teachers to improve their teaching methods, change attitudes, and guide them on how to manage a diverse classroom with learners who have different needs (Ramberg & Watkins, 2020; Sokal & Katz, 2020). Such interventions could help improve the experience of regular education students and those with special needs in mainstream classrooms in the future.

References

- Alduais, A., & Deng, M. (2022). Expansion of special education and promotion of inclusive education in China: Conflict or cooperation? Stakeholders' views. *Journal of Research in Special Educational Needs: JORSEN*, 22(2), 188–205.
<https://doi.org/10.1111/1471-3802.12559>
- Arcangeli, L., Bacherini, A., Gaggioli, C., Sannipoli, M., & Balboni, G. (2020). Attitudes of mainstream and special-education teachers toward Intellectual Disability in Italy: The relevance of being teachers. *International Journal of Environmental Research and Public Health*, 17(19), 7325. <https://doi.org/10.3390/ijerph17197325>
- Armstrong, D. (2021). Can school psychologists be inclusive when delivering evidence-based behavioral interventions in special schools, behavior units or clinics? A systematic mapping literature review. *Review of Education*, 9(3). <https://doi.org/10.1002/rev3.3271>
- Basham, J., Blackorby, J., & Marino, M. (2020). Opportunity in crisis: The role of universal design for learning in educational redesign. *Learning Disabilities: A Contemporary Journal*, 18(1), 71-91.
- Braun, V., & Clarke, V. (2022). Conceptual and design thinking for thematic analysis. *Qualitative Psychology*, 9(1), 3-26. <https://doi.org/10.1037/qup0000196>
- Brown v. Board of Educ.*, 347 U.S. 483 (1954).

- Brussino, O. (2020). Mapping policy approaches and practices for the inclusion of students with special education needs, *OECD Education Working Papers*, No. 227, OECD Publishing, Paris, <https://doi.org/10.1787/600fbad5-en>.
- Burgstahler, S., & Russo-Gleicher, R. J. (2018). Applying universal design to address the needs of post-secondary students on the autism spectrum. *Journal of Postsecondary Education and Disability*, 28(2), 199-212. <https://doi.org/1088357614523121>
- Bygballe, L. E., & Swärd, A. (2019). Collaborative project delivery models and the role of routines in institutionalizing partnering. *Project Management Journal*, 50(2), 161–176. <https://doi.org/10.1177/8756972818820213>
- Carter, M., Webster, A., Stephenson, J., Waddy, N., Stevens, R., Clements, M., & Morris, T. (2022). The nature of adjustments and monitoring for students with special educational needs in mainstream schools. *Australasian Journal of Special and Inclusive Education*, 46(1), 1–18. <https://doi.org/10.1017/jsi.2021.21>
- Carty, A., & Marie Farrell, A. (2018). Co-teaching in a mainstream post-primary mathematics classroom: An evaluation of models of co-teaching from the perspective of the teachers: *Support for Learning*, 33(2), 101–121. <https://doi.org/10.1111/1467-9604.12198>
- CAST. (2011a). Timeline of Innovation. <http://www.cast.org/about/timeline/>
- CAST. (2011b). Frequently ask questions. <http://www.cast.org/udl/faq/index.html>
- Cavendish, W., Morris, C. T., Chapman, L. A., Ocasio-Stoutenburg, L., & Kibler, K. (2020).

- Teacher perceptions of implementation practices to support secondary students in special education. *Preventing School Failure: Alternative Education for Children and Youth*, 64(1), 19–27. <https://doi.org/10.1080/1045988x.2019.1628000>
- Chitiyo, J., & Brinda, W. (2018). Teacher preparedness in the use of co-teaching in inclusive classrooms: Teacher preparedness in co-teaching. *Support for Learning*, 33(1), 38–51. <https://doi.org/10.1111/1467-9604.12190>
- Cooc, N., & Kiru, E. W. (2018). Disproportionality in special education: A synthesis of international research and trends. *The Journal of Special Education*, 52(3), 163–173. <https://doi.org/10.1177/0022466918772300>
- Dalton, E., Lyner-Cleophas, M., Ferguson, B., & McKenzie, J. (2020). Inclusion, universal design, and universal design for learning in higher education: South Africa and the United States. *African Journal of Disability*, 8. <https://doi.org/10.4102/ajod.v8i0.519>
- de Bruin, K. (2019). The impact of inclusive education reforms on students with disability: An international comparison. *International Journal of Inclusive Education*, 23(7–8), 811–826. <https://doi.org/10.1080/13603116.2019.1623327>
- Dell’Anna, S., Pellegrini, M. & Ianes, D. (2021). Experiences and learning outcomes of students without special educational needs in inclusive settings: A systematic review, *International Journal of Inclusive Education*, 25(8), pp. 944–959. doi: 10.1080/13603116.2019.1592248.

- Dalsen, J. (2017). Technology, disability, and law: Then and now. *Journal of Special Education Technology: A Publication of Utah State University, the Association for Special Education Technology, and the Technology and Media Division of the Council for Exceptional Children*, 32(2), 102–108. <https://doi.org/10.1177/0162643417704438>
- DeMartino, P., & Specht, P. (2018). Collaborative co-teaching models and specially designed instruction in secondary education: A new inclusive consultation model. *Preventing School Failure: Alternative Education for Children and Youth*, 62(4), 266–278. <https://doi.org/10.1080/1045988x.2018.1446413>
- Dickinson, K., & Gronseth, S. (2020). Application of universal learning design (UDL) principles to surgical education during the COVID-19 Pandemic. *Journal Of Surgical Education*, 77(5), 1008-1012. <https://doi.org/10.1016/j.jsurg.2020.06.005>
- Dong, S. (2018). Students reflect on the challenges of securing disabled students' program academic accommodations. *University Wire*. <https://www.proquest.com/wire-feeds/students-reflect-on-challenges-securing-disabled/docview/2126760882/se-2?accountid=193930>
- Duque, E., Gairal, R., Molina, S., & Roca, E. (2020). How the psychology of education contributes to research with a social impact on the education of students with special needs: The case of successful educational actions. *Frontiers in Psychology*, (11), 6-11. <https://doi.org/10.3389/fpsyg.2020.00439>

- Edyburn, D. (2020). Universal usability and universal learning design. *Intervention In School and Clinic*, 56(5), 310-315. <https://doi.org/10.1177/1053451220963082>
- Fage, C., Consel, C. Y., Balland, E., Etchegoyhen, K., Amestoy, A., Bouvard, M., & Sauz on, H. (2018). Tablet apps to support first school inclusion of children with autism spectrum disorders (ASD) in mainstream classrooms: A pilot study. *Frontiers in Psychology*, (9), 2-14. <https://doi.org/10.3389/fpsyg.2018.02020>
- Finkelstein, S., Sharma, U., & Furlonger, B. (2021). The inclusive practices of classroom teachers: A scoping review and thematic analysis. *International Journal of Inclusive Education*, 25(6), 735–762. <https://doi.org/10.1080/13603116.2019.1572232>
- Firetto, J. (2023). Teachers’ perspective on co-teaching in an inclusive classroom. (Publication No. 29390323). [Doctoral dissertation, College of Saint Elizabeth]. Proquest Dissertation Publishing.
<https://www.proquest.com/openview/be8b237bcbd82351f84067f56b1d63d0/1.pdf?pq-origsite=gscholar&cbl=18750&diss=y>
- Florian, L. (2019). On the necessary co-existence of special and inclusive education. *International Journal of Inclusive Education*, 23(7–8), 691–704.
<https://doi.org/10.1080/13603116.2019.1622801>
- Francisco, M. P. B., Hartman, M., & Wang, Y. (2020). Inclusion and special education. *Education Sciences*, 10(9), 238. <https://doi.org/10.3390/educsci10090238>

Friend, M., & Bursuck, W. D. (2019). *Including students with special needs: A practical guide for classroom teachers* (8th ed.). Pearson.

Gibbs, K., & Bozaid, A. (2022). Conceptualizing inclusive education in Saudi Arabia through conversations with special education teachers. *Improving Schools*, 25(2), 101–113.
<https://doi.org/10.1177/13654802211021756>

Gierczyk, M., & Hornby, G. (2021). Twice-exceptional students: Review of implications for special and inclusive education. *Education Sciences*, 11(2),85.
<https://doi.org/10.3390/educsci11020085>

Gin, L., Guerrero, F., Cooper, K., & Brownell, S. (2020). Is active learning accessible? Exploring Exploring the process of providing accommodations to students with disabilities. *CBE—Life Sciences Education*, 19(4). <https://doi.org/10.1187/cbe.20-03-0049>

Göransson, K., Bengtsson, K., Hansson, S., Klang, N., Lindqvist, G., & Nilholm, C. (2022). Segregated education as a challenge to inclusive processes: A total population study of Swedish teachers' views on education for pupils with intellectual disability. *International Journal of Inclusive Education*, 26(14), 1367–1382.
<https://doi.org/10.1080/13603116.2020.1810789>

Hajisoteriou, C., & Angelides, P. (2017). Collaborative art-making for reducing marginalisation and promoting intercultural education and inclusion. *International Journal of Inclusive Education*, 21(4), 361–375. <https://doi.org/10.1080/13603116.2016.1197321>

Heyder, A., Südkamp, A., & Steinmayr, R. (2020). How are teachers' attitudes toward inclusion related to the social-emotional school experiences of students with and without special educational needs? *Learning and Individual Differences*, 77(101776), 101776.

<https://doi.org/10.1016/j.lindif.2019.101776>

Holmqvist, M., & Lelinge, B. (2021). Teachers' collaborative professional development for inclusive education. *European Journal of Special Needs Education*, 36(5), 819–833.

<https://doi.org/10.1080/08856257.2020.1842974>

Idol, L. (2018). In remembrance of Dr. Ann Nevin: From early teacher consultation practices to full inclusion. *Journal of Educational and Psychological Consultation: The Official Journal of the Association for Educational and Psychological Consultants*, 28(4),

383–393. <https://doi.org/10.1080/10474412.2018.1510650>

IDEA. (2023). A history of the individuals with Disabilities Education Act.

<https://sites.ed.gov/idea/IDEA-History>

IDEA. (2010). Education for All Handicapped Children's Act", 1975; U. S. Department of Education, 2010

Idol, L. (2018). In remembrance of Dr. Ann Nevin: From early teacher consultation practices to full inclusion. *Journal of Educational and Psychological Consultation: The Official Journal of the Association for Educational and Psychological Consultants*, 28(4),

383–393. <https://doi.org/10.1080/10474412.2018.1510650>

- Kamis, T. (2020). Accessibility Accommodations evolve as classes move online. *University Wire*. <https://www.proquest.com/wire-feeds/accessibility-accommodations-evolve-as-class/es/docview/2384333153/se-2?accountid=193930>
- Kauffman, J. M. (2017). *Handbook of special education* (J. M. Kauffman, D. P. Hallahan, & P. C. Pullen, Eds.). Routledge.
- Lazar, J. (2019). The use of screen reader accommodations by blind students in standardized testing: A legal and socio-technical framework. *Journal of Law and Education*, 48(2), 185-213.
- Lovett, B. (2020). Disability identification and educational accommodations: Lessons from the 2019 admissions scandal. *Educational Researcher*, 49(2), 125-129. <https://doi.org/10.3102/0013189x20902100>
- Martin, T., Dixon, R., Verenikina, I., & Costley, D. (2021). Transitioning primary school students with Autism Spectrum Disorder from a special education setting to a mainstream classroom: Successes and difficulties. *International Journal of Inclusive Education*, 25(5), 640–655. <https://doi.org/10.1080/13603116.2019.1568597>
- Miller, S., Zayac, R., Paulk, A., & Lee, S. (2019). Disability accommodation requests: Prevalence and preference of review processes at post-secondary institutions in the United States. *Journal of Postsecondary Education and Disability*, 32(3), 217-226. <https://doi.org/10.EJ1236833>

- Mihajlovic, C., & Meier, S. (2022). Including students with special educational needs in physical education: An analysis of the current Finnish national core curriculum. *The Curriculum Journal*, 33(2), 279–296. <https://doi.org/10.1002/curj.156>
- Morley, D., Banks, T., Haslingden, C., Kirk, B., Parkinson, S., Van Rossum, T., Morley, I., & Maher, A. (2020). Including pupils with special educational needs and/or disabilities in mainstream secondary physical education: A revisit study. *European Physical Education Review*, 27 (2) 401-418. <https://doi.org/10.1177/1356336x20953872>
- Munn, Z., Dias, M., Tufanaru, C., Porritt, K., Stern, C., Jordan, Z., Aromataris, E., & Pearson, A. (2021). The “quality” of JBI qualitative research synthesis: a methodological investigation into the adherence of meta-aggregative systematic reviews to reporting standards and methodological guidance. *JBI Evidence Synthesis*, 19(5), 1119–1139. <https://doi.org/10.11124/JBIES-20-00364>
- Murphy, M. (2020). Belief without evidence? A policy research notes on universal design for learning. *Policy Futures in Education*, 19(1), 7-12. <https://doi.org/10.1177/1478210320940206>
- Nepo, K. (2017). The use of technology to improve education. *Child & Youth Care Forum*, 46(2), 207–221. <https://doi.org/10.1007/s10566-016-9386-6>
- NCER. (1995). *National study of inclusive education*; The City University of New York: New York, NY, USA.

NCES. (2022). *Inclusion of students with disabilities*.

<https://nces.ed.gov/fastfacts/display.asp?id=59> (accessed on 13 January 2023).

Nwoko, J. C., Crowe, M. J., Malau-Aduli, A. E. O., & Malau-Aduli, B. S. (2022). Exploring private school teachers' perspectives on inclusive education: a case study. *International Journal of Inclusive Education*, 26(1), 77–92.

<https://doi.org/10.1080/13603116.2019.1629122>

Obiakor, F.E., Obi, S.O., Utley, C.A., Graves, J., & Banks, T. (2019), Special Education for Young Learners with Disabilities: Moving Forward. *Special Education for Young Learners with Disabilities*, 34, 209-220.

<https://doi.org/10.1108/S0270-401320190000034013>

Parsons, J., Martin, A., Mccoll, M. A., & Rynard, D. (2021). Accommodations and academic performance: First-year university students with disabilities. *The Canadian Journal of Higher Education*, 51(1), 41-56.

Ramberg, J., & Watkins, A. (2020). Exploring inclusive education across Europe: Some insights from the European Agency Statistics on Inclusive Education. *FIRE Forum for International Research in Education*, 6(1). <https://doi.org/10.32865/fire202061172>

Rangvid, B. S. (2022). Special educational needs placement in lower secondary education: the impact of segregated vs. mainstream placement on post-16 outcomes. *Education Economics*, 30(4), 399–425. <https://doi.org/10.1080/09645292.2021.1995850>

- Rozeboom, S. (2021). From universal design for learning to universal design for communion with the living God. *Journal Of Disability & Religion*, 25(3), 329-346.
<https://doi.org/10.1080/23312521.2021.1895024>
- Ruggiano, N., & Perry, T. E. (2019). Conducting secondary analysis of qualitative data: Should we, can we, and how? *Qualitative Social Work: QSW: Research and Practice*, 18(1), 81–97. <https://doi.org/10.1177/1473325017700701>
- Salend, S. J. (2015). *Creating inclusive classrooms. Effective and reflective practices*. (8th ed.). New York: Merrill Prentice Hall.
- Scourbys, K. (2019). *Removing stigma around disabilities in the classroom: The history and benefits of inclusive education*. [Senior Theses, Dominican University of California]. Dominican Scholar.
<https://scholar.dominican.edu/cgi/viewcontent.cgi?article=1145&context=senior-theses>
- Shaw, A. (2017). Inclusion: The role of special and mainstream schools. *British Journal of Special Education*, 44(3), 292–312. <https://doi.org/10.1111/1467-8578.12181>
- Sokal, L., & Katz, J. (2020). Inclusive and special education in Canada and the United States. *In Oxford Research Encyclopedia of Education*. Oxford University Press.
- Smith, T. E., & Sheridan, S. M. (2019). The effects of teacher training on teachers' family-engagement practices, attitudes, and knowledge: A meta-analysis. *Journal of Educational and Psychological Consultation: The Official Journal of the Association for Educational and Psychological Consultants*, 29(2), 128–157.
<https://doi.org/10.1080/10474412.2018.1460725>

Spain, A. K. (2017). Just talk? Discourses and deinstitutionalization in school district policy making. *American Journal of Education*, 124(1), 101–126.

<https://doi.org/10.1086/693956>

Streett, S.C. (2019). Individuals with Disabilities Education Act, 20 U.S.C. § 1400. 2004.

Available online: <https://sites.ed.gov/idea/statute-chapter-33/subchapter-i/1400> (accessed on 13 January 2023).

Sumayang, K. R., Celendron, K., Declaro, N. P., & Flandez, D. L. (2022). Mainstreaming

Learners with Special Needs in a Regular Classroom: A Scoping Review. *Universal Journal of Educational Research*, 1(3), 106-114.

Syring, L. (2018). *Administrators' Perspectives on Inclusion in Preschool: A Qualitative Multiple Case Study*. (Publication No. 13424979) [Doctoral dissertation, North Central University]. ProQuest Dissertations Publishing.

Tahir, K., Doelger, B., Hynes, M. (2019). A case study on the ecology of inclusive education in the United States. *Journal for Leadership and Instruction*, 18(1), 17-24.

<https://eric.ed.gov/?id=EJ1222244>

Tsybulsky, D., & Muchnik-Rozanov, Y. (2019). The development of student-teachers' professional identity while team-teaching science classes using a project-based learning approach: A multi-level analysis. *Teaching and Teacher Education*, 79, 48–59.

<https://doi.org/10.1016/j.tate.2018.12.006>

UNESCO. (1994). The Salamanca Statement and Framework for Action on Special Needs Education. Accessed 18 January 2023.

http://www.unesco.org/ulis/cgi-bin/ulis.pl?catno=139394&set=4F703E0F_3_432&gp=1&lin=1&ll=1.

UNESCO. (2018). Global Education Meeting, Brussels Declaration, document ED-2018/GEM/1. Accessed 18 January 2023.

<https://unesdoc.unesco.org/ark:/48223/pf0000366394?posInSet=1&queryId=f00bbeb5-caf0-495d-9782-e4caad1e9e0f>.

U. S. Department of Education. (2010, March). A blueprint for reform: The Reauthorization of the Elementary and Secondary Education Act.

<https://www2.ed.gov/policy/elsec/leg/blueprint/blueprint.pdf>

U.S. Department of Education. (2017, May 2). Sec. 303.24 multidisciplinary. Individual with Disabilities Act <http://sites.ed.gov/idea/regs/c/a/303.24>

Vetoniemi, J., & Kärnä, E. (2021). Being included – experiences of social participation of pupils with special education needs in mainstream schools. *International Journal of Inclusive Education*, 25(10), 1190–1204. <https://doi.org/10.1080/13603116.2019.1603329>

Xie, J., & Rice, M. (2020). Professional and social investment in universal design for learning in higher education: Insights from a faculty development program. *Journal of Further and Higher Education*, 26(8), 815–833. <https://doi.org/10.1080/0309877x.2020.1827372>

Xu, S. Q., & Cooper, P. (2022). Mainstream teachers' perceptions of individual differences among students in inclusive education settings of China. *International Journal of Inclusive Education*, 26(8), 815–833. <https://doi.org/10.1080/13603116.2020.1735541>

Appendix A

Inclusion of Special Education Students in the Mainstream Classrooms

Addressing Barriers to Mainstream Inclusion

Background & Purpose

- Mainstreaming of students with special needs is anticipated to improve their inclusion and academic performance.
- However, mainstream classrooms appear less favorable as most teachers in these settings claim to lack the training, preparation, and resources needed to support learners with special needs (Nwoko et al., 2022).
- While students with special learning needs continue to be enrolled in mainstream classrooms, there is a lack of consensus about whether the challenges they experience outweigh the perceived benefits.

Purpose: To understand the advantages of placing special education students in mainstream classrooms, identify barriers to positive experiences then recommend strategies to address the identified challenges.



The student, regardless of ability, is a participating member of a general education classroom.

The curriculum is adapted and modified to meet the student's needs.

The general education teacher oversees the student's education.



The student must meet a set of criteria to participate in a general education classroom.

The student must demonstrate ability to work with existing curriculum.

The special education teacher oversees the student's education.

www.theinclusiveclass.com

Literature

- Over the last decade, the inclusion of special education students into mainstream classrooms has attracted growing research interest (Carter et al., 2022; Martin et al., 2021).
- Across the world, the contention about the inclusion of special education students has revolved around the views shared by teachers, parents, and students (Nwoko et al., 2022; Xu & Cooper, 2022).
- Despite increased enrollment in regular schools, there is skepticism about the impact of including learners with special needs in mainstream classrooms (Alduais & Deng, 2022; Vetoniemi & Kärnä, 2021).
- Alduais and Deng (2022) conducted in-depth interviews to understand how inclusive education impacts regular education in China.
- Findings showed inclusion prepared students for integration into society and eliminates students' feeling of being segregated.
- However, the implementation of inclusion was hindered by a lack of resources and inadequate teacher preparation to help learners with special needs (Alduais & Deng, 2022).
- A major challenge to inclusion relates to lack formal education on special needs, and inadequate preparedness about adopting inclusive learning (Nwoko et al., 2022).

Application Project

- The Universal Design for Learning (UDL) can be used to address barriers to inclusion learning focusing on four factors (CAST, 2011a):
 - (1) teachers should adopt multiple methods of representation,
 - (2) avail various means of student expression and action,
 - (3) different modes of student engagement, and
 - (4) various forms of assessment.
- Regrettably, students with disabilities often experience barriers and challenges that interfere with their ability to access and demonstrate desired learning.
- In this inclusive learning project, barriers to learning for special needs students can be associated with (Gin et al., 2020):
 - The manner information is presented (e.g., lecture, text)
 - The way a learner is required to respond (e.g., speech, writing)
 - Features of mainstream classroom setting (e.g., lighting, noise)
 - Scheduling and timing of instruction (e.g., duration of assignment, time of day) (Gin et al., 2020).

Application Project

Learning Accommodations to improve Inclusion in mainstream classrooms

| Disability Category | Barrier | Example Accommodations |
|---|---|--|
| Language/speech disabilities | Problems with voice strength or articulation | <ul style="list-style-type: none"> • Course substitutions • Alternative tasks for oral class reports • Computer with voice synthesizer or one-to-one presentation |
| Psychiatric Disabilities | Anxiety, mood swings, depression | <ul style="list-style-type: none"> • Extended time for exams • The distraction-free, quiet testing room • Divide the exam into segments with breaks |
| Visual impairment | Reading printed texts | <ul style="list-style-type: none"> • Braille materials • Large-print texts • Convert text to the audio version |
| Learning disabilities | Decoding texts | <ul style="list-style-type: none"> • Text-to-speech software • Audio textbooks |
| Attention-deficit/hyperactivity disorder (ADHD) | Creating and retaining focus | <ul style="list-style-type: none"> • Mark responses in the test booklet instead of the bubble answer sheet • Allow learners frequent break times • Fewer homework questions |
| Orthopaedic impairments | Inability to hold pencils and write responses | <ul style="list-style-type: none"> • Avail speech-to-text software • Allow oral responses • Shorter assignment report |

Resources

Successful inclusion of students with disabilities in mainstream classrooms requires relevant resources to be put in place.

Resources

| | |
|---------------|--|
| People | Mainstream education teachers, special education teachers, mentors, principals, and education policymakers |
| Costs | Teaching, training, equipping, and awareness creation, |
| Time | <ul style="list-style-type: none"> • The implementation process for inclusive practice will be continuous. Teachers may need courses to prepare them, as students require continuous lesson plans to integrate them into mainstream classrooms. |

Sustainability and Impact

- Exclusion of students with disabilities in mainstream classrooms could affect their academic performance and social relationships (Broomhead, 2019; Chitiyo & Brinda, 2018).
- Offering relevant accommodations such as extended time, materials, course substitutions, and text-to-speech software will improve their social experience.
- Success of every intervention and accommodation will depend on commitment by school leaders and administrators to embrace inclusion in mainstream schools (Arcangeli et al., 2020).
- Long-term implementation of inclusive practices will rely on adequate resource allocation including financial support, teaching materials, textbooks, and training opportunities to equip teachers to facilitate relevant curriculum (Brussino, 2020; Cavendish et al., 2020).
- Close collaboration between mainstream teachers, special education educator, and school leaders is needed to formulate plans aimed at continuous support of students with disabilities in mainstream schools (Duque et al., 2020; Fage et al., 2018).
- Sustainable implementation of inclusion will depend on how effective school leaders and teachers commit to avail required resources to integrate the needs of typically developing children and peers with special needs.
- Successful implementation will have a lasting impact for special education students in terms of being exposed to conducive learning environment, access to social support programs, improve their self-respect/ self-esteem, have a sense of belong, and save on time and costs needed to enroll in special education schools (Armstrong, 2021; Gibbs & Rezaei, 2022; Martin et al., 2021).