Increasing Kindergarten Readiness amongst Special Education Students in D.C. Public Preschools

Prepared for AppleTree Institute
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Disclaimer

The author conducted this study as part of the program of professional education at the Frank Batten School of Leadership and Public Policy, University of Virginia. This paper is submitted in partial fulfillment of the course requirements for the Master of Public Policy degree. The judgments and conclusions are solely those of the author, and are not necessarily endorsed by the Batten School, by the University of Virginia, or by any other agency.

Honor Pledge

On my honor as a student, I have neither given nor received unauthorized aid on this assignment.

Abby Rothenberg

Glossary & Abbreviations

Term	Abbreviation	Definition
Community Based Organizations	CBOs	A non-profit organization providing education services to young children
Classroom Assessment Scoring System	CLASS	A district-wide, research based preschool classroom evaluation tool, implemented by OSSE
Early Childhood Education	ECE	Education for children ages 3-5
Every Child Ready	ECR	An early learning, technology-based instructional model developed by AppleTree Institute for Education Innovation
Early Development Instrument	EDI	A D.C.-wide measure of children's health, development, and school readiness
Individuals with Disabilities Education Act	IDEA	Legislation that ensures students with disabilities are provided with a free, public education that is tailored to their needs
Individualized Education Program	IEPs	A plan that describes the supports/accommodations a student with a disability is legally entitled to receive
Local Education Agencies	LEAs	A local level, educational institution that operates a publicly funded school(s) in D.C.
Least Restrictive Environment	LRE	Educating students in as inclusive of an educational setting as possible
Office of the State Superintendent of Education	OSSE	D.C.'s state education agency working to raise the quality of education across the district and provide financial assistance to do so
Professional Development	PD	Training and education seeking to provide necessary skills to completing a job well
Special Education	SPED	Instruction designed to meet the unique needs of students with disabilities
Students with Disabilities	SWDs	Students diagnosed with a disability (classified as SPED), with a huge range of potential disabilities
Uniform per Student Funding Formula	UPSFF	Formula used to determine annual operating funds across D.C.

Executive Summary

The following report seeks to address the **lack of kindergarten readiness amongst students with disabilities (SWDs) in public preschools and charter schools across the District of Columbia**. With significant disparities, poor outcomes, and high costs at risk, policymakers must address this issue efficiently and effectively moving forward.

The report will begin by delving deeper into this important issue, the context required to understand the current trends, the consequences for SWDs if not addressed, and a comprehensive review of existing evidence surrounding potential solutions.

Following this discussion, three potential policy alternatives are considered that support AppleTree's goal of increasing kindergarten readiness amongst SWDs in D.C. preschools:

1. Improving and Expanding AppleTree Institute's Every Child Ready (ECR) Programming into Inclusive Classrooms
2. Promoting D.C. Special Education Cooperative's SPED-focused Professional Development (PD) Opportunities
3. Developing a Charter School Collective with Privatized Screening and Individualized Education Plan (IEP) Development Services

They will be systematically evaluated on four key criteria that align with AppleTree's values and D.C.'s goals:

1. Cost-Effectiveness
2. Political Feasibility
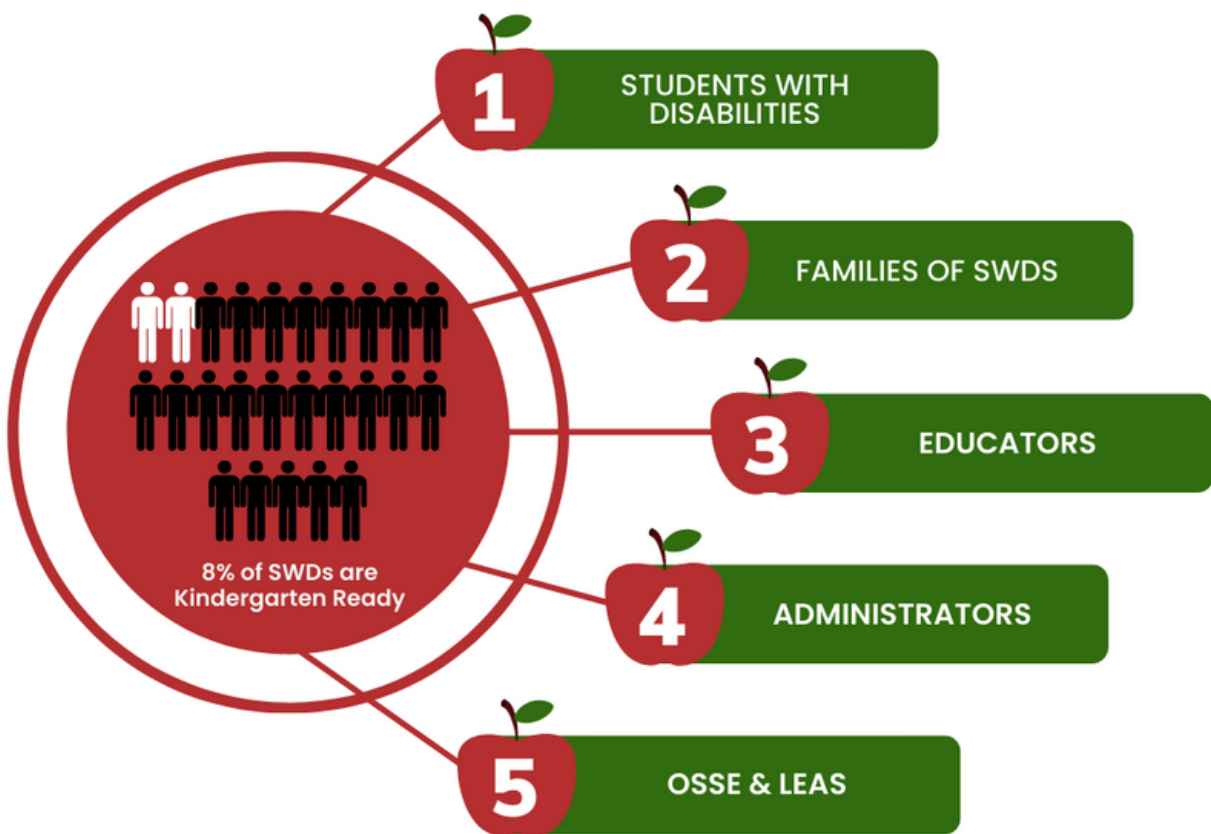3. Administrative Burden
4. Scalability

After thorough analysis, I provide a final recommendation that supports moving forward with the first, curriculum-based alternative, prior to focusing on professional development and IEP services. Supporting students in the classroom is the first step to addressing the lack of kindergarten readiness amongst SWDs in D.C.

Introduction

Problem Statement

With many legal requirements in place to support SWDs, and free universal preschool offered to three- and four-year-olds, D.C. is positioned to provide a strong education to all students. However, despite the Office of the State Superintendent's (OSSE) commitment to improving outcomes for these students, many SWDs are not provided with the tools they need to match their typically-developing peers and live up to their full potential (SWD Landscape Analysis, 2019). **Amongst three- and four-year-old students with IEPs in D.C. preschools, only 119 out of 1,488 are considered on-track to be fully kindergarten-ready, indicating that too few students have the support required to meet their educational needs** (Raise D.C. Progress Report, 2016). Research shows that upwards of 90% of SWDs can perform at grade level when supplied with appropriate supports, yet these 119 children make up only 8% of preschool students with IEPs. When these students are not kindergarten-ready, academic achievement continues to worsen and long-term outcomes suffer. This results in vast achievement gaps between SWDs and their peers, and significant disparities amongst lower-income and minority youth (SWD Landscape Analysis, 2019). Early intervention is crucial to ensuring these children obtain the skills to succeed both academically and in life broadly.

FIGURE #1: WHO HAS A STAKE?

1 STUDENTS WITH DISABILITIES
2 FAMILIES OF SWDS
3 EDUCATORS
4 ADMINISTRATORS
5 OSSE & LEAS
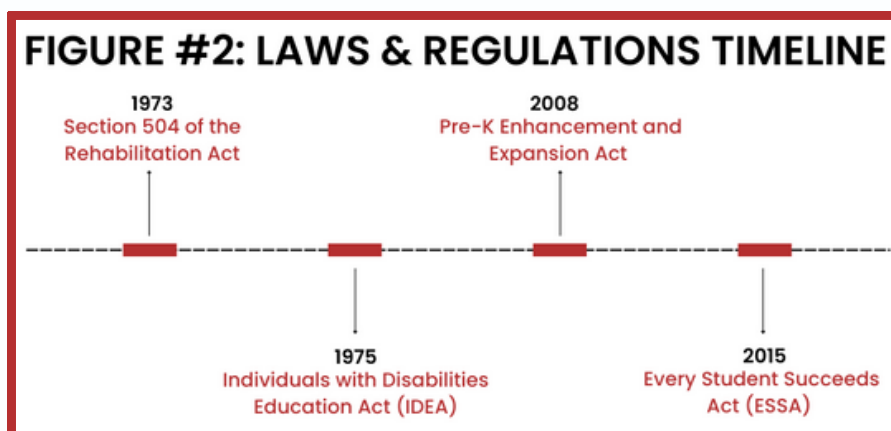
8% of SWDs are Kindergarten Ready

Client Overview

This report is prepared for AppleTree Institute in the District of Columbia. AppleTree provides free education for three- and four-year-old students through its 11 public charter schools across D.C. AppleTree schools are considered Tier 1, meaning they consistently provide top-quality preschool education (AppleTree Schools, 2023). This stems from the value they place on closing achievement gaps and setting every child up for success in kindergarten and beyond. They are extremely solution-focused, strive for continuous improvement, and use research-to-practice approaches to ensure effective outcomes (Mission & Vision, 2023). Leading these efforts is President and CEO of AppleTree, Jack McCarthy, who has served as the main point of contact for this report.

AppleTree is well-positioned to address the lack of kindergarten readiness amongst D.C. SWDs given their values and emphasis on supporting these students. They also serve on a team specifically dedicated to improving special education (SPED), alongside the D.C. Special Education Cooperative and other charter schools, which can help them expand the reach and impact of their efforts. Despite AppleTree schools priding themselves on providing IEPs and specialized instruction for SWDs, they still struggle to meet the needs of every SWD in the classroom (Frequently Asked Questions, n.d.). AppleTree is hoping to leverage their resources and position to better support their own SWDs, as well as help other preschools across D.C. do the same. This report provides potential policy options AppleTree could consider and hopes to guide them on next steps to help mitigate current barriers to supporting these students on their kindergarten readiness.

Background

Major Laws & Regulations

Many policies have been put in place on the national, state, and local level to provide SPED for SWDs. Driving these policies, and stated in law, is that "Disability is a natural part of the human experience and in no way diminishes the right of individuals to participate in or contribute to society" (About IDEA, n.d.). Improving educational opportunities for these children is an essential part of making this overarching goal a reality. Highlighted here are a few key pieces of legislation that impact the work that AppleTree Institute, and public preschools and charter schools across D.C., engage in (Appendix 1).

FIGURE #2: LAWS & REGULATIONS TIMELINE

1973
Section 504 of the Rehabilitation Act

2008
Pre-K Enhancement and Expansion Act

1975
Individuals with Disabilities Education Act (IDEA)

2015
Every Student Succeeds Act (ESSA)

The D.C. Education Landscape

D.C. has a unique educational landscape as a result of the mayor's takeover of public schools, the large presence of charter schools, the existence of OSSE, and the multitude of local education agencies (LEAs) (Expanding the LRE, 2010). It is important to understand the history and context of D.C. preschools, as well as the population of SWDs AppleTree is seeking to support.

D.C. public schools have a long history of challenges in providing high-quality education to all students, as there was a lengthy period of time where they were serving as both the state and local education agency with little oversight. These schools faced significant corruption, with many political figures serving their own self-interests, rather than focusing on bettering the education of D.C.'s children (McCarthy, 2023). To address the difficulties D.C. public schools faced with educating students to high standards, the D.C. School Reform Act was passed in 1995. This Act established the D.C. Public Charter School Board, and soon after, in 1996, the first of D.C.'s charter schools opened. Charter schools exist as a free alternative to traditional public schools and have control over academic programming, school structure, and expenditures (Understanding the D.C., n.d.). D.C. currently leads in the nation for the largest number of charter schools per capita with 135 public charter campuses spanning 69 LEAs, and 48% of its students attending charter schools. The remaining 52% attend traditional public schools across the District (Data and Reports, 2021; Public Charter School Data, n.d.). SWDs comprise 20% of the students in these classrooms (Kelley et al., 2021).

In 2007, OSSE was established to provide resources, funding, accountability, and support across D.C. public schools (Understanding the D.C., n.d.). OSSE is the lead agency ensuring that both charter schools and traditional public schools comply with the IDEA and that IEPs are developed when necessary. OSSE also oversees Strong Start, an early intervention program for toddlers and infants, and Early Stages, a screening and identification service for students ages 3-5 (Early Intervention, 2013).

Honing in on the three- and four-year-old age group, the Pre-K Enhancement and Expansion Act has provided early learning opportunities to thousands of children across D.C. A total of 165 sites provide early childhood education (ECE), including 78 traditional public schools, 61 public charter schools, and 26 community-based organizations (CBOs) (OSSE Annual Pre-K Report, 2019). Across D.C., there are about 18,000 three- and four-year-olds, with 11,448 enrolled in a formal, early learning program. Amongst these students, 1,488 had IEPs in 2021 due to their SPED classification. Although there are a variety of different SPED categories, the three primary disability categories include developmental delays, speech and language impairment, and autism (Special Education Feasibility Project, 2022).

Despite the development of charter schools, the creation of OSSE, and the increasing emphasis on improving SPED, 92% of SWDs are not kindergarten-ready. It is critical to understand the root of this issue and the serious consequences that will continue to grow if this problem is not addressed with urgency moving forward.

Causes of the Problem

Incentive towards Status Quo & Non-Public Placements
National, state, and local policy emphasizes the importance of supporting SWDs and improving their academic experiences. It further highlights that the desired approach is educating students in their school of choice, and favors integrating SWDs with their typically-developing peers as much as possible. However, schools face limited motivation to invest in improving the classroom experience for SWDs. Those who are making the decisions often do not have disabilities themselves, so there is a disconnect in understanding their needs. The small population of SWDs further hinders prioritization of this issue. Finally, the district incentivizes the status quo by subsidizing students to be transported to non-public placements when their local LEA cannot support their IEP (McCarthy, 2023). As a result, schools are unmotivated to change knowing that private ECE programs will handle these students instead. Not only does this cost the district a significantly higher amount, but when the default is to send students away, rather than develop ways to accommodate their needs, LEAs fail to meet their responsibility of educating all students.

"If OSSE acted on behalf of students with disabilities to ensure that whatever LEA their parents choose had the flexibility and resources to provide these students with the special education services they need, it would have profound effects on the other policies around school reform, school choice, school funding, and the ways in which school facilities are maintained and managed."
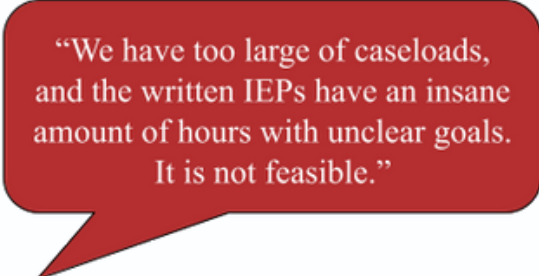
**Jack McCarthy,
President & CEO of
AppleTree Institute**

Gaps in Screening and IEP Services
Another component of the problem stems from issues with screening and IEP services (Appendix 2). In D.C., half of SWDs are identified after the age of 10, indicating that too many students with special needs are left without proper support for years of their education (*SWD Landscape Analysis*, 2019). Early identification is crucial to tackling achievement gaps and setting students up for success, but properly identifying SWDs at this early age is challenging. Early Stages is the central institution conducting evaluations and developing IEPs in D.C. public schools (Early Stages, 2023). They provide free evaluations for families who believe their child may be suffering from a disability, but rely on referrals and face many transparency issues

with how the process is conducted (Special Education Feasibility Project, 2022). Referrals are heavily based on the parents' judgment in this age group, but many parents lack the ability to identify certain disabilities or are motivated to believe their child is "fine." Even if an IEP is provided, they are often unclear and contain difficult goals for teachers to meet (Burns, 2023). As a result of this confusing and challenging process, numerous children who need an IEP fall under the radar during preschool years. Without the IEP in place to support their unique needs, kindergarten readiness is hard to achieve.

Under the IDEA, screenings and IEP services are mandated, yet there are significant gaps with this legislation that further exacerbate the issue. If a SWD attends a preschool program through a CBO, they are not provided with an IEP. This is because CBOs do not have the ability to conduct an IEP and are not required under law to do so (Stafford, 2023). In theory, D.C. public schools have the ability to step in to provide IEPs for these students, but they will not do so to prevent liability issues and increased caseloads (McCarthy, 2023). This major gap in screenings and IEPs is another reason many SWDs are not identified and thus fall behind in school.

Finally, some schools struggle with over-identifying and misidentifying students in this age group. There is a financial motivation to qualify kids as special needs given the weighted funding for these students, but this does not guarantee that all of the money goes towards SPED (McCarthy, 2023). The COVID-19 pandemic is another driving factor in over-identification, as teachers

"We have too large of caseloads, and the written IEPs have an insane amount of hours with unclear goals. It is not feasible."

DCPS Special Education Teacher

are jumping to conclusions with students below grade-level and rushing them through the screening process (Chertoff, 2023). In general, many kids who are "on the fence" are given IEPs without data to support this decision. This is largely driven by differences in school context, parent advocacy, and resources, when it should be rooted in data and evaluations. This leads to unmanageable caseloads for teachers and a misuse of available resources by taking them away from the students who need them most (Burns, 2023). It is critical to root these decisions in data, and utilize available resources to identify students more accurately and support them completely.

With barriers to obtaining screenings, major gaps in IEP services, and misidentification being commonplace, many young children suffer at this stage in the process. When children are not identified correctly, teachers are not able to properly support them, contributing to the lack of kindergarten readiness amongst SWDs.

Classroom Challenges
Adaptable, evidence-based curriculum and proper classroom management are necessary parts of preparing students for kindergarten, yet current approaches do not support SWDs to the extent necessary. There is no D.C.-wide mandate regarding the type of curriculum used in the classroom, which means that quality can vary drastically. Oftentimes, curriculum is not able to adapt to meet different students' needs, and is not built to support SWDs. There is also significant pressure on SPED teachers to navigate needed curriculum adjustments and locate their own resources, since their needs are often overlooked (Burns, 2023). This general lack of guidance and support means that teachers are not given the tools they need to succeed, and SWDs suffer as a result.

"Current programming is doing the bare minimum to be compliant with the IDEA, but not reaching the level necessary to progress these children to the level they are capable of."

**Julie Camerata,
DC Special Education Cooperative**

Furthermore, many classrooms face a major disconnect between related services for SWDs and the stakeholders involved. There is a lack of communication between general education teachers, SPED teachers, speech pathologists, therapists, administrators, and parents about the steps taken and what further work needs to be done (Camerata, 2023). This confusion can have serious consequences for SWDs, as progress is frequently stunted due to miscommunications and transparency issues.

"Anyone can show up and be a SPED teacher in DC. We see crazy resumes with no knowledge or experience teaching the most vulnerable population. What happens is the SWDs who need the most, get the least talented people."

**OSSE's Focus Group &
Interview Study**

Finally, many SPED teachers are overworked and thus unable to support students in the way they wish to. Many teachers do not have sufficient time throughout the week to meet the service hours required, and there is a major SPED teacher shortage, resulting in "wildly unmanageable" caseloads of children to support (Burns, 2023). High teacher turnover rates and a lack of SPED-specific qualifications are also major issues in ECE (SWD Landscape Analysis, n.d.). An increased amount of high-quality teachers is needed to provide SWDs with the attention and support needed to be prepared for kindergarten.

Another major issue resulting in the lack of kindergarten readiness amongst SWDs is insufficient PD opportunities that focus specifically on SPED. The D.C. Special Education Cooperative conducted a survey with local LEAs to understand the challenges faced. The survey reported that 91% of respondents rated their need for stronger PD as "high need" and 81% desired more specialized instruction for inclusive classroom settings (Expanding the LRE, 2010). Although educating students in the LRE is the goal, putting SWDs in inclusive classrooms without training general education teachers results in teachers who cannot properly support these students (Camerata, 2023). Many teachers also reported that the PD provided to them was not focused on ECE, let alone SPED, so it was unhelpful and often a "waste of time" (Burns, 2023). It is critical to properly train and support all teachers in how to best educate SWDs.

"Early intervention is the key - and we all know that - but they continue to not give us what we need to be able to support that"

DCPS Special Education Teacher

"No one is preparing general education teachers to teach diverse learners."

OSSE's Focus Group & Interview Study

Funding Challenges

Having enough funding to support programs and services in place for SWDs is another critical component. D.C. aims to support these students with a funding add-on for each SWD through the Uniform Per Student Funding Formula (UPSFF), but D.C.'s fragmented and complex system for serving SWDs means this has not been enough to solve the current problem (Welcome FY23 Budget, 2022). The D.C. Special Education Cooperative's survey found that 52% of LEAs reported spending more than 120% of their SPED allotment (Expanding the LRE, 2010). This indicates that sufficient funding is not provided, as schools are having to overspend and utilize other areas of their budget to better support SWDs. Furthermore, the number of SWDs has grown at a pace faster than anticipated, so funds are spread out and the effectiveness of these dollars are diluted. Finally, it was found that some ECE programs misspend their SPED funding, as LEAs are given flexibility over how to utilize the money given to them (2020 UPSFF Study, n.d.).

Consequences of the Problem

There are a variety of consequences, disparities, and costs related to the lack of kindergarten readiness amongst SWDs that motivate addressing the problem and highlight its importance to both AppleTree and society at large.

Poor Outcomes
When SWDs are not grade-level ready, it leads to a variety of poor outcomes. SWDs are not performing at the same level of academic achievement as their typically-developing peers, and the achievement gap continues to widen. Only 10% of SWDs performed at grade level on the 2019 Partnership for Assessment of Readiness for College and Careers (PARCC) exam compared to 45% of their non-disabled peers, and these gaps are prevalent academically across the board. Trends over time show that this issue has been longstanding and continues to worsen. SWDs' PARCC proficiency rate is 13.4%, which has dropped 8.2 percentage points over the past three years (D.C. PARCC Dashboard, n.d.). On national exams, D.C. has continuously fallen behind other areas, as well. The average National Assessment of Educational Progress (NAEP) score for D.C. SWDs is 11 points below the national average (SWD Landscape Analysis, 2019). The evidenced academic gaps occurring throughout these students' education can be mitigated. Starting this process during ECE is crucial to having the greatest impact on SWDs' outcomes.
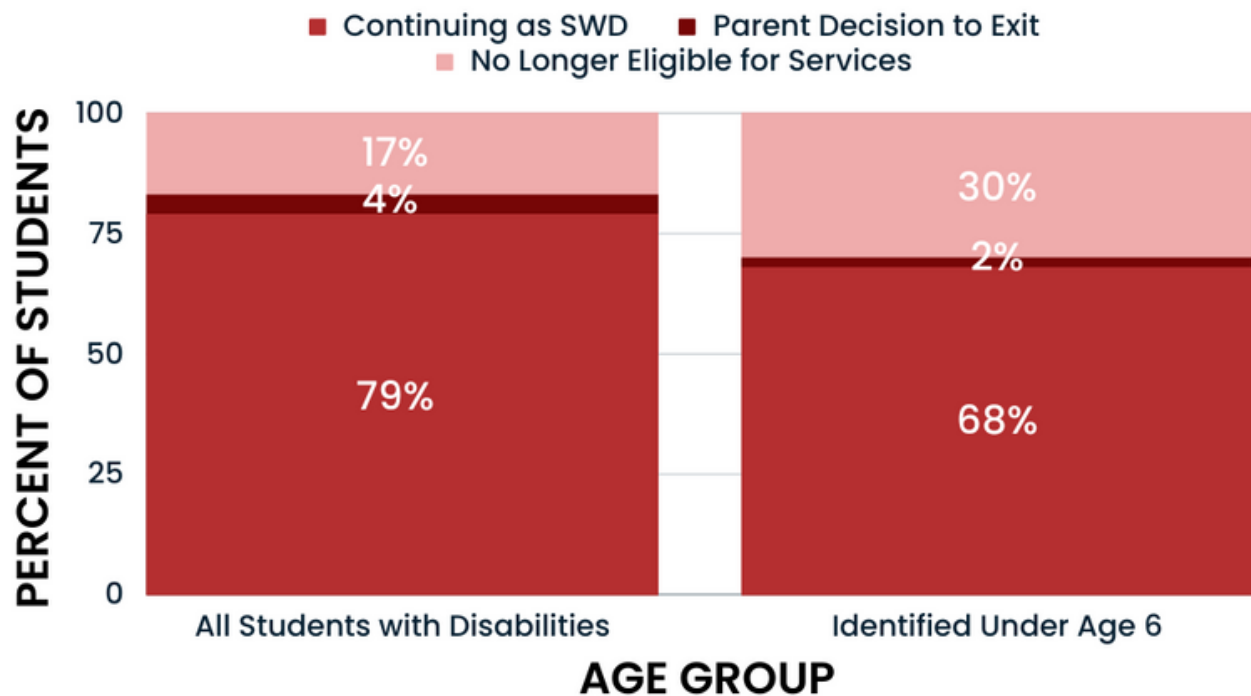
FIGURE #3: NAEP AVERAGE SCORES

4th grade scores, 2017

■ DC ■ National
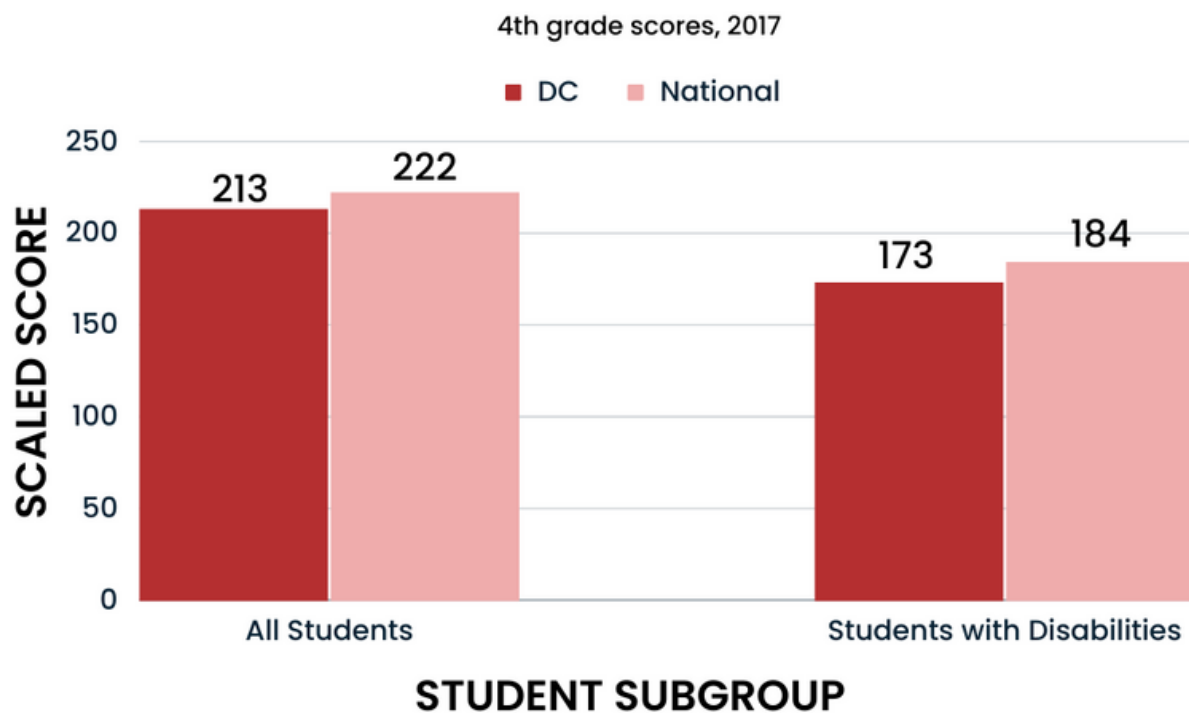
Source: SWD Landscape Analysis

In addition to academic outcomes, it is important to look at the proportion of SWDs exiting into general education, which signifies that they were provided with the tools needed to be in more inclusive settings. While some students will always need SPED, with the right supports in place, many students will not need a SPED classification for the entirety of their education. An even larger percentage of SWDs are capable of increasing the amount of time spent in general education and inclusive classrooms. However, current data shows that D.C. is not reaching these goals. Only 17% of all SWDs across D.C. exit into general education over time, which decreases to 0% once children hit the age of 14. This puts D.C. last in the nation, falling far behind other comparable urban districts. Moreover, 9% of SWDs are served in separate classrooms or schools, rather than general education spaces, which is three times the national average (SWD Landscape Analysis, 2019). These outcomes likely stem from the lack of proper programming, PD, and identification tactics in place to support SWDs in reaching their full potential. Additionally, 50% of SWDs in D.C. are not identified as special needs until after the age of 10, which makes reaching these goals even harder. Evidence shows that students who are identified before the age of 6 are significantly more likely to exit SPED compared to those identified at later ages, so improving ECE for SWDs is critical to addressing these poor outcomes (SWD Landscape Analysis, 2019).

FIGURE #4: EXITS FOLLOWING INITIAL ELIGIBILITY

Legend:
- Continuing as SWD
- Parent Decision to Exit
- No Longer Eligible for Services

PERCENT OF STUDENTS

All Students with Disabilities:
- 17% (No Longer Eligible for Services)
- 4% (Parent Decision to Exit)
- 79% (Continuing as SWD)

Identified Under Age 6:
- 30% (No Longer Eligible for Services)
- 2% (Parent Decision to Exit)
- 68% (Continuing as SWD)

AGE GROUP

Source: SWD Landscape Analysis

SWDs also experience disparities in non-test score outcomes, such as lower attendance rates, higher discipline rates, and lower retention than their peers. They are twice as likely to face discipline than non-SWDs, after controlling for other demographic factors. Additionally, more than 1 out of 4 SWDs ends up repeating ninth grade, which is more than double the rate of their peers (SWD Landscape Analysis, 2019). These setbacks extend into high school graduation rates, given that about 75% of all D.C. students graduate high school, compared to only 58% of SWDs. College enrollment is also impacted, as their six month college enrollment rate is 16 percentage points lower than the general D.C. population (Academic Performance, 2021). ECE is a critical part of addressing these gaps in academic performance and opportunity for SWDs.

Within the population of SWDs, there are also significant disparities to consider, as minority and lower-income SWDs face further setbacks. One in four Black males and one in eight Black females are identified as SPED, which is twice the rate of their White peers. Furthermore, at-risk students are identified as SWDs at significantly higher rates. African American students are the most likely population of SWDs to remain classified as SPED throughout their education and not exit these services once identified. Finally, only 4% of students who are both lower-income and special needs performed at grade level on the 2019 ELA assessment (SWD Landscape Analysis, 2019). These disparities are ultimately increasing the opportunity gaps already present in education broadly, deepening the issue at hand.
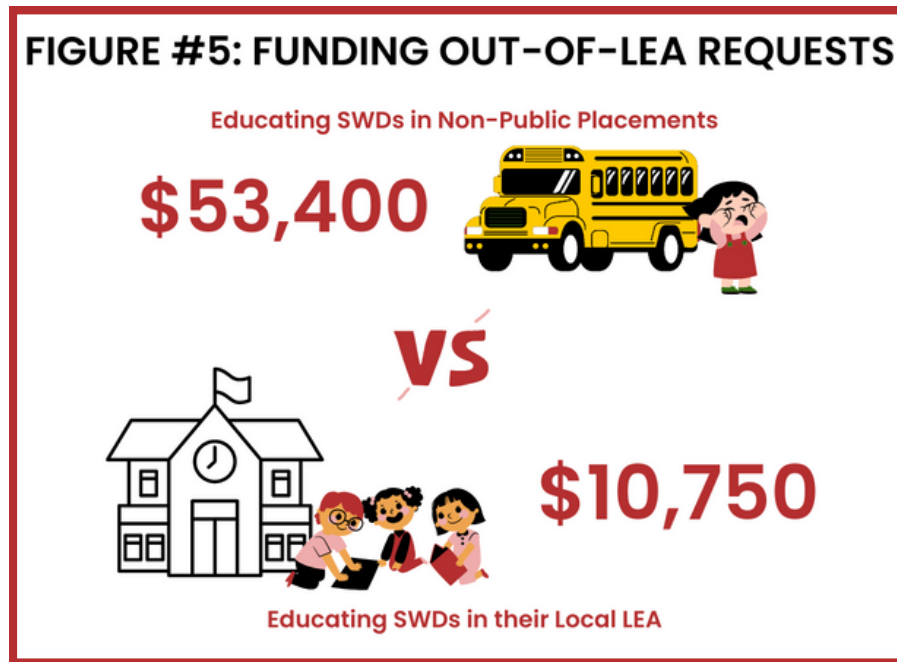
Finally, obtaining a strong education matters for long-term well-being. It is associated with higher income and financial stability, improved health and happiness, more political and community involvement, and higher personal satisfaction (Why Is Education Important, 2020). These are opportunities and benefits that SWDs miss out on without the support they deserve. The National Center on Educational Outcomes reported that up to 90% of SWDs have the capacity to perform at grade level when provided with the services and support they need (Quenemoen & Thurlow, n.d.). Therefore, it is important to strengthen ECE and prepare them for further education to ensure all students, regardless of background or disability status, are given the opportunity to succeed.

Costs to Society
There are many direct and indirect costs to consider in regards to this issue. A major direct, out-of-pocket cost stems from many of these SWDs going to out-of-LEA placements as a result of the lack of support from their local LEAs. When these students are educated in public schools, they rely on the UPSFF to fund services that support SWDs. After considering the population of SWDs and the weighted funding they get for their disability status, the overall total above base level funding is about $123,000,000 and the per-pupil amount is $10,750 (Appendix 3).

However, not all of these students wind up in their LEA, as some students request out-of-LEA placements to better reach their needs. About 65% of LEAs request out-of-LEA placements, totaling in about 152 requests (Expanding the LRE, 2010). About 50% of these requests result in students actually getting placed in non-public programs, so 76 students bear the additional costs. When a student is transferred to a private option, OSSE bears the cost of tuition and

transportation. With this in mind, the total funding for out-of-LEA placements is $4,056,000, or about $53,400 per student (Appendix 3). This is over four times the amount it costs to fund a child in a public program. Furthermore, the students placed in these programs spend two hours or more on buses each day, totalling 15 full days of their time on a bus over the course of a school year (SWD Landscape Analysis, 2019). Addressing how to support students in their LEA is a crucial way to save money, utilize funds more effectively, and use time wisely.

FIGURE #5: FUNDING OUT-OF-LEA REQUESTS

Educating SWDs in Non-Public Placements

$53,400

VS

$10,750

Educating SWDs in their Local LEA

As addressed, there are significant costs that stem from the inequities and widening academic achievement gaps amongst SWDs. These students have lower incomes, worse health outcomes, and less community involvement (Why Is Education Important, 2020). They are also less likely to graduate from high school, acquire a college education, and have financially-stable job opportunities (Academic Performance, 2021). There are major opportunity costs with these lost experiences and wages for SWDs who are not able to get the educational support they need. Families may also face costs, as they spend time trying to navigate SPED and support their children at home. The economy more broadly may suffer if SWDs do not enter the workforce, and unemployment rates are about three times as large for SWDs compared to nondisabled peers (Removing Obstacles, n.d.). This is not because they are incapable of employment and workplace success, but rather due to educational disparities and employer biases. This is a missed opportunity for employment and increased money entering into the economy. Additionally, with less political and community involvement, society as a whole suffers. Investing in education for SWDs is crucial to combat these externalities and major costs.

"We can shift the narrative around who these kids are and what they can accomplish."

OSSE's Focus Group & Interview Study

Existing Evidence: Strategies for Supporting SWDs

Evidence Overview

Evidence of supporting SWDs in the preschool space is extremely limited. The following studies cited focus on supporting SWDs and improving SPED more broadly, and thus may be limited in their generalizability. Even so, they highlight important findings that emphasize the need for stronger curriculum, PD, and IEP services to best support SWDs in D.C.

Classroom Tactics

Inclusion-Based Models

Given the IDEA's emphasis on educating students in the LRE, many schools across the nation use an inclusion-based model, which seeks to keep SWDs in general education classrooms as much as possible. Researchers point to the historical stigma and discrimination against SWDs that has set these children back, thus identifying inclusion as a key step in their success (UNICEF, 2013). Boston has implemented this model successfully in their charter school programs by administering educational practices that benefit students as a whole, rather than targeting SWDs. Their inclusive classrooms, high expectations, and data-driven instruction resulted in more SWDs meeting key high school graduation requirements, scoring higher on exams, and enrolling in college. Boston charters also decreased the achievement gap between SWDs and their non-disabled peers by 30% in math and 20% in reading through this approach (Setren, 2020). Given Boston's unique mix of school types and the lottery system for entering many of the city's charter schools, the researchers were able to develop a "counterfactual" to determine how exposure to stronger general education affected SWDs. This sound study design and the statistically significant results highlight the importance of inclusive settings for SWDs (Setren, 2020). Similar effects were found in Denver and New York, who have schools with related models (Abdulkadiroglu et al., n.d.; Dobbie & Fryer, 2013). Although targeted services may still be required for SWDs who need more individualized attention, the evidence points to the need for D.C. to implement programming that can support all students in the classroom.

Curriculum Adjustments

In order to make the curriculum more accessible to SWDs, adjustments are often needed to meet their unique needs. These adjustments are usually disability-specific and should be rooted in the student's IEP. Broadly, it is crucial that teachers keep track of the adjustments they are making and utilize data to ensure steps taken are effective (Poed, n.d.).

Furthermore, there are a few key developmental tools that teachers should prioritize, due to their evidenced success in supporting SWDs. The first is to teach self-monitoring, self-evaluation, and self-advocacy skills to help build up independence and motivation. One literature review of eleven studies showcased that developing self-regulation skills had statistically significant results on academic gains for SWDs (Fowler et al., 2007). Empowering these students and increasing expectations can help guide them towards stronger achievement. Social competence also requires increased focus, as it helps SWDs connect with their peers and

engage in general education settings. One study found that increased participation in unstructured social activities was the most beneficial for this population (Brooks et al., 2014). Other research discusses the importance of early interventions centering around the organization of peer social networks and opportunities to facilitate play in school settings (Guralnick, 2010). Although this may not have a direct impact on academic gains, inclusion and comfortability in classrooms may indirectly support academic goals.

Therapy
Another classroom-based approach is the use of therapy to provide SWDs individualized support in reaching their goals. One study analyzed the use of individual and group therapy sessions for SWDs, assessing students prior to beginning and again seven months later. They found significant increases in both fine and gross motor skills for both groups, with a rate approximately that of typically-developing children (Davies & Gavin, 1994). Another study looked at parental involvement in therapy programs, finding that when parents are included, students progressed at a rate almost two times that of the control group. Therapy, coupled with parental support, promoted cognitive ability, language skills, social competence, and self-care amongst SWDs (Lin et al., 2018). Many peer communities utilize therapy as a service to support SWDs, which strengthens the evidence that this can lead to stronger outcomes for these children and be a good addition to inclusion-based settings (Detroit Institute for Children, n.d.).

Teacher Supports

Communication and Collaboration
Given the consistent barriers to collaboration and resulting miscommunications that have posed challenges for SWDs, an increased emphasis on communication and multi-stakeholder involvement is crucial (*Early Intervention*, 2013). One study analyzed a collaborative consultation program between stakeholders, ensuring that goals were agreed upon and that resolutions to any dilemmas were tackled together. It required consistent meeting times and implemented accountability measures, which were dynamics that saw great success (Villeneuve & Hutchinson, 2015). Incorporating these types of practices into the classrooms between students, parents, and teachers is key. Additionally, "expansive learning" occurs when everyone on the team utilizes each other's knowledge and experience to develop unique solutions to a shared problem (Engestrom, 2012). By pulling in more voices and engaging in clearer communication, children are more likely to improve academically (Giangreco, 1995; Kampwirth & Powers, 2006). It is important to keep in mind that high turnover rates make consistent communication challenging, despite its importance for SWDs.

Professional Development
PD is a critical way to tackle the frequent disconnect between general education and SPED teachers, and the lack of preparedness in supporting SWDs. Research suggests emphasis on a blend of teaching basics, such as lesson planning and classroom management, with more advanced topics, including content-area preparation and effective pedagogy. It further discusses the importance of PD being content-focused, situated in classroom settings, and centered on student data. Stronger collegial support and communication helps to round-out this PD approach (Leko & Brownell, 2009).

There are also numerous studies that highlight the importance of PD for general education and SPED teachers on these topics. With inclusive classrooms becoming commonplace, general education teachers can no longer take a back seat with regards to SWDs, and thus require stronger PD to develop the necessary skills. Research on co-teaching focuses on embedded PD between these two types of teachers in the classroom to share knowledge and skills in "real time." The findings of this qualitative study showcased increased opportunities for students as a result (Shaffer & Thomas-Brown, 2015). Stronger, more SPED-specific PD must be a priority for D.C.

Screenings & IEP Development

Frequent Screenings
Ideally, every child should be screened upon entering preschool to increase the likelihood of early identification. Having a streamlined and easy-to-understand approach to these screenings is critical to ensure that teachers complete them efficiently and correctly, prior to referring at-risk students for further evaluation (K. Singleton, 2023). Overarching entities, like OSSE, must play a role in ensuring public preschools and charter schools abide by these standards. However, to combat over-identification, at-risk students should be monitored throughout the year to gauge progress prior to moving through the entire IEP process. Rooting decisions in data and evaluations is key (Chertoff, 2023).

Inclusion of Stakeholders' Voices
Oftentimes, decisions regarding SPED are made without the consideration of SWDs themselves. As IEPs are developed and classroom adjustments are determined, SWDs and their parents should be included in the conversation. One study showcased the need for increasing involvement of students and parents in educational decision-making (Poed, n.d.). Ultimately, the primary focus should be on what will best support the child and how to maintain effectiveness over time.

Criteria

Criteria #1: Cost-Effectiveness
A universal goal across D.C. preschools is to ensure that all students are prepared for kindergarten, and ultimately the rest of their academic journey and beyond. Therefore, it is crucial that any recommended policy alternative increases the proportion of SWDs who meet kindergarten-ready standards. To do so, I utilize the Early Development Instrument (EDI) as a baseline measure. The EDI is an internationally recognized tool that provides a citywide snapshot of children's health, development, and school readiness through a series of holistic criteria (Raise D.C., 2016). OSSE collected EDI data in 2016 in D.C. public preschools and charter schools, highlighting that only 8% of SWDs met kindergarten standards. To measure the overall effectiveness of a policy alternative, I consider the increased number of kindergarten-ready students above the 8% baseline level. I utilize data from smaller scale implementations of the alternatives to extrapolate numbers and determine how it may affect the number of kindergarten-ready SWDs in D.C.

Given funding limits, it is also important to consider the costs associated with each policy alternative (Appendix 8). To produce the final metric, I estimate the total cost associated with each alternative and divide it by the estimated increase in kindergarten-ready SWDs. This will provide the investment needed to yield one additional kindergarten-ready student, so alternatives with <u>lower values</u> will be preferred. Ultimately, each alternative is ranked low, medium, or high in cost-effectiveness.

Criteria #2: Political Feasibility

A policy alternative will not be viable if it is not politically feasible, meaning that it has sufficient stakeholder support in the current political climate to be implemented. I consider whose permission is needed to pursue the policy option, the level of support shown towards similar programs, the degree of buy-in from important stakeholders, and whether any major opposition exists. The alternatives are ranked low, moderate, or high for their political feasibility. Highly-feasible alternatives have significant support and buy-in, high autonomy, and limited or easy-to-combat opposition. A low-feasibility rating means that at least one major political roadblock is anticipated.

Criteria #3: Administrative Burden

This criterion considers the administrative burden both the overarching entity and LEAs would face to implement a given alternative. This category will consider the amount of additional staffing, phasing of implementation, administrative coordination, skill development, and infrastructure changes required. Each option is ranked limited, moderate, or extensive for their administrative burden. Alternatives that are easier to implement and do not require many alterations relative to the status quo will have limited administrative burden, whereas policy options that are more complex and burdensome will be given a considerable or extensive rating

Criteria #4: Scalability

Scalability of the policy alternative across D.C. preschools is analyzed, given the importance of supporting SWDs D.C.-wide. This criterion will look at scalability from a small subset of LEAs to a much larger proportion of D.C.'s preschools, and how adaptable the solution is in different settings. Given that charter schools and public preschools operate quite differently, this criterion will also consider the level of difficulty leaders would face in getting LEAs to adopt the approach. Each alternative will be given a rating of either low, moderate, or high scalability. Solutions that are likely to have high take-up rates and strong fidelity with implementation when expanded are given highly-scalable ratings.

Timeframe:

A five-year timeline is used to project outcomes for each alternative, with the current 2022-2023 school year utilized as the baseline. Results are thus projected into the 2027-2028 school year.
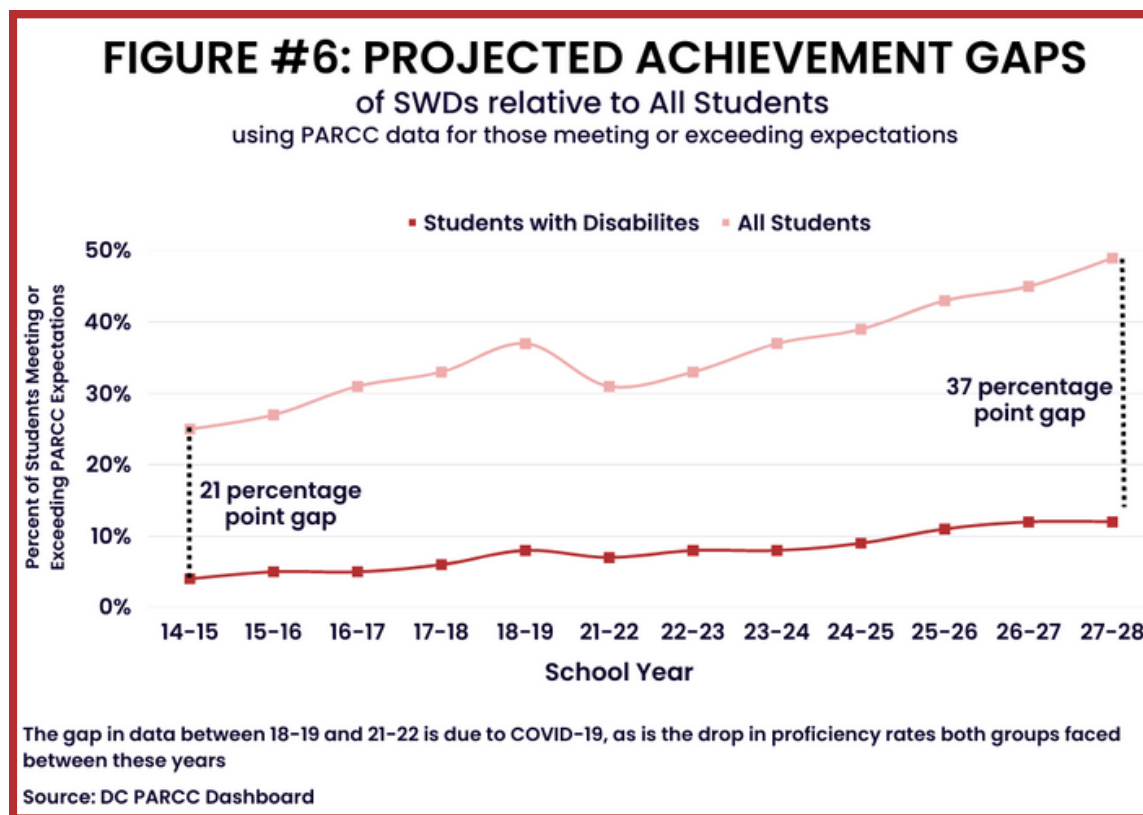
Weighting Criteria:

Given that AppleTree's priorities center around effectiveness in supporting SWDs and their ability to reach students across D.C., the cost-effectiveness and scalability criterion are weighted double.

Alternatives

Status Quo

Before diving into three potential policy alternatives, it is crucial to understand current trends and what D.C. may look like if this issue goes unresolved. Currently, SWDs face significant barriers to being kindergarten-ready due to a lack of capacity from their LEAs, gaps in IEP services, curriculum with inadequate differentiation opportunities, and PD that does not equip teachers to support them. The EDI measure that provided the 8% baseline-level of kindergarten readiness amongst SWDs has not been evaluated since. However, academic performance trends over time show that this issue has been longstanding and continues to worsen. SWDs' proficiency rates on academic exams are not improving at the rate their peers' are, and thus achievement gaps continue to widen (D.C. PARCC, n.d.). These trends are likely to continue worsening without intervention (Appendix 4).

FIGURE #6: PROJECTED ACHIEVEMENT GAPS
of SWDs relative to All Students
using PARCC data for those meeting or exceeding expectations

The gap in data between 18-19 and 21-22 is due to COVID-19, as is the drop in proficiency rates both groups faced between these years

Source: DC PARCC Dashboard

There are certainly many aspects of the problem to consider and different pathways that could effectively mitigate barriers to kindergarten readiness, but this report dives into three of the biggest threats: a lack of sufficient classroom support, professional development not setting teachers up for success, and major gaps in screenings and IEP development.

Alternative #1: Improve and Expand Every Child Ready Programming into Inclusive Classrooms across D.C.

Every Child Ready is an early learning instructional model that AppleTree Institute for Education Innovation (AIEI) developed and has implemented in 103 classrooms across D.C. (McCarthy, 2023). It is a technology-based curriculum built to flexibly customize to students' learning needs (ECR Curriculum Sample, 2023). Most notably, it has three tiers of instruction to adapt to different baseline levels, with tier 3 mostly serving SWDs (McCarthy, 2023). To ensure the program is having its intended impacts, ECR has built-in, on-going progress monitoring tools, with coaches provided for implementation support (How to Measure Success, 2023). The intention of the platform is to provide a one-stop-shop for teachers and administration to make planning easier, maximize time with children in the classroom, and customize to different students' needs in real time (Platform Information, 2023).

This policy option will leverage the ECR framework to build out tier 3 curriculum to better support SWDs. The new tier 3 model will be piloted in 2 self-contained classrooms this upcoming fall, and will rely on the monitoring tools to evaluate outcomes, prior to expanding into other spaces (How to Measure Success, 2023). This alternative also entails expanding ECR curriculum into inclusive classrooms across D.C., with a targeted growth rate of 15% annually to reach more students (Brown, 2023).

Evaluation of Alternative #1

Cost-Effectiveness:
Expanding ECR at the targeted 15% annual growth rate will increase the number of classrooms using the platform by more than double by the end of the five year timeline, which requires more coaches to support implementation (Brown, 2023). Piloting and building out tier 3 curriculum into self-contained classrooms requires funds for technology development, staff salaries, and on boarding. Due to lower enrollment since COVID-19, many classrooms are not being utilized, leaving room to develop 12 self-contained classrooms using ECR (*Developing the Vision*, 2022; Brown, 2023). Two pilot classrooms will open up first, followed by 10 more over the following years. Building out tier 3 curriculum and expanding ECR into more classrooms results in a total net-present-value (NPV) cost of $7,350,000, given that it supports *all* students in the classroom. Honing in on SWDs, the total cost lowers to $955,000 (Appendix 5).

In regards to effectiveness, ECR has performed extremely well on its evaluation reports, with academic and social-emotional scores improving immensely. ECR has also performed consistently higher than CLASS assessment averages, the district-wide classroom evaluation tool. Ultimately, 90% of children in ECR classrooms met achievement goals and were kindergarten-ready (*ECR Results*, 2020). With achievement gaps in mind, this translates into an 11 percentage point increase in kindergarten readiness for SWDs. At the conclusion of the five year timeline, 242 SWDs using ECR will be kindergarten-ready. Considering the costs and outcomes holistically, this translates into a cost of $3,950 per kindergarten-ready student, resulting in a **low cost and very cost-effective** rating (Appendix 5).

Political Feasibility:
AIEI has started to develop a stronger tier 3 curriculum and conducted a project to address gaps in the current ECR infrastructure (*SPED Discovery Results*, 2023). They have clearly taken initiative to improve ECR and have expressed a desire to expand it, showing strong stakeholder support (Brown, 2023). Approval from OSSE and School Boards is not required to implement classroom curriculums, so no political barriers to take-up exist. However, developing strategic partnerships with these stakeholders to promote ECR can increase success due to their expansive reach (Brown, 2023). Ultimately, this alternative receives a **high political feasibility** rating.

Administrative Burden:
In order to improve and expand ECR, AIEI has to invest time and funding into technology development, staffing, strategic messaging, and LEA coordination (Brown, 2023). There are also costs to accessing and implementing ECR for the schools. These costs include annual subscription fees, materials, and training, but a district-wide analysis shows that prices are comparable to other programs (*ECR Simple Competitive Analysis*, 2016). Although there is a burden to switching curriculums, ECR provides training to increase ease of implementation. With the flexibility of three curriculum tiers, teachers are likely to have an easier time supporting students in the classroom (*ECR Curriculum Sample, 2023*). Resultantly, this option has **moderate administrative burden**.

Scalability:
Developing buy-in from other preschools is necessary to meet target growth rates. Currently, ECR is utilized in 103 classrooms across D.C. due to its strong evaluation reports and access to coaching (Brown, 2023). This is a promising sign that buy-in from other LEAs will follow over time as the curriculum improves and strategic enrollment messaging is strengthened. Barriers to scaling this up are the costs associated with the technology and the time needed to learn a new program. However, if a school's current classroom tactics are not working, we can assume that motivation to better support students will mitigate barriers and increase take-up. This alternative thus scores **high on scalability**.

Key Takeaways:
1) Expanding ECR is very cost-effective, and can potentially serve even greater numbers of SWDs if the target growth rate is surpassed and tier 3 curriculum is improved
2) It is critical to raise awareness for ECR's positive effects and develop strategic partnerships to increase take-up from other LEAs, as ensuring SWDs are supported in. the classroom is critical to their long-term success

Alternative #2: Promote D.C. Special Education Cooperative's SPED-focused Professional Development Opportunities

The D.C. Special Education Cooperative focuses on providing services that support SWDs across D.C. Charter schools. In order to cultivate the strongest outcomes for SWDs, the Co-op offers evidence-backed programming to better prepare teachers. ELEVATE is the core program that improves SPED instruction by conducting a classroom-specific needs assessment and providing PD services focused on areas that need improvement. The annual ELEVATE conference leverages local expertise to highlight these best practices (*ELEVATE*, 2023). Tours of demonstration classrooms are also available to showcase how the Universal Design for Learning (UDL) framework sets inclusive classrooms up for success. These tours allow teachers to visualize tactics in action and develop an implementation strategy (*Demonstration Classrooms*, 2023).

Currently, three demonstration classrooms exist that focus on elementary-level schooling. This policy alternative entails developing two preschool-focused demonstration classrooms, and expanding access to the Co-op's PD approach. This involves increasing access to the ELEVATE software, inviting more LEAs to the annual conference, and expanding infrastructure to allow more schools to benefit from the demonstration model.

Evaluation of Alternative #2

Cost-Effectiveness:
In order to expand the positive effects of the demonstration classroom tours, two preschool, SPED demonstration classrooms should be developed over the next few years. This will require funding for development, training, and materials, as well as preparation costs and teacher stipends once the classrooms are ready. Through social media, bulletin posts, and strategic partnerships, the Co-Op can also extend more invites to the ELEVATE conference, which requires funding for a larger venue. Finally, this alternative aims to increase access to the ELEVATE coaching, with a gradual addition to their typical 5-schools-per-year caseload and more coaches to support expansion. With these considerations in mind, the NPV of the costs total to $875,000 over the 5 years (Appendix 6).

In regards to effectiveness, the demonstration classrooms and ELEVATE coaching focus on helping schools meet their academic goals through a UDL framework. This approach emphasizes teaching to individual students, rather than an average, and ensures that barriers to learning and creativity are eliminated. The ultimate goal is to equip teachers with the best practices for teaching, and not allow IEPs to drive expectations (UDL, 2023). Bridges PCS is a 4th grade classroom that utilized the Co-Op's tools and UDL framework, ultimately leading to 85% of their students exceeding expectations. I translated this into kindergarten readiness amongst the preschool age-group and considered present achievement gaps. Looking holistically at ELEVATE trainings, the conference, and a demonstration classroom tour, 38 additional SWDs will be kindergarten-ready using these approaches. This translates into a cost of $23,000 per kindergarten-ready SWD, resulting in a **high cost and not very cost-effective rating** (Appendix 6).

Political Feasibility:
The demonstration classrooms are modeled off the Reggio Emilia approach, which is an international network of representatives aiming to share their PD and classroom approaches (Reggio Emilia, 2023). Given its successful implementation in 34 countries and continued expansion world-wide, there is evidence of broad political feasibility. The Co-Op also expressed interest in expanding into the preschool age-group, and is considering AppleTree as one of the preschool demonstration classrooms (Camerata, 2023). As an NGO, there are no political constraints on who can access their PD model outside of the ones they themselves place. Establishing a strategic partnership with OSSE may help to increase take-up, but this is not required. This option is resultantly given a **high political feasibility** rating.

Administrative Burden:
The Co-Op currently has three demonstration classrooms in elementary schools and is developing a high-school-level classroom presently (Camerata, 2023). Creating two preschool demonstration classrooms would be an additional burden in terms of cost and time, especially to ensure effectiveness is not falling flat. However, it is a relatively easy lift for the Co-Op once set up, given that tours are mostly controlled by the teachers providing them. Expanding the ELEVATE conference is also relatively easy, as increasing attendance just entails funding a larger venue and spreading awareness. Increasing access to ELEVATE PD requires the Co-Op to expand current caps placed on these resources and increase the number of coaches, but they have sufficient resources for the time being. Accessing the demonstrations and needs assessment is free to schools, and they can decide if they want to contract with the Co-Op for personalized coaching (Camerata, 2023). However, they do face the burden of time and transportation to access these resources. Holistically, this alternative has a **limited administrative burden**.

Scalability:
The classrooms that offer demonstrations went through ELEVATE, had successful outcomes, and are passionate about offering their services to others who wish to serve SWDs better. Finding ELEVATE-improved classrooms who are willing to offer tours has not been a challenge so far, but could get increasingly difficult as they aim to develop more classrooms. Although they only serve charter schools currently, the Co-op is open to working with all D.C. public schools to benefit children across the board. However, the Co-op currently caps themselves at 4 tours per demonstration classroom annually, and 4 to 6 schools in the ELEVATE continuous improvement process to ensure effectiveness is not sacrificed (Camerata, 2023). Scaling above these levels to increase reach may be difficult, even if more schools show interest, because of administrative and infrastructure constraints. Therefore, **scalability is ranked low**.

Key Takeaways:
1) Although PD is critical to supporting SWDs, this alternative is not nearly as cost-effective or scalable due to constraints on how many schools the Co-Op can support at one time
2) However, it is quite feasible with low administrative burden and thus with increased support and time, this is a promising option - especially given how important setting teachers up for success is

Alternative #3: Develop a Charter School Collective with Privatized Screening and IEP Development Services

Early Stages is the central institution responsible for identifying SWDs and developing IEPs in D.C. public schools (Early Stages, 2023). Although it is provided with funding to complete its work, there are significant transparency issues, major gaps in screenings for charter schools and CBOs, and many struggling students that are overlooked due to its reliance on referrals (Special Education Feasibility Project, 2022). Furthermore, despite IEP services being mandated under the IDEA, many CBOs and charter schools lack the capacity and infrastructure to support their proper implementation. Charter schools across the country have worked to combat capacity issues by forming collectives, or charter management organizations, that help reduce costs, spread risks, share resources, and expand knowledge (O'Neil & Garda, 2021).

This policy alternative involves D.C. charter schools becoming a collective to increase capacity and share knowledge and resources, which can greatly benefit SWDs (O'Neil & Garda, 2021). This collective would contract out to a private entity, whether that be an outside organization or an in-house charter school with strong infrastructure, that would provide screening services and IEP support to help fill these gaps. The ultimate goal is for all students to obtain initial screenings and ensure that those who need to take further steps have the support they need. It will be important to incorporate families into this process and work diligently with the school the student will attend to effectively implement the screenings and IEPs.

Evaluation of Alternative #3

Cost-Effectiveness:
Creating a collective allows schools to work together, and thus establishes economies of scale and saves money in the long-run (O'Neil & Garda, 2021). However, designating a new entity to provide screenings, evaluations, and IEPs to SWDs will have significant costs to consider, including development, training, salaries, transportation, and technology. These costs help support the entity in providing initial screenings to students in public charter schools and CBOs, operating a diagnostic center for evaluations, visiting schools that need more direct support for evaluations, and ensuring that staff is prepared to support IEP development. In total, this costs $3,385,000 for the entity providing the services, but hopefully the collective could help lower or spread-out costs in the long-term (Appendix 7).

Diving into outcomes, we know that 13% of students enrolled in D.C. public preschool programs have IEPs (*Special Education Feasibility Project,* 2022). However, across D.C. broadly, 1 in 5 students have IEPs, which means that preschools are falling 7 percentage points short of the district average (*SWD Landscape Analysis*, n.d.). This alternative hopes to close this gap, and believes it can do so by targeting charter schools and CBOs, the entities that often struggle most. After determining how many students this alternative could reach in getting an IEP, 180 additional SWDs will be kindergarten-ready. This translates into a cost of $18,800 per kindergarten-ready SWD, resulting in a **medium cost-effectiveness** rating (Appendix 7).

Political Feasibility:
There are a few barriers with political feasibility to keep in mind. Early Stages is the established entity responsible, so developing an additional organization could be a political conflict of interest. OSSE's approval will be required to ensure there is no "legal minefield" and opposition does not become a barrier to success (McCarthy, 2023). Luckily, there are many successful models of charter school collectives across the country that showcase the benefits of this type of tool. For example, the Harlem Children's Zone developed a neighborhood-wide network of services to help students thrive, showing major improvements in poverty rates and educational attainment (Harlem Children's Zone, 2023). Research has also showcased the potential benefits of collectives in serving SWDs specifically, with broader benefits to gain as well (O'Neil & Garda, 2021). Current behavior of charter schools shows that they are likely to be on-board with this type of alternative, given many examples of these LEAs supporting one another. The present gaps in obtaining screenings and IEPs would serve as further motivation for involvement. Ultimately, this alternative is rated **moderate for political feasibility**.

Administrative Burden:
Whether it is a charter school within D.C. or a private entity, significant time and funding is needed to accomplish this alternative. Creating an entity that can sufficiently support a collective of charter schools and CBOs will entail developing an organizational structure, training and paying staff, visiting schools to provide evaluations, and acquiring sufficient resources for these tasks. It will also be crucial to have monitoring systems and frequent check-ins in place once IEPs are issued and implemented. It may also be burdensome to learn the intricacies of the different students and schools that they would be working with. We can assume that once the system is in place, this burden will lessen considerably, but the initial adjustment will likely take time. It is also important to consider the cost to the schools and CBOs themselves to access the screenings and IEP support. Therefore, the **administrative burden is extensive**.

Scalability:
Collectives have been utilized in many settings to share resources and knowledge, and thus increase the scalable impact of great practices. However, just because an entity has strong screening and IEP infrastructure that works for their own students, does not guarantee equal effects or ease with a much larger group. Furthermore, it may be difficult to adapt to the unique needs of various students and school settings, posing challenges for scaling this up. It will certainly take time to adapt the approach to fit D.C.-wide preschools, but once developed, scalability increases significantly. With the present gaps in screenings and IEPs in mind, this alternative has potential for significant take-up across the board, resulting in a **moderate scalability rating**.

Key Takeaways:
1) Given how critical identifying students is in ensuring they obtain the needed support, this option will play an important role in increasing kindergarten readiness amongst SWDs - but likely isn't sufficient on its own
2) This option scores fairly moderately on each criteria, so developing ways to increase scalability and decrease administrative burden will be key

Outcomes Matrix

FIGURE #7: OUTCOMES MATRIX

	Cost Effectiveness x2	Political Feasibility x1	Administrative Burden x1	Scalability x2	Total Score
Option 1: Every Child Ready Programming & Expansion	$3,950 (3)	High (3)	Moderate (2)	High (3)	17
Option 2: DC SPED Co-op's Professional Development	$23,000 (1)	High (3)	Limited (3)	Low (1)	10
Option 3: IEP Development & Screening Services	$18,800 (2)	Moderate (2)	Extensive (1)	Moderate (2)	11

See Appendix #9 for Further Details

Recommendation

Ultimately, I recommend that AppleTree pursues **alternative #1 to improve and expand Every Child Ready programming into public preschools across D.C**. This alternative is the most cost-effective relative to the other two options, even considering potential worst-case-scenarios through sensitivity analyses (Appendix 5). This can largely be attributed to the direct impact supportive curriculum can have on a student's outcomes. It is both highly scalable and highly feasible politically, but does face trade-offs in terms of the administrative burden faced to build out the technology, increase access, and monitor outcomes. Over time, I recommend that alternatives #2 and #3 are considered as well, given that all three play important roles in holistically supporting SWDs. However, alternative #1 has the ability to drastically change the SPED landscape across D.C. in a quicker time frame, and thus should be pursued first. Ultimately, taking this step to better support SWDs in their academic journeys is crucial to tackling opportunity gaps and equity concerns across D.C.

Implementation

To effectively implement ECR in an improved and expanded format, a strong plan for next steps, that considers stakeholders and a mitigation strategy for potential risks, is necessary. Gathering sufficient funds for improving ECR technology and increasing accessibility must occur first. Next, AppleTree must leverage the current framework to build out tier 3 curriculum and ensure that SWDs are supported. Progress-monitoring tools will be used to evaluate outcomes amongst pilot schools. Once standards are met, ECR will be expanded across D.C. to increase support and kindergarten readiness amongst students. There are certainly implementation challenges with take-up and funding, but with proper mitigation strategies and stakeholder support, this alternative has the potential for great success.

Next Steps

1. *Funding:*

ECR currently operates in 103 D.C. classrooms (Brown, 2023). This is mainly due to money raised from venture philanthropy to support ECR costs, alongside grant funding to subsidize schools. The New Schools Venture Fund, an entity that helps fund innovations in public education, underwrote the cost of adopting ECR in preschools that were not meeting performance standards (Ventures, 2023). AppleTree also won a federal Investing in Education grant that helped encourage school leaders to adopt ECR and subsidized the first few years of implementation (McCarthy, 2023). Moving forward, it will be critical for AppleTree to gather more funds from philanthropists, nonprofits, and grants to improve ECR and increase platform take-up. With proven success, hopefully securing further funding will not be a major challenge, but leveraging AppleTree's chief financial officer and grants manager will be key.

2. *Improving ECR:*

Evaluation reports show extremely positive outcomes for a majority of students using ECR (ECR Results, 2020). However, achievement gaps and a lack of kindergarten readiness show that SWDs are still falling behind. AppleTree conducted a project to gain insight on needed ECR improvements and how SWDs could be better supported (SPED Discovery Results, 2023). In order to improve ECR for SWDs, forming a team that is dedicated to this task will be important, which may include AppleTree's chief of research & innovation, implementation manager, growth & impact specialist, and SPED expert. Conducting in-depth research on other tech-based curriculums, diving into comparative analyses with other D.C. platforms, and leveraging technology experts to ensure that progress-monitoring tools measure outcomes accurately are all necessary steps to improving ECR. Finally, organizing focus groups along the way to obtain feedback from teachers using ECR will increase effectiveness.

3. *Expanding ECR:*

The long-term goal is to expand ECR into inclusive classrooms across D.C., and implement it in self-contained classrooms for the SWDs who need individualized support (Brown, 2023). It will be easiest to pilot changes in AppleTree's own classrooms, as they already utilize the platform

and are easiest to reach. Furthermore, starting with two self-contained AppleTree classrooms to monitor how the tier 3 curriculum is functioning will be necessary before slowly opening 10 additional classrooms over the following years. Progress-monitoring tools are an important step in ensuring ECR is effective at improving students' kindergarten readiness, especially amongst SWDs. Once these steps are accomplished, ECR should launch an education campaign and push for partnerships with OSSE and the D.C. school boards to increase awareness of ECR. Luckily, expansion is likely to increase naturally over time, as D.C. is concentrating more and more on performance management frameworks centered on holistic learning, which aligns strongly with ECR (McCarthy, 2023). Expanding ECR will certainly take time, but effective implementation requires dedication to improving the platform and proving to LEAs that it will help D.C. reach performance goals.

4. *Pursuing Alternatives #2 & #3:*

Although expanding ECR should be prioritized in the short-term, to set SWDs up for success, improving PD and IEP services are also important. AppleTree is in the unique position with their resources and infrastructure to potentially serve as a preschool demonstration classroom or the entity providing IEPs within the broader charter school collective. Given that these alternatives will take time to develop and coordinate, AppleTree should keep them on their radar once ECR expansion is under way.

Key Stakeholders

Amongst the stakeholders involved, AIEI plays a key role, as they are responsible for the ECR platform. They have shown strong support for improving and expanding ECR, and have many strategic partnerships and team members to do this effectively (*Strategic Partnerships*, 2023; Brown, 2023). Although approval from OSSE and school boards is not required, obtaining their support can increase take-up, as they have significant impact and reach (Brown, 2023). Given that DCPS has already encouraged school leaders to adopt ECR, gathering support from stakeholders within these entities is feasible (McCarthy, 2023). Ultimately, success is reliant on take-up from LEA leaders and teachers, who are responsible for implementation within the classroom. With subsidized costs, training for ECR use, and three tiers of curriculum to support students, buy-in is likely to improve as ECR does and as awareness increases.

Risks and Mitigation

FIGURE #8: RISKS & MITIGATION

POTENTIAL RISK	MITIGATION STRATEGIES
Insufficient Funding	1) Hire a grant writer to improve grant applications and increase the likelihood of obtaining grant funds 2) Spread awareness for the effectiveness of ECR, specifically for SWDs, to obtain more venture philanthropy funds 3) Charge slightly higher fees for ECR subscriptions as a short-term strategy to support the platform
ECR changes do not improve kindergarten readiness as planned	1) Continue interviewing and holding focus groups to gather improvement recommendations 2) Improve progress-monitoring tools to obtain deeper insight into necessary changes
Lack of take-up by LEAs and Teachers	1) Develop a social media and education campaign to highlight ECR's effectiveness and the steps taken to increase fidelity and ease of implementation 2) Subsidize the first few years of ECR use so that the preschool can witness the improvements themselves before committing to investing in the platform 3) Highlight the implementation trainings available for classrooms using ECR that help mitigate challenges with learning a new curriculum 4) Advocate for more holistic performance management frameworks from OSSE, because better alignment with ECR can increase take-up

Note: These are all strategies AppleTree & their partners can utilize in regards to Alternative #1. They do not address potential risks with alternatives #2 or #3 that may be pursued at a later date, nor the risks the schools taking up ECR could face in implementing it.

Conclusion

Kindergarten readiness amongst SWDs is a key predictor of future life outcomes and plays a significant role in combating opportunity gaps and inequities in education. Unfortunately, too few SWDs are meeting kindergarten-ready standards due to insufficient curriculum, professional development, and IEP services that best support their needs. Efficient action must be taken to address this concern and ensure that all students, regardless of disability status and background, are able to succeed in school and beyond.

It is this report's hope that AppleTree Institute will play an important role in addressing the lack of kindergarten readiness amongst SWDs through their Every Child Ready platform and by raising awareness across D.C. preschools. ECR's ability to incorporate SWDs into inclusive classroom settings and increase the ease with which teachers can support them enables all students to be set up for success.

About the Author

Abby Rothenberg is a Master of Public Policy candidate at the University of Virginia from Westfield, New Jersey. She recently graduated from UVA with a B.S. in Youth and Social Innovation in May of 2022. Her policy interests mainly center around education and human rights, and she has been able to work on a variety of issues in these spaces through internships and work experience in both the public and private sector. Her research as an Education Policy Associate and work with the EdPolicyWorks department not only inspired her interests in this space, but prepared her to tackle this report. She is blessed to have the opportunity to learn about SWDs and the DC education landscape, while working with inspiring individuals along the way.

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Appendix

Appendix 1
Important Laws & Regulations

Section 504 of the Rehabilitation Act of 1973
Section 504 of the Rehabilitation Act helps ensure the rights of individuals with disabilities. "Disability" is defined in a much broader manner than other pieces of legislation to encompass any mental or physical impairment that limits life activities. This Act focuses on providing education in the least restrictive environment (LRE) for all students (Evaluation Process, n.d.). This means that education is accessible and integrates SWDs with their typically-developing peers as much as possible to create more inclusive environments.

Individuals with Disabilities Education Act (IDEA) of 1975
In 1975, the IDEA was signed into law to provide a free and appropriate public education to all students in the LRE (47 Years of IDEA, 2022). The IDEA ultimately governs how states and public agencies provide SPED and early intervention services to SWDs. Furthermore, this legislation provides funding opportunities to support the implementation of programs needed to provide a full continuum of services for these students. If a student is found eligible, administrators, teachers, and parents work together to develop and provide an IEP that best fits their needs (About IDEA, n.d.). To function effectively with different age groups, IDEA is split into multiple parts, with Part B serving babies ages birth to two and Part C serving children ages three through five (Kelley et al., 2021). The IDEA has been amended over the years to better support younger SWDs, provide smoother transitions between Parts, and increase accountability measures (About IDEA, n.d.).

Pre-K Enhancement and Expansion Act of 2008
After a couple of years of successful lobbying and fundraising from the Pre-K for All D.C. Campaign, the Pre-K Enhancement and Expansion Act was passed unanimously. The Act expands access to preschool programs to thousands of three- and four-year-old children who could not access them before, effectively making D.C. one of the few places to offer universal pre-k nationwide. This Act also provides funding and resources to strengthen the quality of preschool programs and teacher qualifications (Watson, 2010). As a result of this legislation, 90% of D.C.'s four-year-olds and 70% of D.C.'s three-year-olds attend public preschools, not only increasing educational opportunities for children, but also benefiting mothers and the economy at large (Gunn, 2018).

Every Student Succeeds Act (ESSA) of 2015
In 2015, ESSA was signed into law, replacing No Child Left Behind and serving as a reauthorization of the Elementary and Secondary Education Act. The broad goal of this piece of legislation is to ensure that all students are prepared for college and career success. It emphasizes the importance of equity for disadvantaged students, including SWDs, and creates accountability measures to ensure all students are meeting the high standards set forth (Evaluation Process, n.d.).

Appendix 2
IEP Process and Drawbacks

Early Stages IEP Process & Drawbacks

STEP 1: REFERRAL & SCREENING

Students referred to Early Stages receive a brief developmental screening through the Ages & Stages Questionnaire

X Referrals rely heavily on parents acknowledging their child is struggling
X Referrals may be made rashly by worried parents
X Teachers may struggle to identify students at this young of an age
X Not every student who needs the screening gets screened

STEP 2: EVALUATIONS

Early Stages team members conduct a 2-3 hour long evaluation looking at a variety of skills to determine eligibility for SPED services

X The time and location can be a major barrier to parents
X It can be difficult to identify challenges in this age group, especially in one sitting

STEP 3: ELIGIBILITY

Meetings are scheduled with an Early Stages team member to discuss if the child meets eligibility criteria for SPED

X The time and location can be a major barrier to parents
X Eligibility is difficult to identify in this age group, so over- and under-identification are issues

STEP 4: IEP DEVELOPMENT

An IEP is developed by establishing the child's needs and goals, and the amount and frequency of services required to meet them

X A lot of - potentially conflicting - stakeholders are involved in this process
X CBOs are not required to move forward with developing an IEP
X Making decisions regarding what is best for this age group is challenging

STEP 5: IMPLEMENTATION

The final step works with the school the child will enroll in to coordinate implementation of the IEP

X Not every school can provide the appropriate services to support the child's IEP
X Many children get sent to out-of-LEA placements to meet their needs, resulting in major financial and opportunity costs to all involved

Source: Early Stages DC

Appendix 3
Direct Costs to Supporting SWDs

1) <u>Funding Students in their LEA:</u>
- Base level of funding for all students is around $11,700
- Preschool students are weighted, on average, at a rate of 1.32, or about $15,450 per student
- Special education students get additional funding depending on what level of disability category they fall into, and on average, get an additional $7,000
- Per-student funding: $15,450 + $7,000 = $22,450
- About 11,448 three- and four-year-old students are SWDs: 11,448($22,450) = $257,000,000 in total funding for SWDs
- Given that the base level of funding would be spent regardless, SPED students cost an ADDITIONAL $10,750 per SWD ($22,450-$11,700) on average, totaling about $123,000,000

2) <u>Funding Students in Non-Public Placements:</u>
- About 60% of the 69 LEAs requested one to five out-of-LEA placements, while 5% requested more than five
- Using these numbers, about 40 LEAs fall in the first category, averaging at 3 requests each and totaling 120 requests
- About 4 LEAs requested more than five, averaging at about 8, for an additional 32 requests
- This results in a total of 152 requests for out-of-LEA placements from D.C. public schools
- About 50% of these requests result in students actually being placed in non-public programs = 76 students bear the additional costs
- Tuition is paid for by OSSE = average of $51,000 for a private program
- Cost of transportation = $36,000 annually for bus operations on average, with about 5 school buses operating to transport children to the different locations
- Total funding for out-of-LEA placements for these 76 children: ($51,000x76 + $36,000x5) = $4,056,000
- Per-student funding = $53,400

Sources:
(*2021-22 Uniform Per Student Funding Formula Payments*, 2022)
(*SWD Landscape Analysis*, n.d.)
(*Expanding the LRE*, 2010)
(Gregorypoole, 2021)

Appendix 4
The Status Quo

1) <u>Status Quo Graph:</u>
- I only utilized the trends from the years 2018-2019 and prior, given that we can attribute the drop faced in the 2021-2022 results to the COVID-19 pandemic
- Given that the trends formed a pattern, I continued the pattern into the years after 2021-2022, starting with where the pandemic left us last year
- If trends continued in this manner, achievement gaps would continue to widen, given that non-SWDs are improving in proficiency at faster rates

2) <u>Baseline Measures:</u>
- Early Development Instrument showed that 8% of preschool students with IEPs were Kindergarten ready in 2016
- Most recent data shows that 1,488 of 3 & 4 year olds enrolled in preschool programs have IEPs out of 11,448 total
  - 1,488/11,448 = 13% of students have IEPs
  - 8% of students were kindergarten ready according to EDI = 119 out of 1,488

Sources:
(*Raise D.C. Progress Report*, 2016)
(*Special Education Feasibility Project*, 2022)

Appendix 5
Alternative #1: Improve and Expand Every Child Ready Programming into Inclusive Classrooms across D.C.

COST ASSUMPTIONS
Assumptions for building out tier 3 curriculum in self-contained classrooms: 1) Pilot in 2 self-contained classrooms to ensure it is working as intended 2) About 10 more empty classrooms available to use through AppleTree → I decided to spread out the expansion into these spaces over 2 years to break up the costs Costs included: - 1 SPED teacher and 1 assistant teacher per self-contained classroom - 1 coach - On boarding in the pilot year to finalize how self-contained classrooms using tier 3 curriculum will work
Assumptions for expanding ECR into more classrooms: 1) 15% growth rate is the target based off of client discussions, starting from the baseline of 103 classrooms that ECR is currently implemented in Costs included: - 1 coach per 20 classrooms → coaches work 20 hours per week on average & each classroom utilizes 1 hour of coaching per week on average
Assumptions for getting to total cost over 5 year timeline: 1) Given that costs to use a tech-based platform are based on annual classroom fees, they are equal for all students → about 13% of students are SWDs, so I will take 13% of the total NPV value over 5 years to get the cost value to hone in on our target population Costs included: - Total cost of technology and curriculum updates - Total cost of ECR expansion into inclusive classroom settings & self-contained classrooms
TOTAL NPV OF COSTS AFTER 5 YEARS: $955,000

OUTCOMES ASSUMPTIONS

Assumptions for expanding ECR into inclusive classrooms:
1) Baseline: 103 classrooms currently utilize ECR and every classroom has an average of 18 students per classroom → 103(18) = 1,854 students being reached with ECR at the moment, 13% IEP = 241 are SWDs
2) Expanding ECR at 15% growth rate
- Year 1: 119 classrooms = 2,141 students, 278 SWDs
- Year 2: 137 classrooms = 2,466 students, 321 SWDs
- Year 3: 158 classrooms = 2,844 students, 370 SWDs
- Year 4: 182 classrooms = 3,276 students, 426 SWDs
- Year 5: 209 classrooms = 3,762 students, 489 SWDs

SOURCES:
(OSSE Annual Pre-K Report, 2019)
(Special Education Feasibility Project: Setting the Vision, 2022)

Assumptions for expanding ECR into self-contained classrooms:
1) Baseline: 0 self-contained classrooms utilizing ECR

2) No more than 10 students in a self-contained classroom, we will assume about 7 on average, all SWDs

2) Expanding ECR in to 12 self-contained classrooms
- Year 1: 2 classrooms = 14 SWDs
- Year 2: 7 classrooms = 49 SWDs
- Year 3: 12 classrooms = 84 SWDs
- Year 4: 12 classrooms = 84 SWDs
- Year 5: 12 classrooms = 84 SWDs

SOURCES:
(*3 Benefits of Learning in a Self-Contained Classroom - AutismClassroom.Com*, n.d.)

Evidence of ECR's Effectiveness
1) Language scores increased by 26% on average, Math scores increased by 30% on average, Literacy scores increased by 40%, Social-emotional development scores increased → performing well on all important outcomes

2) ECR performs well above CLASS reported averages, showing that it is a more effective curriculum relative to others

3) 90% of children in Every Child Ready classrooms met achievement goals → assumption is that "meeting achievement goals" = kindergarten ready, especially because ECR tests on the things the EDI tests on → BUT this number includes all students, not just SWDs

SOURCES:
(*ECR Results*, 2020)
(*ECR Simple Competitive Analysis*, 2016)

Estimating Outcomes
1) Without ECR, 8% of SWDs and 36% of non-SWDs were kindergarten ready according to the EDI

2) Considering achievement gaps broadly, about 1/10 of SWDs perform at grade level compared to 5/10 of their non-disabled peers → the assumption is that non-SWDs are 5x more likely to be kindergarten ready than SWDs

3) 90% of students using ECR are kindergarten ready
- 90-36 = 54 percentage point increase in kindergarten readiness amongst non-SWDs
- ⅕ of this increase will occur for SWDs = 11 percentage point increase in kindergarten readiness above those who would have been kindergarten ready without ECR

4) Total SWDs reached per year
- Year 1: 292(0.11) = 32
- Year 2: 370(0.11) = 41
- Year 3: 454(0.11) = 50
- Year 4: 510(0.11) = 56
- Year 5: 573(0.11) = 63
- Total of kindergarten ready SWDs (additional impact above those who would have been kindergarten ready without ECR): 242

SOURCES:
(*SWD Landscape Analysis*, 2019)

TOTAL KINDERGARTEN READY SWDs: 242

COST-EFFECTIVENESS RESULTS

$955,000 / 242 = $3,950 per kindergarten ready SWD

SENSITIVITY ANALYSIS

Best case scenario:
- We could go above the 15% growth target rate to expand into more classrooms, and thus reach more students
- ECR could also have a stronger impact for SWDs because of the improvements made to better cater to their needs

With a 30% growth rate in ECR use & the self-contained classrooms as planned:
- Year 1: 134 classrooms = 2,412 students, 314 SWDs +14 = 328
- Year 2: 174 classrooms = 3,131 students, 407 SWDs + 49 = 456
- Year 3: 226 classrooms = 4,068 students, 529 SWDs + 84 = 613
- Year 4: 294 classrooms = 5,292 students, 688 SWDs + 84 = 772
- Year 5: 382 classrooms = 6,876 students, 894 SWDs + 84 = 978

With a 20 percentage point increase in kindergarten readiness, above baseline level who would have been prepared regardless of ECR
- Year 1: 328(0.2) = 66
- Year 2: 456(0.2) = 91
- Year 3: 613(0.2) = 123
- Year 4: 772(0.2) = 154
- Year 5: 978(0.2) = 196

Costs increase to $1,141,452
Total SWDs reached increases to 630

Cost-Effectiveness in this case is: $1,141,452/630 = $1,811 per kindergarten ready SWD

Worst case scenario:
- We could go below the 15% growth target rate to expand into more classrooms, and reach less students than planned
- ECR could have less of an impact on SWDs
- These are both unlikely occurrences

With a 10% growth rate in ECR use & the self-contained classrooms as planned:
- Year 1: 113 classrooms = 2,034 students, 264 SWDs + 14 = 278
- Year 2: 124 classrooms = 2,232 students, 290 SWDs + 49 = 339
- Year 3: 136 classrooms = 2,448 students, 318 SWDs + 84 = 402
- Year 4: 150 classrooms = 2,700 students, 351 SWDs + 84 = 435
- Year 5: 165 classrooms = 2,970 students, 386 SWDs = 84 = 470

With a 5 percentage point increase in kindergarten readiness, above baseline level who would have been prepared regardless of ECR

- Year 1: 278(0.05) = 14
- Year 2: 339(0.05) = 17
- Year 3: 402(0.05) = 20
- Year 4: 435(0.05) = 22
- Year 5: 470(0.05) = 24

Costs decrease to $915,630
Total SWDs reached decreases to 97

Cost-effectiveness in this case is: $915,630/97 = $9,440 per kindergarten ready SWD

Conclusions:
- Very cost effective, even in worst case scenario, relative to the other options

Appendix 6
Alternative #2: Promote D.C. Special Education Cooperative's SPED-focused Professional Development Opportunities

COST ASSUMPTIONS

Assumptions for developing a preschool demonstration classroom:
1) Materials range from $5k-$15k, so I averaged this at $10k, and these are all one time costs in the year the preschool classroom is developed

2) Timeline wise, I am making the assumption that it will take a year to develop, and tours will begin in the space in the following year

Costs included:
- Co-Ops time to develop the classroom in a preschool space
- Supplemental consultants and training for the preschool demonstration classroom
- Materials for the classroom to be able to operate effectively

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Assumptions for operating a demonstration classroom:
1) 3 demonstration classrooms currently exist that help me make assumptions regarding what a preschool demonstration classroom would cost once developed
- A demo classroom requires time/preparation costs from 2 Co-Op staff members for each tour
- About 4 tours per classroom per year occur are currently requested
- Because they exist in already functioning classrooms, it is built into the teachers workday and thus no salaries need to be considered outside of the Co-Op's prep time
- They are hoping to provide yearly stipends to the two teachers in each of the demonstration classrooms → I am making the assumption that they will start providing these in year 2, alongside the opening of the first preschool demo classroom

2) Julie Camerata is hoping to grow to 10 demonstration classrooms
- I am costing out a preschool-focused one for next-year
- Given that 3 exist for the elementary level and a highschool one is in the works, that leaves 5 more demonstration classrooms to develop → I am making the assumption that 1 of those will be another preschool one
- I made the decision to spread these out: develop the first preschool demo classroom in Year 1 & begin tours in Year 2, develop the second preschool one in Year 3 & begin tours in Year 4

Costs included:
- Co-Op staff member's time for the tours
- Teacher stipends for those running the demonstrations

SOURCES:
(Camerata, 2023)

Assumptions for the ELEVATE conference:
1) Annual conference currently hosts about 30 schools and 150 people → 150/30 = an average of 5 people per school signed up attend
- Total of 80 elementary schools in the district and 30/80 = 38% of schools attend the conference

2) Increasing attendance through additional demonstration classrooms
- 78 preschools → (38%)(78) = 29 schools = 145 people
- 21 high schools → (38%)(21) = 8 schools = 40 people
- Totals to 335 attending the conference, which is 2.23x the current amount

3) I am using 335 as the goal by the end of the 5 years, with slight increases starting in year 3 because that is a year after the demonstration classrooms have started being offered and hopefully, they incentivize attendance
- Operating at a steady growth of about 50-60 new attendees each year for the last three years

4) Increased attendance requires larger venues
- Assuming 200 person cap in current venue, 300 person cap would be 1.5x the cost ($15k), and 400 person cap in largest venue would be 2x the cost ($20k)

Costs Included:
- Venue fees to fit number of attendees

SOURCES:
(*District of Columbia Public Schools*, n.d.)
(Camerata, 2023)

Assumptions for ELEVATE professional development coaching:
1) Usually work with 4-6 schools each year → averages at 5 each year
- I am making the assumption that since there are about the same number of preschools as elementary schools, a similar number would want to engage in these consulting/training opportunities

2) The goal is 5/year based on current capacity levels
- I am making the assumption that expanding into the preschool space would have to occur slowly over the next 5 years with about 1 additional preschool per year utilizing this resources

3) Coaches could handle about 2 schools per year, so we have to pay salaries accordingly
Costs included:
- Coaches salaries

SOURCES:
(Camerata, 2023)

TOTAL NPV OF COSTS AFTER 5 YEARS: $875,000

OUTCOMES ASSUMPTIONS

Evidence of ELEVATE's effectiveness
1) Effect on Bridges PCS - a 4th grade classroom that went through the Co-Op's ELEVATE trainings / uses the UDL approach, and has since become a demonstration classroom
- 41% of students at Bridges PCS exceeded expectations in ELA compared to 20% of the overall charter sector
- 38% of students at Bridges PCS exceeded expectations in Math compared to 14% of the overall charter population
- On average, 85% of students in the UDL demo classroom are meeting overall academic standards → going to translate this phrase to "kindergarten ready" in the preschool space

2) There are about 4-6 classrooms per preschool, which averages to 5, and 18 students per classroom on average, with about 13% of students having IEPs

3) Number of SWDs reached through ELEVATE
- Year 1: 1 preschool = 5 classrooms = 90 students, 12 SWDs
- Year 2: 2 preschools = 10 classrooms = 180 students, 23 SWDs
- Year 3: 3 preschools = 15 classrooms = 270 students, 35 SWDs
- Year 4: 4 preschools = 20 classrooms, 360 students, 47 SWDs
- Year 5: 5 preschools = 25 classrooms = 450 students, 59 SWDs
- Total reach = 176 SWDs

SOURCES:
(UDL: A Gateway to Improving Academic Outcomes for ALL Students, 2023)
(Elevate UDL ClassSheet, 2023)

(OSSE Annual Pre-K Report, 2019)
(Special Education Feasibility Project: Setting the Vision, 2022)

Estimating Outcomes of ELEVATE
1) Without ELEVATE, 8% of SWDs and 36% of non-SWDs were kindergarten ready according to the EDI

2) Considering achievement gaps broadly, about 1/10 of SWDs perform at grade level compared to 5/10 of their non-disabled peers → the assumption is that non-SWDs are 5x more likely to be kindergarten ready than SWDs

3) 85% of students using ELEVATE are kindergarten ready
- 85-36 = 49 percentage point increase in kindergarten readiness amongst non-SWDs
- ⅕ of this increase will occur for SWDs = 10 percentage point increase in kindergarten readiness above those who would have been kindergarten ready without ELEVATE

4) Total SWDs becoming kindergarten ready
- Year 1: 12(0.10) = 2 SWD
- Year 2: 23(0.10) = 3 SWD
- Year 3: 35(0.10) = 4 SWD
- Year 4: 47(0.10) = 5 SWD
- Year 5: 59(0.10) = 6 SWD
- Total of kindergarten ready SWDs (additional impact above those who would have been kindergarten ready without ELEVATE): 20

5) This number only includes the benefits of getting the ELEVATE coaching, not the additional benefits of the conference and/or demonstration classroom tours

Estimating Outcomes of Preschool Demonstration Classroom
1) I do not have numbers on the effects of the demonstration classroom tours, but based on their grounding in the UDL framework and an international model, I will assume their effects are generally quite positive
- Given that they showcase what the ELEVATE coaching aims to do, I will assume the same 85% and 10 percentage point increase numbers as laid out previously

2) I am assuming that accessing the tour = your classroom is reached / helped

3) Number of SWDs reached through demonstration tours
- Year 1: 0 demonstration classrooms
- Year 2: 1 demonstration classroom = 4 tours = 4 classrooms = 72 students, 10 SWDs
- Year 3: 1 demonstration classroom = 4 tours = 4 classrooms = 72 students, 10 SWDs
- Year 4: 2 demonstration classroom = 8 tours = 8 classrooms = 144 students, 19 SWDs
- Year 5: 2 demonstration classroom = 8 tours = 8 classrooms = 144 students, 19 SWDs
- Total reach = 58 SWDs

45

4) Total SWDs becoming kindergarten ready
- Year 1: 0 SWDs
- Year 2: 10(0.10) = 1 SWD
- Year 3: 10(0.10) = 1 SWD
- Year 4: 19(0.10) = 2 SWD
- Year 5: 19(0.10) = 2 SWD
- Total of kindergarten ready SWDs (additional impact above those who would have been kindergarten ready without demonstration classroom tours): 6

Estimating Outcomes of ELEVATE conference
1) I do not have numbers on the effects of the ELEVATE conference, but based on their grounding in showcase tactics that will best support teachers and administration, I will assume the effects are generally quite positive, though less effective that catered tours and coaching
- I will assume about half of the students in classrooms whose teachers attended the conference will be kindergarten ready

2) 50% of students whose teachers went to the conference are kindergarten ready
- 50-36= 14 percentage point increase in kindergarten readiness amongst non-SWDs
- ⅕ of this increase will occur for SWDs = 3 percentage point increase in kindergarten readiness above those who would have been kindergarten ready without the conference

3) Total of 145 people from 29 preschools will attend the conference by the end of the 5 years (starting in year 3 after the demonstration classroom opens), which is about 48 teachers per year
- see cost assumptions above for more details

3) Number of SWDs reached through ELEVATE conference
- Year 1: N/A
- Year 2: N/A
- Year 3: 10 preschools = 48 teachers/classrooms = 864 students, 112 SWDs
- Year 4: 10 preschools = 48 teachers/classrooms = 864 students, 112 SWDs
- Year 5: 10 preschools = 48 teachers/classrooms = 864 students, 112 SWDs
- Total reach = 336 SWDs

4) Total SWDs becoming kindergarten ready
- Year 1: 0 SWDs
- Year 2: 0 SWDs
- Year 3: 112(0.03) = 4 SWD
- Year 4: 112(0.03) = 4 SWD
- Year 5: 112(0.03) = 4 SWD
- Total of kindergarten ready SWDs (additional impact above those who would have been kindergarten ready without the conference): 12

TOTAL KINDERGARTEN READY SWDs: 38

COST-EFFECTIVENESS RESULTS

$875,000 / 38 = $23,000 per kindergarten ready SWD

SENSITIVITY ANALYSIS

Best case scenario:
- The Co-Op increases their capacity to support slightly more classrooms in accessing the ELEVATE coaching
- The effects of ELEVATE are stronger than we think for SWDs, because teachers are better equipped to support them
- The effects of the demonstration tours are stronger than we think for the same reasons
- The conference's effects likely won't change much

With higher capacity for coaching classrooms
- Year 1: 2 preschools = 10 classrooms = 180 students, 23 SWDs
- Year 2: 3 preschools = 15 classrooms = 270 students, 35 SWDs
- Year 3: 4 preschools = 20 classrooms, 360 students, 47 SWDs
- Year 4: 5 preschools = 25 classrooms = 450 students, 59 SWDs
- Year 5: 6 preschools = 30 classrooms = 540 students, 70 SWDs

With a 20 percentage point increase in kindergarten readiness, above baseline level who would have been prepared regardless of ELEVATE
- Year 1: 23(0.2) = 5 SWDs
- Year 2: 35(0.2) = 7 SWDs
- Year 3: 47(0.2) = 10 SWDs
- Year 4: 59(0.2) = 12 SWDs
- Year 5: 70(0.2) = 14 SWDs
- Total = 48 SWDs

With a 20 percentage point increase in kindergarten readiness, above baseline level who would have been prepared regardless of the demonstration classroom tour
- Year 1: 0 SWDs
- Year 2: 10(0.20) = 2 SWD
- Year 3: 10(0.20) = 2 SWD

- Year 4: 19(0.20) = 4 SWD
- Year 5: 19(0.20) = 4 SWD
- Total = 12 SWDs

Costs will increase in this case to $1,011,430
Total number of SWDs reached increases to 72

Cost-effectiveness in this case is: $1,011,430/72 = $14,050 per kindergarten ready SWD

<u>Worst Case scenario:</u>
- The Co-Op does not have the capacity to support all of these classrooms in accessing the ELEVATE coaching
- The effects of ELEVATE are weaker than we think for SWDs
- The effects of the demonstration tours are weaker than we think
- The conference's effects likely won't change much
- These are unlikely occurrences

With lower capacity for coaching classrooms
- Year 1: 0 preschools
- Year 2: 1 preschools = 5 classrooms = 90 students, 12 SWDs
- Year 3: 2 preschools = 10 classrooms, 180 students, 23 SWDs
- Year 4: 3 preschools = 15 classrooms = 270 students, 35 SWDs
- Year 5: 4 preschools = 20 classrooms, 360 students, 47 SWDs

With a 5 percentage point increase in kindergarten readiness, above baseline level who would have been prepared regardless of ELEVATE
- Year 1: 0 SWDs
- Year 2: 12(0.05) = 1 SWDs
- Year 3: 23(0.05) = 2 SWDs
- Year 4: 35(0.05) = 2 SWDs
- Year 5: 47(0.05) = 3 SWDs
- Total = 8 SWDs

With a 5 percentage point increase in kindergarten readiness, above baseline level who would have been prepared regardless of the demonstration classroom tour
- Year 1: 0 SWDs
- Year 2: 12(0.05) = 1 SWDs
- Year 3: 23(0.05) = 2 SWDs
- Year 4: 35(0.05) = 2 SWDs
- Year 5: 47(0.05) = 3 SWDs
- Total = 8 SWDs

With a 5 percentage point increase in kindergarten readiness, above baseline level who would have been prepared regardless of the demonstration classroom tour
- Year 1: 0 SWDs
- Year 2: 10(0.05) = 1 SWD
- Year 3: 10(0.05) = 1 SWD
- Year 4: 19(0.05) = 1 SWD
- Year 5: 19(0.05) = 1 SWD
- Total = 4 SWDs

Costs will decrease in this case to $667,950
Total number of SWDs reached decreases to 24

Cost-effectiveness in this case is $667,950/24 = $27,830 per kindergarten ready SWD

Conclusions:
- The better case scenario is more comparable / manageable with costs, but the worst case scenario can get quite expensive

Appendix 7
Alternative #3: Develop a Charter School Collective with Privatized Screening and IEP Development Services

COST ASSUMPTIONS

Assumptions for developing a collective:
1) It will certainly take time to develop a collective and establish an approach to reaching all of the charter schools and CBOs that will be involved
- I have no numbers on this but went off of my first two alternatives (that have a development-focused costing involved). Since alternative 1 is super technology focused and alternative 2 only looks at one classroom, I averaged these numbers out, assuming alternative 3 would fall somewhere in the middle

2) Similar to the above, I have no numbers on how long it would cost to train staff and ensure they are prepared to support evaluations and IEP development
- Alternative 2 budgeted $20k for this for a classroom with 2 teachers
- About 6 staff members are needed (see below) so about 3x the amount of training will be needed

Costs included:
- Developing an approach to a collective-based, IEP & screening services entity
- Entity's time training the staff to properly conduct screeners and develop IEPs

SOURCES:
(Stafford, 2023)
(Camerata, 2023)

Assumptions for teacher salaries:
1) A speech and language pathologist at Early Stages - who conducts screenings and evaluations as well as drafts IEPs for SWDs - has a salary range of $83,237 and $121,888 per year → averages to $102,562.5, which I will round to $102,000

2) According to Rachel Stafford, a team of about 6 will be needed to reach these goals, which includes a Speech pathologist, Occupational Therapist, Physical Therapist, Education Evaluator, Psychologist, and Audiologist

Costs included:
- Salaries of each team member

SOURCES:
(Apply Now – D.C. Public Schools, 2023)

Assumptions for transportation costs:
1) Operating a bus costs about $36,000 annually on average

2) Initial screenings can be conducted without the overarching entity and will ultimately flag to the organization which students may need a full evaluation

3) At Early Stages, parents bring their kid to a center to conduct evaluations / do IEP meetings, and we will assume Charter parents will come to whatever space the provider has
- I am making the assumption that CBOs may need a bit more direct support and thus, the new screening provider would visit CBOs to help support them

4) CBOs using PKEEP are publicly funded but are not legally required under IDEA to provide IEP services to students so this is the population we are focusing on
- 30 sites, serving about 900 students → I am assuming that visiting 30 schools across D.C. in the fall to provide direct support and be able to visit for evaluations throughout the year will require access to two full time buses

Costs included:
- Bus costs

SOURCES:
(Poole, 2021)
(*OSSE Annual Pre-K Report,* 2019)

Assumptions for technology and materials:
1) Screenings are done virtually but ensuring that all schools utilize the same approach will be useful - this will be decided by whatever entity steps up to provide this support
- But we still need to consider costs of providing this technology and have a method of monitoring progress
- I used the same $50k number from my alternative 1, which had to build out their technology

2) In terms of the space used as the diagnostic center, we would hopefully be working in a space that already exists within that entity and is thus paid for already
Costs included:

Costs included:
- Technology and material costs

Assumptions for timeline:
1) I am making the assumption that this process will occur over the next year

2) Year 2 is when the entity could start providing screening and IEP services

TOTAL NPV OF COSTS AFTER 5 YEARS: $3,385,000

OUTCOMES ASSUMPTIONS

General Information
1) 13% of students have IEPs in preschool age group, but across D.C., 1 in 5 students has an IEP and is considered SPED
- There is the 7 percentage point gap in preschool for supporting all students who are SWDs

2) Although we know enrollment numbers change every year, for ease of calculations, we will use current numbers for all 5 years of the timeline

3) I am making the assumption that if they are provided with the screenings and IEP, they are more likely to be kindergarten ready than previously
- This alternative ensures that these students will get the IEP that they need
- It is important to note that this alternative does not address what happens after they obtain the IEP in the classroom with curriculum or PD, so the percent of kindergarten ready students likely does not change.

SOURCES:
(SWD Landscape Analysis, 2019)

Assumptions regarding number of students reached
1) Charter School reach
- Charter schools make up 48% of students, so out of the 11,448 total students enrolled in public preschools, 5,494 are in public charter schools
- 13% have IEPs currently = 714 students, but 20% are actually SWDs so 1,099 should have IEPs → gap of 385 students not obtaining the IEP support that they need

2) CBO reach
- 915 students are enrolled in CBOs using PKEEP
- None of these students have IEPs currently, so 20% / 183 students are not obtaining the IEP support that they need

52

3) Total gap of 385 + 183 = 568 SWDs who do not currently have an IEP, but would be reached and supported with this alternative

SOURCES:
(*SWD Landscape Analysis*, 2019)
(*Data and Reports | Osse*, 2021)
(*Public Charter School Data | D.C. PCSB*, n.d.)
(*OSSE Annual Pre-K Report*, 2019)

Estimating Outcomes
1) Amongst students with IEPs, only 8% are kindergarten ready according to the baseline EDI measure. Given that this alternative does not address what happens in the classroom, we will assume that this number would not change and thus use it as the percent of kindergarten ready students.
- Year 1: 0 SWDs
- Year 2: (0.08)(568) = 45 SWDs
- Year 3: (0.08)(568) = 45 SWDs
- Year 4: (0.08)(568) = 45 SWDs
- Year 5: (0.08)(568) = 45 SWDs
- Total = 180 SWDs are kindergarten ready amongst the students that had not been reached or had an IEP previously

TOTAL KINDERGARTEN READY SWDS: 180

COST-EFFECTIVENESS RESULTS

$3,385,000 / 180 = $18,800 per kindergarten ready SWD

SENSITIVITY ANALYSIS

Best case scenario:
- By improving screening and IEP services, we are also improving kindergarten readiness because we are filling in gaps and increasing support for these students, so 8% was a low-ball estimate of what could occur with this alternative
- Costs, therefore, do not change is this scenario

With 20% kindergarten ready
- Year 1: 0 SWDs
- Year 2: (0.20)(568) = 113 SWDs
- Year 3: (0.20)(568) = 113 SWDs
- Year 4: (0.20)(568) = 113 SWDs
- Year 5: (0.20)(568) = 113 SWDs

Cost-effectiveness in this scenario: $3,385,000/452 = $7,490 per kindergarten ready SWD

Worst Case scenario:
- This alternative does not succeed in reaching every student in this gap

With only 70% of the students in this gap getting support through this policy option
- Year 1: 0 SWDs
- Year 2: (0.08)(398) = 32 SWDs
- Year 3: (0.08)(398) = 32 SWDs
- Year 4: (0.08)(398) = 32 SWDs
- Year 5: (0.08)(398) = 32 SWDs

Cost effectiveness in this scenario: $3,385,000/128 = $26,450 per kindergarten ready SWD

Conclusions:
- Overall, fairly cost-effective and comparable to alternative 2

Appendix 8
Excel Spreadsheet with Cost-Effectiveness Analysis

Excel Spreadsheet

In this document, you can view the costing numbers laid out based on the assumptions made in appendices 5, 6, and 7.

Appendix 9
Outcomes Matrix Key

Cost-Effectiveness (weighted x2)	**High Cost** over $20k per student **Score = 1**	**Medium Cost** $10k-$20k per student **Score = 2**	**Low Cost** under $10k per student **Score = 3**
Political Feasibility (weighted x1)	**Low Feasibility Score = 1**	**Moderate Feasibility Score = 2**	**High Feasibility Score = 3**
Administrative Burden (weighted x1)	**Extensive Burden Score = 1**	**Moderate Burden Score = 2**	**Limited Burden Score = 3**
Scalability (weighted x2)	**Low Scalability Score = 1**	**Moderate Scalability Score = 2**	**High Scalability Score = 3**

NOTES: I have weighted cost-effectiveness and scalability slightly higher, based on my clients main priorities centering around best serving SWDs in being kindergarten readiness and supporting students across D.C. preschools broadly.

Obtaining the Final Score:
General Equation: (cost-effectiveness score)(2) + (political feasibility score)(1) + (administrative burden score)(1) + (scalability score)(2)
Alternative #1: (3)(2) + (3)(1) + (2)(1) + (3)(2) = **17 points**
Alternative #2: (1)(2) + (3)(1) + (3)(1) + (1)(2) = **10 points**
Alternative #3: (2)(2) + (2)(1) + (1)(1) + (2)(2) = **11 points**

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