

Article

Philosophical Perspectives and Practical Considerations for the Inclusion of Students with Developmental Disabilities

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Abstract: Federal law in the United States requires that students with disabilities receive their education alongside their peers without disabilities to the maximum extent appropriate given their individual circumstances. As a result, students with less support needs have enjoyed increasing amounts of time in the regular education classroom, while their peers with developmental disabilities are still largely served in separate educational settings. When these students are not included in the regular education classroom, they are not able to access the academic, social, and communication benefits of inclusion. The inclusion of students with developmental disabilities has long been a point of contention and disagreement among special education teachers, administrators, and scholars. It is the goal of this paper to carefully consider the perspectives and practical considerations that affect the placement of students with developmental disabilities and understand why these students spend less time in the regular education classroom than their peers with other disabilities. In addition, we weigh the relative advantages of inclusive and separate placements. After reviewing these issues, we believe that it is possible to simultaneously value a spectrum of placement options and advocate for increased inclusion in the regular education classroom. We discuss evidence-based practices to support inclusive placements and areas of future research to support inclusion of students with developmental disabilities in the regular education classroom.

Keywords: inclusion; educational placement; developmental disabilities; least restrictive environment



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1. Introduction

In 1975, in the United States, the Education for all Handicapped Children's Act (EACHA; [1]) proposed a revolutionary idea in special education—that to the maximum extent appropriate, students with disabilities should be educated alongside peers without disabilities in regular education classrooms. This concept, called Least Restrictive Environment, has been a staple of each subsequent special education law, including the Individuals with Disabilities Education Act (IDEA; [2]) and the Individuals with Disabilities Education Improvement Act (IDEIA; [3]).

IDEIA delineates a process for how educational placement decisions will be made by teams of professionals and family members who develop the student's Individualized Education Program (IEP). At a minimum, this team is made up of the student's parents, at least one special education teacher or provider, at least one general education teacher, a professional who can interpret evaluation results such as a school psychologist, and a representative from the school system, such as a building or district-level administrator. This team is charged with two important and related tasks. First, the team must decide on appropriate goals for students with disabilities, and those goals must be both ambitious and “reasonably calculated” for the student to make progress relative to their individual needs [4]. Second, the team must decide on the degree to which the student can be appropriately educated in a regular education classroom if provided with “supplemental aids and services” (IDEIA; [3]).

In addition, IDEIA and its predecessors have mandated that states report the educational placement of students with disabilities to track the degree to which students access regular education classrooms. These data allow for longitudinal analysis of how rates of educational placement in regular education classrooms have changed over the past 47 years. For advocates of inclusion, the initial analysis of these data is encouraging. Indeed, when analyzing educational placements for all students with disabilities, scholars have reported a steady trend toward more inclusive placements in regular education classrooms [5]. In 1989, only 27% of students with disabilities were included in regular education classrooms for the bulk of the school day. This percentage increased to 46% in 1999 and then 65% in 2019. Put another way, in the 30 years between 1989 and 2019, 38% more students with disabilities were included in regular education classrooms [6].

However, these impressive gains have not been shared uniformly across disability groups. Specifically, students with developmental disabilities (e.g., intellectual disability, autism, and multiple disabilities) continue to lag far behind other disability groups [7]. The term developmental disabilities includes a range of specific diagnoses and includes chronic disabilities that manifest before the age of 22 or result in restrictions and limitations of three or more major life activities [8]. The analysis of all students with disabilities is heavily influenced by placement of students with high-incidence disabilities—students with speech or language impairment, specific learning disabilities, and other health impairments—who make up over 70% of all students with disabilities [6]. In contrast to those groups, students with intellectual disability have continued to be placed predominantly in separate classrooms and schools in every year in which data have been collected [7]. There was movement toward more inclusive placement in the 1990s and early 2000s, during which the percentage of students with intellectual disability spending the bulk of their school day in a regular education classroom increased from 7% to 18%. However, since that period, inclusive placements have remained stagnant and slowly receded. Indeed, students with intellectual disability were included at a higher rate 10 years ago than they are today [7]. Similar trends can be observed for students with multiple disabilities [6]. Trends are more complicated for students on the autism spectrum, for whom rates of inclusion climbed rapidly between 1998 and 2008 in parallel with rapid increases in the number of students identified with autism. However, similar to intellectual disability and multiple disabilities, the rate of inclusion for students on the autism spectrum has plateaued over the past 10 years [6].

These data raise an important question: Why are other students with disabilities gaining increased access to inclusion, while students with developmental disabilities continue to lag behind? This is the central question that guides this paper. To answer this question, we conducted a professional review of the literature. First, we review different perspectives on inclusion of students with developmental disabilities, discuss why inclusion rates for students with developmental disabilities lag behind those of other students with disabilities, and then review strategies and approaches for supporting the success of students with developmental disabilities in regular education classrooms.

We selected articles that supported a variety of philosophical perspectives, including work from authors who support full inclusion and those who support separate placements. When selecting articles about practical considerations, we considered how different classroom stakeholders (i.e., students, teachers, and administrators) might address barriers to inclusion of students with developmental disabilities. Although the scope of our review was not representative of all extant publications, it was intended to fairly capture multiple perspectives based on the expertise of the authors.

Prior to selecting articles to include in this review, we outlined subjects and issues relevant to inclusion of students with developmental disabilities. Our aim was to include perspectives from scholars with opposing viewpoints regarding these subjects to better understand why students with developmental disabilities continue to receive their education in separate settings, while students with other disabilities are increasingly placed in inclusive classrooms. Specifically, we selected articles in which scholars discussed the

benefits and risks of full inclusion, the benefits and risks of a spectrum of services, direct comparisons of different placements for students with developmental disabilities, research-based supports that improve outcomes for students with developmental disabilities in the general education classroom, educator preparation and training to support students with developmental disabilities, and opportunities and impact for peers without disabilities.

2. Philosophical Perspectives

The inclusion of all students with disabilities has long been a point of contention and disagreement among special education teachers, administrators, and scholars. These disagreements range from complex discussions of the value of the goals of inclusion to simple discussions of terminology (i.e., mainstreaming, inclusion, and educational placement). Indeed, there are even inconsistencies of how to use specific terms (e.g., mainstreaming could refer to the placement of students with disabilities for social benefits or access to the general education curriculum [9]). In this paper, we focus on inclusion and educational placement. We use the term educational placement to describe the location where students spend their time and do not assume that students' placement represents inclusion or mainstreaming. We use the term inclusion to refer to a set of practices and beliefs that focus on increasing student involvement within the regular education classroom.

One of the core issues in the debate of philosophical perspectives is the relevance of the general education curriculum for students with the most significant support needs. In the following sections, we first examine the debate around the relevance of the general education curriculum, and then we review perspectives of scholars who advocate for full inclusion and those who advocate for a wide spectrum of placement options. Most of the discussions and debates about inclusion of students with developmental disabilities are characterized by scholars with opposing points of view. These disagreements span a variety of topics including the appropriateness of general education curriculum compared to specialized curriculum, the physical location where students should be educated, whether students are better served in homogenous or heterogenous groupings, and the ways in which general and special education teachers best contribute to student learning.

2.1. General Education Curriculum versus Specialized Curriculum

Although much of the debate about the inclusion of students with developmental disabilities focuses on where students should be taught, a closely related issue is what type of curriculum should be prioritized. Some scholars argue that educational teams should prioritize functional skills (e.g., money handling and daily living skills) for students with developmental disabilities [10,11]. In contrast to this view, other scholars favor prioritizing standards-based curriculum (e.g., state specific academic standards, Common Core) [12]. The type of goals prioritized by the educational team have bearing on what placement is appropriate and as a result may impact the level of inclusion for students with developmental disabilities. Although these two goals are not necessarily in conflict, there is disagreement about which goals should be the primary focus for students with developmental disabilities.

Ayers and colleagues [10,11] suggest that these goals are not mutually exclusive but that prioritizing standards-based educational goals takes focus away from meaningful functional skills that students will need as they transition to independence and adulthood. The authors argue that a better approach is to outline what functional skills should be taught to support the student in the future and then to individualize standards-based goals that also support future independence. From this perspective, time spent teaching grade level standards should be weighed against how that time might be spent teaching other skills needed for success and independence after students complete their education. By prioritizing standards-based curriculum, Ayers and colleagues [8] argue that students are not receiving an education that is tailored to their individual needs.

As a response to Ayers and colleagues [10], Courtade and colleagues [12] described seven reasons why prioritizing standards-based education is appropriate. Their arguments

can be categorized into benefits of standards-based curriculum and reasons why standards-based curriculum does not conflict with functional goals. The benefits of the standards-based curriculum include the following: (a) right to a full educational opportunity, (b) relevancy of standards-based curriculum, (c) unknown potential of students with severe disabilities, and (d) students creating their own changing expectations through achievements. Reasons why a standards-based curriculum does not conflict with functional goals include the following: (a) functional skills are not a prerequisite to academic skills; (b) standards-based curriculum is not a replacement for functional curriculum; (c) individualized curriculum is limited when it is the only curriculum. Ultimately, the authors argue that the use of a standards-based curriculum allows for a more complete education than an individualized curriculum and that individualized goals can be accomplished simultaneously.

Interestingly, neither perspective focuses heavily on the educational environment of students. Ayers and colleagues [10] suggest that when it is appropriate to target a standards-based curriculum, the regular education classroom is the most appropriate location. Courtade and colleagues [12] suggest that some individualized daily living skills might be best taught at home. From either perspective, the location of services is less important than the prioritization of goals. From this point of view, inclusion is more about what is taught than where it is taught. The following sections present perspectives in the research advocating for full inclusion and a spectrum of services for students with developmental disabilities.

2.2. Placement in the Regular Education Classroom or Other Settings

Many scholars advocate that students with developmental disabilities should receive their education in the regular education classroom and point to numerous social and academic benefits for these students. Placement in the regular education classroom is also the preferred placement under federal law [13]. One of the primary purposes of education is to promote socialization for students. As part of this socialization they learn about societal expectations through their contact with adults and the presence of their peers who are learning the same expectations simultaneously [14]. From this perspective, socialization is hindered when students are separated from the environment where this socialization occurs frequently in a natural context. When surrounded by other students with developmental disabilities who also have deficits in social skills, students have very limited opportunities to naturally learn social skills through observation and practice. In contrast, when students are well-supported in the regular education classroom, there are rich opportunities for building social skills and relationships [15].

Multiple studies have demonstrated positive academic, communication, and social outcomes as well as effective methods for supporting students with developmental disabilities in the regular education classroom [16–18]. When students receive their education in the regular education classroom, they have better access to the general education curriculum than when placed in separate settings [19].

Although some scholars argue for placement in the regular education classroom, others continue to advocate for consideration of alternative placements. Some of the debate and disagreement about whether students with developmental disabilities should receive educational services in the regular education classroom could be linked to federal law. As stated previously, federal law expresses preference that students be placed in the least restrictive environment (i.e., the regular education classroom) [3]. However, the law also describes that if “the nature or severity of the disability is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily, special classes, separate schooling, or other removal of children with disabilities from the regular educational environment” might be appropriate. Further complicating the discussion, when other placements are considered, the choice must be made from “a continuum of alternative placements” to meet the needs of students receiving special education services [3]. This continuum might include placement in the regular education

classroom with or without specific supports, targeted pullout supports and services, or even separate self-contained settings [19].

The vague language surrounding the continuum of placements might be one factor that has led to different states and school districts applying LRE in drastically different ways. Unfortunately, there is evidence that placement patterns for students with developmental disabilities vary both between states [20] and between regions within individual states [21]. Inconsistency in placement decisions points to differences in how different states and schools interpret LRE.

Some scholars argue that prioritizing placement as the indicator of inclusion misses the mark and that more attention should be paid to the quality of instruction in any placement. Kauffman and colleagues [22] argue that the level of specialized effective instruction appropriate for some students with developmental disabilities is not possible without the use of specialized settings and services. From this perspective, rather than focusing on where a student is placed, the focus should be on the quality of instruction, and in some instances, scholars focus on placement for the convenience of measurement as it is easier to record where a student is located than how well they are being taught.

One important argument made by advocates for a spectrum of services is for greater individualization of goals and accommodations. Part of the role of the educational team is to consider how different educational service locations and supports will best align with the goals set forth in the student's IEP. Gilmour [23] argues that mandates and goals for placement in the regular education classroom for specific durations or percentages of the school day ignore this step of individualization. This argument echoes the perspective of Ayers and colleagues [10,11] that individual circumstances and needs should be prioritized over broadly applied standards. From this perspective, advocates for full inclusion are missing opportunities to specifically tailor placement and support decisions in the same way that IEP goals and accommodations are designed to meet the needs of a specific student. Furthermore, Kaufman and colleagues [22] argue that tiered systems of support used in many schools to support these students (e.g., RTI, MTSS, and PBIS) do not have sufficient evidence to support their adoption for all students.

We agree that inclusion should be more than pro forma placement in the regular education classroom and that students in any environment are entitled to effective instruction. However, we also agree with the perspective that when students appear to be exceptions to being included, it is more likely linked to a failure of our field to support these students than an inability of the students to succeed [24]. Although there is legal preference for placement in the regular education classroom, other placements are common and the full consideration of placement options is required. Placements in other settings should be based on documented individual need and should consider the academic and social benefits of placement in the least restrictive environment [25].

2.3. Homogenous Grouping or Heterogenous Grouping

In addition to the academic benefits of inclusive placements, there are social benefits for students with developmental disabilities when placed in inclusive settings. Students in these settings have improved communication outcomes compared to their peers in separate settings [26]. When placed in the regular education classroom, students can interact with and learn from their peers. A growing number of studies focus on peer-mediated interventions that leverage peers to support academic and social goals in the regular education classroom [27,28]. These supports are unavailable when students receive their education in separate placements that only serve students with disabilities.

Advocates for separate, more homogeneous placements purport that these placements allow for specialized instruction in less distracting environments. However, advocates for inclusive placements question the validity of these claims. Causton-Theoharis and colleagues [29] conducted an observational study in separate classroom placements to examine these claims. The authors found that disruptions and distractions in the separate environment were frequent and severe. Additionally, the instruction that occurred in these

classrooms did not connect to the regular education classroom. In similar observational studies, both Vaughn and colleagues [30] and Moody and colleagues [31] found that reading instruction in separate resource room settings was not individualized to student needs and did not fulfil the promise of more specialized instruction when students were removed from the regular education classroom. For advocates of inclusive placement, these limitations of separate settings are a sign that instruction can and should occur in the regular education classroom rather than separate settings. This point is further illustrated in a study conducted by Gee and colleagues [26], who analyzed data from matched pairs of students with developmental disabilities comparing students placed in the regular education classroom with students placed in separate classrooms. Students who were in the regular education classroom made greater gains in communication, literacy, and numeracy than their peers served in separate placements. Furthermore, the students in the regular education classroom had higher levels of academic engagement, socialization, and academic activities, which more closely reflected the activities of their typical peers.

2.4. Instruction from Content Specialists, Intervention Specialists, or Collaborative Teams

Choosing who is most appropriate to deliver instruction is not a trivial concern. When considering any particular academic area (e.g., reading), educational teams must consider and decide whether content expertise or intervention expertise is most appropriate to foster student growth.

A growing number of studies have demonstrated improved academic performance when students are placed in inclusive classrooms. Coyne and colleagues [17] demonstrated that young children with severe disabilities could make significant progress on literacy skills given instruction that was delivered in an inclusive classroom. In a related study, Vaughn and colleagues [30] observed and interviewed special education teachers who taught in separate settings and found that there was little differentiation in reading instruction, and students primarily received group instruction rather than individualized support. Furthermore, descriptive research has shown that students who spend more time in regular education classrooms have significantly more access to the general education curriculum [32] and make progress on the academic standards that were targeted in regular education classrooms [33].

Conflicting with this view, advocates for a spectrum of services have concerns about the preparation and training of general education teachers and administrators. School principals play an important role in whether inclusive practices are successful in individual schools. When provided with appropriate training and professional development, principals can have a positive impact on the climate of inclusion in their schools [34]. When these administrators are not trained and prepared to support inclusive practices, slow progress and growth of inclusive programs seems likely. Similarly, Kauffman expresses concerns about the lack of preparation of general education teachers to provide services to largely heterogeneous groups of students [22].

We agree that there are barriers in teacher preparation but do not agree that this is an appropriate justification for separate placement. Instead, we align with more aspirational scholars such as McLeskey who are forthright in identifying barriers but also propose solutions that move towards more inclusive practices. Given the limitations described in separate settings, legal preference in educational placement, the academic and social gains, and the improved access to the general education curriculum, there are multiple compelling arguments for the full inclusion of students with developmental disabilities. However, there are still vocal advocates that argue that a one size fits all approach using full inclusion is not always appropriate. From this view, a spectrum of services including placements outside the regular education classroom is not only appropriate but in some cases is the best approach to ensuring students receive the free and appropriate education that is their right.

2.5. Challenges in Directly Comparing Placements and Placement as a Marker of Inclusion in the Existing Research

In addition to advocating for the benefits of a spectrum of services, critics of full inclusion point to limitations of the literature used to support full inclusion (i.e., use of placement data to measure success of inclusion and biased comparisons between students).

First, a limitation of much of the existing research on inclusion of students with developmental disabilities is the focus on educational placement rates from large administrative data sets. These studies often analyze federally reported data. As part of IDEIA, states report where students who are served under IDEIA receive their education. Educational placement is reported as percentage of time spent within the regular education classroom or as other separate placements. These data speak broadly to where students are receiving their education but do not report on either the quality of placements, or individual differences between students. These data could for example tell us that 10% of students with intellectual disability in each state spend 80% or more of their day in the regular education classroom but not about the quality of instruction they receive or how they differ from students with intellectual disability who are only in the regular education classroom 40% or less of the day.

In addition to concerns about conclusions drawn from administrative data sets, there are concerns about biased comparisons of students in studies where the effects of different placements are measured. Advocates for a spectrum of services point to this unfair comparison in the existing research as an indication that evidence from studies focused on improved outcomes for students in inclusive settings does not account for biased comparisons. From this perspective, students who are included more frequently are already more likely to be successful (e.g., they have fewer behavioral and academic support needs). Gilmour points to this as a major limitation of the existing research [23]. Proponents of separate placements argue that selection bias of participants in existing research highlights intervention for students who have less significant support needs. As a result, they view interventions supported by this research as not applicable for students with the same disability label but more significant support needs.

We agree that both points are valid concerns. First, we agree that research that focuses on educational placement percentages is not able to reflect the quality of instruction in any given environment. We have pointed to this limitation directly in both Brock [7] and Anderson and Brock [20]. However, although placement alone is not a guarantee of quality instruction, placement in the regular education classroom does relate to increased exposure to the general education curriculum [19]. Second, selection bias in research can result in the overgeneralization of the conclusions drawn from individual studies. Students with developmental disabilities comprise a heterogeneous group, and differences in skills and support needs between students should be expected. Given these inherent differences, it is important for researchers to recruit participants with the most significant needs when developing and testing interventions to support participation in the regular education classroom. Or put another way, the existence of selection bias in existing research is not an indication that interventions are ineffective for some students, but rather an indication that interventions should be tested and improved to support all students. Fortunately, researchers are taking steps to address these concerns by conducting studies with matched samples [26]. As more of these studies are completed, selection bias and overgeneralization should be less of a concern.

3. Research-Based Supports That Promote Improved Outcomes in the Regular Education Classroom

Although much of the debate around inclusion has been focused on how much time students are spending in regular education classrooms, an equally important concern is the quality of instruction and support that students receive in these settings. Regular education classrooms have the potential to promote progress in the general education curriculum

and development of social and communication skills. However, whether this potential is realized hinges on the quality of instruction and support.

Fortunately, researchers have amassed a considerable amount of evidence regarding which interventions promote improved outcomes for students with developmental disabilities in regular education classrooms. In this section, we outline research-based supports in the areas of instruction, social, and behavioral support that can be used to ensure high quality instruction.

3.1. Instructional Supports

Instructional supports should be designed and implemented to meet the needs of the individual student. We recommend two approaches: a universal design for learning as a proactive method and differentiated instruction as a reactive method.

A universal design for learning provides a framework for educators to design a learning environment that provides students with (a) multiple ways to access information and knowledge, such as through written or multi-media material; (b) multiple ways to approach how material is learned, such as through hands-on experiences; and (c) multiple ways of becoming and staying engaged in learning [17]. Universal design is a proactive strategy: it is implemented at the outset of instruction to reduce the number of learning barriers for the widest possible range of students [35].

When progress monitoring shows that some students are not responding well to universal design, educators can use response to intervention (RtI) strategies to identify which students might require more intensive instruction [36]. Although RtI should not be an alternative to comprehensive evaluation [37], RtI can be used to measure the level of supports students require to make progress. In the context of inclusion for students with developmental disabilities, RtI might be used to indicate that a student requires additional time and practice with a specific goal to make progress. This type of middle tier support can be implemented with small groups of students in the regular education classroom and does not require individualized support or instruction. If progress monitoring still indicates additional supports are required educational teams can decide to use differentiated instruction.

Differentiated instruction is used reactively to meet the needs of an individual student [38]. Similar to the universal design for learning, differentiated instruction modifies three components: the context, or what the student learns; the process, or how students learn the material; and the product, or how students demonstrate what they have learned. Unlike universal design, differentiated instruction is individualized to the needs of the learner. Differentiation may include alternative forms of assignments or assessments. These alternate assignments can and should align with the content standards that are taught in the regular education classroom. For example, if most students in a second-grade classroom are completing a 20-problem double-digit addition worksheet, a student with a significant disability might be working on three single-digit addition problems with manipulatives. This differentiation can also alter the process. If students in a fourth-grade class are reading a passage and answering comprehension questions, a student with developmental disabilities could answer the same questions but rather than reading the passage independently, use text-to-speech technology to access the passage.

3.2. Social Supports

Generally, educators should focus on positive interactions between all students, help peers to be socially engaged with students with disabilities, and use classroom interventions that are positive and focused on supporting appropriate social skills [39,40]. Educators can also implement strategies such as peer support arrangements.

Peer support arrangements are an evidence-based practice for promoting social interactions between students with significant support needs and their peers in general education settings [15]. With peer support arrangements, peers are trained to provide social, academic, and behavioral support to students with disabilities [41]. Peer support arrangements are

helpful for several reasons. First, students with severe disabilities are often seated far from peers, which decreases the likelihood that interaction with peers will occur. Second, peers may not know how to interact with students with severe disabilities and may benefit from instruction on how to interact successfully. Lastly, individually assigned paraeducator support—a common support model for students with developmental disabilities in regular education classrooms—can sometimes unintentionally hinder interaction with peers or the general education teacher [27,41].

Implementing peer support arrangements first involves general and special education teachers working together to design a peer support plan that is individualized to the student's unique needs and the classroom context. When appropriate, related service personnel and paraeducators can be invited to participate in developing the plan. The plan includes practical and natural ways that peers can provide support within classroom routines. One of the members of the team, often a paraeducator, meets with the peers to orient them to their new roles and then provides ongoing coaching in the regular education classroom [27].

The research base for peer support arrangements is sufficient to establish it as an evidence-based practice according to criteria by the Council for Exceptional Children [16]. For students with disabilities, benefits of peer support arrangements include increased peer interactions, increased academic engagement, increased progress on individualized social goals, increased progress on individualized academic goals, and decreased levels of support from adults [42–45].

3.3. Behavioral Support

A common barrier to inclusion in regular education classroom is challenging behavior. An evidence-based approach to addressing challenging behavior includes the following: (a) a comprehensive assessment that identifies environmental variables influencing the challenging behavior, (b) a behavior intervention plan based on assessment data, and (c) ongoing monitoring of academic and behavioral progress [46,47].

A comprehensive behavior assessment includes data from multiple sources, such as standardized tests, student self-report, parent report, and observations. For students with intensive behavior support needs, assessments should also include medical, psychological, and behavior support data [47]. The purpose of a behavior assessment is to select and operationally define challenging behaviors, describe the contexts and settings in which challenging behavior is likely to occur, and describe the consequences that maintain the challenging behavior in those contexts [48].

After an assessment is completed, a behavior intervention plan (BIP) should be developed to address the student's identified needs. Trader and colleagues outline three criteria for BIPs [47]. First, the plan must use evidence-based practices that align with assessment data. Some evidence-based practices for behavior support include (a) teacher praise and positive reinforcement, (b) modification of antecedent and consequence events that influence and maintain behavior, (c) group contingencies such as the Good Behavior Game, and (d) self-management strategies [46,47]. Second, the behavior plan must be consistent with the values, skills, and administrative support that is available. Lastly, the behavior plan should teach a replacement behavior for the problem behavior rather than focusing solely on decreasing the challenging behavior.

Students' academic and behavioral progress should be monitored frequently to determine if the strategies in the BIP are working. Monitoring frequency should be individualized to the intensity of the challenging behavior and needs of the student. In addition to monitoring student progress, the implementation fidelity of the BIP strategies should be measured to determine if educators are adhering to the implementation steps.

3.4. Educator Preparation and Needs to Support Students with Developmental Disabilities

Educators have identified barriers and needs that include training in evidence-based practices, knowledge of specific disabilities, skill in designing and implementing classroom-

based instruction for students based on individual needs and learning interests, improved pre-service training in inclusive practices, and collaboration with other professionals [15,49].

There is a substantial research base of effective strategies for teaching learners with developmental disabilities in inclusive settings, yet educators state that they feel unprepared to implement these practices. Numerous studies have shown that with professional development that uses strategies such as didactic instruction, modeling, rehearsal, and performance feedback, educators can be trained to effectively implement a myriad of practices, including discrete trial training, naturalistic interventions, and positive behavior supports [50]. Additionally, educators report that they would benefit from training that describes the specific characteristics of disabilities [49]. In many states, teacher licensure is specific to a disability type or severity, and not every teacher is prepared to work with each student [15]. Targeted training for both special and general educators that provides information about specific disabilities may help reduce this barrier and enable educators to meet students' needs. Lastly, providing more training may help shape educator attitudes toward inclusion. Researchers found that teachers who had access to training related to developmental disabilities viewed inclusive teaching strategies more positively [51].

Adaptations to pre-service educator preparation programs may also help reduce barriers to inclusion. Researchers note that teacher candidates have few opportunities to practice inclusion skills, such as designing individualized instruction, before applying those skills within their own classrooms [52,53]. Although coursework can provide pre-service educators with knowledge of practices, applied experiences allow them to practice under the guidance of an experienced teacher [39].

Finally, educators state that ongoing collaboration is needed to make inclusion successful. When asked what practices are effective in including students with developmental disabilities, educators identified a team approach with other professionals (e.g., speech-language pathologist, school psychologist) [49]. Practices that can make collaboration more successful include open communication with the entire team and openness about teaching style.

4. Other School Shareholders

4.1. Impact on Peers

Too often, the discussion around inclusion focuses solely on benefits for students with disabilities, ignoring potential impacts on peers without disabilities. Researchers have accumulated a sizable body of evidence that demonstrates how peers can simultaneously provide natural support to students with developmental disabilities while also experiencing benefits themselves. For peers without disabilities, benefits include character development, increased comfort around people with disabilities, and acquiring new skills such as sign language [54]. Furthermore, in some cases, researchers have intentionally selected peers to provide support who themselves had low academic engagement and have demonstrated that providing peer support enables them to increase their own academic engagement [43].

In addition to peer support arrangements, a number of other peer-mediated interventions have been shown to produce similar reciprocal benefits for students with developmental disabilities and their peers. Examples include peer networks that focus on social interactions in the lunchroom and the hallway [55], recess-focused intervention that involves support for interaction and play, and peer tutoring that focuses on teaching specific academic content [55–57]. Taken together, this body of literature provides strong evidence that peer-mediated intervention can enhance outcomes for students with developmental disabilities in inclusive settings and that the peers who provide support also experience unique benefits. Indeed, teachers and administrators report that including students with developmental disabilities and involving peers helps them in developing more inclusive and caring classrooms and schools [54].

4.2. Need for Administrative Support and Cultural Buy-In for Inclusive Practices

To make inclusion successful, there is a need for administrative support and cultural buy-in. Agran and colleagues provide suggestions for creating sustainable systemic change [15]. There is a critical need for a shared common vision of desired change across the school system, with commitment from all personnel involved across the school, district, and state levels. Given a common vision, the next step is operationally defining the practices necessary for change and developing corresponding goals. Personnel should then be trained to implement inclusive practices. Lastly, communication and collaboration are needed between all involved personnel.

Administration plays an important role in creating and sustaining inclusive environments. McLeskey pointed to active principal involvement as the single defining factor that contributes to successful school improvement initiatives [34]. The principal plays an integral role in working with teachers and other stakeholders to develop a common vision and support operationally defined steps toward that vision.

5. Discussion

Despite a nearly 50-year federal mandate to place students with disabilities in inclusive educational settings to the maximum extent appropriate, the majority of students with developmental disabilities continue to be placed primarily in separate classrooms in schools [58]. Progress toward more inclusive placements has stagnated over the past decade in sharp contrast to the disability groups that have made steady progress toward more inclusion [58]. Rates of inclusion vary widely by state and individual school district, suggesting that there are differences in how schools prioritize inclusive placements. In this paper, we reviewed philosophical perspectives that drive how students with disabilities are placed, including what kinds of educational goals are prioritized and the degree to which educational teams value experiences and learning opportunities that are only available in regular education classrooms. We also reviewed evidence-based practices that can be used to promote meaningful interaction and learning in inclusive classrooms. Given the accumulation of evidence that illustrates how students with developmental disabilities can be effectively supported in inclusive classrooms, we believe that there is a large gap between current placement rates and including students to the “maximum extent appropriate.” In this discussion, we clarify our position on inclusive placement of students with developmental disabilities.

First, we believe that it is possible to simultaneously value a spectrum of educational placements and prioritize inclusive placements that offer unique learning opportunities that are not available in separate classrooms and schools. Specifically, we believe that all students deserve to access the regular education classroom because this is the most natural setting for learning and practicing social skills as well as accessing and making progress on the general education curriculum. We believe that the regular education classroom should be the default educational placement for all students—including students with developmental disabilities. Alternative placements should only be utilized when schools can justify why those placements are better equipped to address individualized goals, and placement should not continue unless progress monitoring data confirm progress toward those goals. There certainly are some situations that meet these conditions. For example, if an educational team decides to prioritize vocational training for a high school student with a developmental disability, the best place to access vocational training opportunities is in the community in which the students can experience authentic employment settings. Alternatively, if a team decides to prioritize daily living skills such as dressing or personal hygiene, it would not be feasible to provide this instruction in a regular education classroom. Moreover, if a junior high student is still working on early literacy skills, a team might decide to use text-to-speech software and partner reading to enable the student to access grade-level content in the regular education classroom. At the same time, the team might also decide that the student would benefit from intensive phonics instruction, and that a separate classroom would be the most feasible place to deliver this instruction. By

implementing these methods, we believe it is possible to prioritize inclusive educational placements while also valuing a wider spectrum of placements in situations where they promote superior progress on individualized goals.

Second, we acknowledge that it is possible that inclusion can be implemented poorly. This is not a reason to abandon inclusive educational placements but instead an opportunity to leverage evidence-based practices that have been shown to promote social and academic outcomes. The good news for educational teams that have decided to utilize inclusive placements is that there are numerous evidence-based supports to ensure that time in the regular education classroom is more than pro forma. Teams can select peer-mediated interventions to increase communication and academic engagement [42–45]. UDL strategies and differentiated instruction can be used to support students with academic goals [35,38]. Finally, if students are engaging in challenging behavior, teams can incorporate behavioral intervention within the regular education classroom [46–48]. These examples are far from exhaustive, and educational teams should select interventions and accommodations that are aligned with the goals of the individual student. Fortunately, researchers continue to refine existing interventions and develop new interventions increasing the options for educational teams and opportunities for students with developmental disabilities.

Beyond the concerns of poor implementation for students with developmental disabilities, we also discussed the effects of including these students on other classroom stakeholders. Both special education and general education teachers identified the need for additional training and collaboration to successfully implement inclusive education for students with developmental disabilities [49,51,52]. To accomplish these goals, it is also important to consider the culture of the school and support from administration. When school principals are advocates for inclusion, inclusion is more successful [34]. Although these challenges are significant and cannot be dismissed, when students with developmental disabilities are successfully included in the regular education classroom, there are benefits for their peers as well [54]. Advocates for inclusion should also focus efforts on how to support classroom stakeholders as well as students with developmental disabilities. Without this support for other classroom stakeholders, students with developmental disabilities will continue to face barriers to inclusive placement.

Third, we reject the idea that homogenous instructional groupings are inherently superior or should be used as a justification for separate placement. When focused on academic goals, the Response-to-Intervention literature provides ample evidence [36] that when students are included in regular education classrooms, they are able to benefit from time spent in both heterogenous and homogenous groupings (e.g., participating in whole group activities, and small group instruction if indicated by progress monitoring data). We agree that in some instances homogenous grouping of students can be beneficial (e.g., decreased distractions, increased individualized and specialized instruction). However, placement in separate classes does not guarantee these benefits. In fact, there is evidence that when educational teams decide to utilize separate placements, students are faced with more distractions [29] and are provided with group rather than individualized instruction [30,31]. Beyond the evidence of the limitations of separate classrooms, students in the regular education class can make greater gains than matched peers in separate classrooms [26]. Similarly, there are improved social and communication opportunities in the regular education classroom when students are placed in heterogenous groupings with their peers [18]. Considering these limitations of separate classrooms, the benefits of the regular education classroom, and that the benefits of homogenous grouping can be achieved in the regular education classroom, we recommend that educational teams hoping to capitalize on the benefits of homogeneous grouping consider inclusive placement options rather than separate classrooms.

5.1. Recommendations for Future Research

When considering the limitations of existing published research, we agree that selection bias might affect the results of existing research and that comparing outcomes of

different educational placements does not speak to the quality of instruction received in any placement. Readers of these studies should carefully consider the participants included and the limitations of the conclusions based on small samples. However, even when considering these limitations, we view the existing research as promising and positive evidence that placement in the regular education classroom can benefit students with developmental disabilities. Similarly, studies that present data on educational placement using population totals but no individual student characteristics are also limited in the types of conclusions that can be made. Although these studies do not provide information about individual student experience, it is still valuable to understand larger trends and patterns of educational placement. A better understanding of these trends might also identify if there are systematic differences based on broader demographic factors (i.e., family economic status, differences in race, or differences in culture).

Moving forward, future research is needed in several areas. First, researchers should focus on further identifying research-based strategies that make inclusion successful, such as peer-mediated interventions, multi-tiered systems of support, and individualized instruction. Second, research that focuses on both educational placement and instruction across multiple school years is necessary. Although many researchers have described the settings where students are educated, few have examined the quality of these educational placements [58]. Future research should measure quality across the spectrum of placements. To address issues of selection bias more research is needed on the effectiveness of interventions for a large number of diverse students across varying classroom settings [15]. In addition to the diversity of ability, researchers should also consider other forms of diversity (e.g., race, ethnicity, gender, and income). Finally, research is needed to determine the degree to which effective inclusive practices are adopted and maintained outside of research projects that involve coaching and support beyond what is typical in schools.

5.2. Conclusions

Students with developmental disabilities continue to receive their education in environments other than the regular education classroom and as a result are unable to access numerous social and academic benefits. Educational teams, special educators, and school administrators have an opportunity to begin to increase access for these students. Although there are situations in which a separate placement might be justified, there is clearly an opportunity to better leverage the benefits of inclusive placements. Educational teams should carefully consider the benefits of different placement options and utilize the appropriate supports to ensure that students receive an education that is individualized to their needs and sufficiently ambitious. When teams carefully consider the benefits, philosophical perspectives, and practical considerations of inclusive placement, the decisions they make will be aligned with legal requirements and focused on the appropriate needs of the student. By the implementation of these considerations, teams can increase the time students spend in the regular education classroom and ensure that that time is meaningfully and genuinely inclusive.

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