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The Para Predicament: Investigating the Intersectionality of Race, Disability, and Paraeducator Assignment

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The Para Predicament: Investigating the Intersectionality of Race, Disability,
and Paraeducator Assignment

Christina Saccoccio, Ed.D.

University of Connecticut, 2018

Abstract

This study examined the relationship between student characteristics and paraeducator assignment. A Disability Critical Race framework was chosen to investigate whether current models of special education service delivery, which rely heavily on paraeducator supports, may be further marginalizing Students of Color with disabilities. A secondary dataset from one school district of 322 students serviced under the Individuals with Disabilities Education Act (IDEA) in grades PK-12 was analyzed. This quantitative study utilized multivariate logistic regression with a focus on student characteristics as a predictor variable for paraeducator assignment. My first research question investigated whether individual student characteristics (i.e., race/ethnicity, disability category, gender, school level) were predictive of paraeducator assignment. Findings of the multivariate logistic regression yielded some significant findings. Students at the elementary school level and students with a low incidence disability were found to be more likely to be assigned full-time paraeducator support. My second research question focused on determining the risk of paraeducator assignment based on student race/ethnicity. Findings of the risk ratio analysis suggested African American and Asian American students had an elevated risk of full-time paraeducator assignment, and Asian American students and students of two of more races had an elevated risk of part-time paraeducator assignment when compared to all other students included in the sample.

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The Para Predicament: Investigating the Intersectionality of Race,
Disability, and Paraeducator Assignment

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B.A., University of Connecticut, 2005

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A Dissertation

Submitted in Partial Fulfillment of the

Requirements for the Degree of

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at the

University of Connecticut

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APPROVAL PAGE

Doctor of Educational Leadership Dissertation

The Para Predicament: Investigating the Intersectionality of Race, Disability, and Paraeducator
Assignment

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The Para Predicament:

Investigating the Intersectionality of Race, Disability, and Paraeducator Assignment

Paraeducators are considered essential school support staff for the inclusion of students with disabilities in general education classroom settings (Downing, Ryndak, & Clark, 2000; Giangreco, Broer, & Edelman, 2002; Villa, Thousand, & Nevin, 2008). Thus, the role of the paraeducator has increasingly focused on the provision of instruction to students with special needs (Giangreco, Smith, & Pinckney, 2006). However, paraeducators are the most under-qualified and under-trained direct service providers for students with disabilities (Breton, 2010; Carter et al., 2016; Downing, Ryndak, & Clark, 2000; French, 2001; Giangreco & Broer, 2005; 2007; Giangreco, Suter, & Doyle, 2010; Suter & Giangreco, 2009) creating some real questions regarding the appropriateness, ethics, and legalities of utilizing them in this way.

Indeed, despite their prevalence in schools, there is a notable dearth of research regarding whether providing paraeducator support enhances students' with disabilities performance (Farrell et al., 2010; Giangreco, Broer, & Edelman, 2001; Giangreco, Suter, & Doyle, 2010). Of the evidence that does exist, it tends to suggest paraeducator support may actually lead to negative student achievement outcomes (Blatchford et al., 2009; Wagner & Blackorby, 2007; Webster et al., 2010) as well as declines in social interaction with peers and teachers (Causton-Theoharis & Malmgren, 2005a; 2005b; Giangreco, 2010; Malmgren & Causton-Theoharis, 2006). Moreover, excessive paraeducator support is also associated with inadvertent detrimental effects for students including low self-esteem (Al Zyoudi Krull, 2010), an increase in behavioral problems (Giangreco & Broer, 2005), unnecessary dependence, interference with teacher involvement, and less competent instruction (Campbell-Whatley, 2008; Causton-Theoharis, 2009; Giangreco, 2003; Giangreco et al., 2005; Giangreco et al., 2007; Giangreco et al., 2010b; Giangreco & Hoza,

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2013; LaBarbera, 2008; Suter & Giangreco, 2009). Students assigned to paraeducators may experience feelings of disenfranchisement, loss of personal control, embarrassment, loneliness, rejection, fear, isolation, and stigmatization (Broer, Doyle, & Giangreco, 2005; Giangreco et al., 2005; Giangreco, Broer, & Edelman, 2002).

These realities regarding the negative impact of paraeducators is further complicated by the fact that traditionally underserved¹ groups of students are overrepresented² in special education, especially with regard to race (Artiles et al., 2010; Harry & Klingner, 2006; Office of Special Education Programs, 2011; 2015; 2016; Parish, 2002; Zhang, 2014). While we might presume, because more Students of Color are identified for special education services, they would also be more likely to be assigned a paraeducator, it is unclear from the research which student characteristics are more or less likely to result in paraeducator assignment (Giangreco, 2010a). There is a lack of national data regarding the demographic characteristics (e.g., gender, race, socioeconomic status) and learning characteristics of students receiving paraeducator supports in American schools (Giangreco, 2010a). Therefore, although the research provides some evidence certain demographics of students serviced under certain disability categories may be more likely to be assigned a paraeducator (Suter & Giangreco, 2009), and the impact of these paraeducators may be negative on student outcomes, the true relationship between student race and paraeducator assignment is largely absent from the literature and warrants further investigation (Giangreco, 2010a).

The purpose of this study is to address this gap in the literature and asks the following research questions: 1) Is there an increased likelihood of paraeducator assignment based on

1 Underserved students are students who do not receive equitable resources and opportunities compared to other students and who historically underperform academically (New England Comprehensive Center, 2008)

2 Overrepresentation in special education is defined as the representation of a racial/ethnic group in special education that exceeds the representation of that group in the total student population (Zhang & Katsiyannis, 2002; Skiba et al., 2008).

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student characteristics (i.e., race/ethnicity, disability category, gender, school level)? and; 2) Does student race/ethnicity influence the risk of paraeducator assignment?

In the current study, I find both Asian American students and students of two or more races have an elevated risk of part-time paraeducator assignment when compared to all other students included in the sample. African American students and Asian American students were also found to have an elevated risk of full-time paraeducator assignment. These findings are important because the utilization of paraeducators as direct service providers for students receiving special education services may be inadvertently perpetuating the marginalization of some of our most vulnerable student populations (Giangreco & Broer, 2005), raising serious concerns about equity in service delivery across different student subgroups, especially those students belonging to one or more marginalized populations (Breton, 2010; Butt, 2016; Giangreco, 2003; Giangreco et al., 2005; Giangreco, Suter, & Doyle, 2010). This model of service delivery is described by some scholars as “regressive and restrictive” (Butt, 2016, p. 1000), as it ultimately challenges student access to equitable educational opportunities (Giangreco, 2010a).

Literature Review

My capstone research draws on the following sets of literature: a) the rise of paraeducators in schools, b) credentialing, certification, and training standards for paraeducators, c) effectiveness of paraeducator supports, and d) critical approach as discussed through a Disability Critical Race lens. I accessed multiple databases to find scholarly research relating to this study, including ERIC, Academic Search Premier, and PsycINFO. The vast majority of the literature was accessed from peer-reviewed journals, reports from private organizations, published dissertations, and textbooks.

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Paraeducators in Schools

According to the National Center for Education Statistics, the use of full-time paraeducators in classrooms has increased substantially every decade for nearly forty years: 2.5 percent in 1970, 11.9% in 1980, 16.5% in 2000, and 17.2% in 2009 (U.S. Department of Education, 2011). The National Education Association (NEA) estimated in 2015 in the United States, there were approximately 758,000 paraeducators working with students in schools (NEA, 2015). As the trend in education legislation has been to increasingly include students with disabilities in general education settings, the number of paraeducators supporting students with disabilities has also risen (Alquarini & Gut, 2012; National Center for Education Statistics, 2015; Riggs, 2004).

Paraeducators are often considered the primary support system for students with disabilities (Fisher & Pleasants, 2012) and members of the special education instructional team (Giangreco, Suter, & Doyle, 2010). According to the University Center for Excellence in Developmental Disabilities (UCEDD), 85% of paraeducators supported students with disabilities in the state of Connecticut in 2014. This trend is consistent with national statistics, which estimate 71% of paraeducators support students with disabilities across the United States (National Education Association, 2016).

National data indicates special education placements are predominantly staffed by paraeducators, as special education paraeducators have outnumbered special education teachers in schools since 2010 (U.S. Department of Education, 2010; 2012). The state of Connecticut was one of six states where teachers made up less than half of the total school staff in 2014, yet due to a high percentage of paraeducators, the state's teacher-to-pupil ratio was simultaneously also one of the highest in the country (National Center for Education Statistics, 2017).

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Much like other states across the country, Connecticut paraeducators are not highly compensated for their work with students (Bureau of Labor Statistics, 2013; Giangreco & Broer, 2003; Suter & Giangreco, 2009). According to the Bureau of Labor Statistics (BLS), paraeducators in Connecticut receive a median hourly wage of about twenty dollars and earn \$29,230 yearly, which is less than half of the average special education teacher's salary (BLS, 2013). Dubbed as the "solution to inclusion" (Rutherford, 2012, p.757), paraeducators are viewed in many states as a way to provide cost-effective instruction and support services to students, with the added benefit of bolstering federally mandated student inclusion rates (Giangreco, Suter, & Doyle, 2010).

Paraeducators and Education Policy: A Brief History. Paraeducators are undoubtedly recognized within federal legislation as vital members of school instructional teams providing essential supports to students across the general and special education classroom settings (IDEA, 1997, NCLB, 2001, ESEA, 2015). The reauthorization of the Individuals with Disabilities Education Act (IDEA) of 1997 required students with disabilities to have access to the general education curriculum and instruction, increasing the use of paraeducators supporting students in general education classrooms. Prior to the 1997 amendments, there was no recognition of paraeducators in any federal legislation and paraeducators were not legally recognized as personnel who may assist in the provision of special education and related services to students with disabilities (IDEA, 1997).

The No Child Left Behind Act (NCLB) of 2001, in part, endeavored to ensure that students received instruction from paraeducators who were supervised by highly qualified individuals. NCLB (2001) required that all state educational agencies ensured that paraeducators working in a program supported with funds under Title I meet applicable credentialing minimum

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requirements. For those districts and schools taking these funds, NCLB mandated that Title I paraeducators must have a high school diploma or equivalent, and either completed two years of college, have an Associate's Degree, or passed a formal academic assessment (NCLB, PL 107-110, § 1119 (c) (d)).

NCLB also delineated specific roles and responsibilities of paraeducators in schools under the direct supervision of a teacher who met the highly qualified requirements of the Act. These prescribed responsibilities for paraeducators included: (a) provide one-on-one instruction to students if it is at a time that the child would not otherwise be scheduled to receive instruction from a teacher; (b) assist in classroom organization and management; (c) assist in the computer lab, library, or media center; (d) conduct parent-involvement activities; and (e) act as translators (NCLB, §1119(g)(2)).

The reauthorization of IDEA in 2004 again recognized paraeducators who were appropriately trained and supervised (in accordance with state law, regulation, or written policy) as personnel who may assist in the provision of special education and related services to students with disabilities (20 U.S.C. 1412(a)(14)). However, the legislation did not further describe specific training or supervision requirements for hired paraeducators, allowing state and local education agencies to determine these practices themselves.

The Every Student Succeeds Act (ESSA) in 2015, expanded upon federal mandates affecting paraeducators ESSA mandated that special education professionals who deliver special education services must implement and receive training on evidence-based practices. ESSA further required schools provide high-quality professional development of teaching professionals and paraeducators; although what constituted high-quality professional development continued to be left up to state and local educational agencies (Brenton, 2010).

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It's clear federal education legislation spanning the past two decades has increasingly focused on the preparation, qualification, roles, and ongoing development of the paraeducator workforce. The legislation has simultaneously provided more control to state and local education agencies to develop their own standards, credentials, and training guidelines for paraeducators. This raises concerns regarding inconsistencies across and within state education agencies, as there is little consensus among states regarding credentialing, training, supervision, and evaluation guidelines for paraeducators. By leaving paraeducator policy development and implementation to the states, federal legislation has inadvertently led to an overall lack of consensus regarding best practice (Breton, 2010). With the exception of the minimum training requirements delineated for Title I paraeducators (ESSA, 2015), few administrative guidelines currently exist within federal legislation regarding credentialing and training practices. Without more explicit federal regulations and mandates, uniformity of practice, policy, and procedure pertaining to paraeducators across states is unlikely to occur.

A summary of the key provisions pertaining to paraeducators within the federal legislation described within this section is provided in Table 1.

Table 1

<i>Key provisions of federal legislation pertaining to paraeducators</i>			
IDEA 1997	NCLB 2001	IDEA 2004	ESSA 2015
Prior to the 1997 amendments, there was no recognition of paraeducators in federal legislation.	NCLB [Title I, section 1119(g)(2)], defines the allowable roles of paraeducators.	Maintains that paraeducators that are appropriately trained and supervised (in accordance with state law, regulation, or written policy) are recognized as personnel who may assist in the provision of special education and	Removes the 'highly qualified teacher' requirements under NCLB 2001 for regular and special education teachers, but requires they meet state licensure and certification requirements. Under this revision, paraeducators may provide supports under the supervision of a certified, licensed teacher.
Paraeducators are first recognized as personnel who may assist in the provision of special education and related services to students with disabilities.	Allows the provision of instructional support services under the direct supervision of a certified teacher who meets the highly qualified teacher requirements of NCLB, working in close and frequent proximity to the		Section 1111 (g) (2) (J)

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<p>teacher.</p> <p>All Title I paraprofessionals whose duties include instructional support must meet one of the following requirements by 2006 [Title I, section 1119(c) and (d)]:</p> <ol style="list-style-type: none"> 1) Completed at least two years of post-secondary study at an institution of higher education; 2) Obtained an associate's (or higher) degree; 3) Pass required academic assessment 	<p>related services to students with disabilities [20 U.S.C. 1412(a)(14)].</p> <p>In sec. 654(a)(3)(B)(i-vi) requires each state to: "improve the knowledge of special education and regular education teachers and principals and, in appropriate cases, paraprofessionals, concerning effective instructional practices, and provide training."</p> <p>IDEA 2004 does not describe specific training or supervision requirements for states to adopt, but allows them to determine their own practices.</p> <p>Authorized State Personnel Improvement Grants [20 U.S.C. §1415] provided federal funds through competitive grants to states to be used to improve paraeducator knowledge of effective educational practices.</p>	<p>maintains that the State educational agency will ensure that all paraprofessionals working in a program supported with funds under Title I, Part A meet applicable State certification requirements.</p> <p>Requires that high-quality professional development of teaching professionals and paraprofessionals be offered.</p> <p>Defines paraprofessional: "an individual who is employed in a preschool, elementary school, or secondary school under the supervision of a certified or licensed teacher..."</p> <p>Requires the creation of "State Committee of Practitioners" that includes paraeducators.</p> <p>Mandates the implementation of and training on evidence based practices [114 U.S.C. 8101(21)(a)§1177-290].</p>
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Paraeducator Credentialing. It is important recognize the ways federal education legislation has influenced credentialing standards for paraeducators in schools. As previously indicated, there is an overall lack federal guidance regarding certification and credentialing practices. The lack of consistency across local, state, and national education agencies has contributed to substantial variability in best practice standards for virtually every aspect of paraeducator certification and credentialing procedures.

As previously mentioned, unless the district or school in which the paraeducator works receives federal funding under Title I, there is no minimal standard in place for paraeducator credentialing (NCLB, 2001). Even with the legal provisions for minimum credentialing standards for Title I paraeducators, many argue paraeducators do not have the requisite qualifications or receive the requisite training necessary to work with students with disabilities (Bourke & Carrington, 2007).

Paraeducators being placed in roles where they received little to no preparation remains a significant concern in instructional environments (Giangreco, 2010; Giangreco, Doyle, & Suter, 2012). Paraeducators are reported to be minimally versed in research-based interventions and insufficiently trained in the use of data collection for instructional decision making (Brock & Carter, 2015; Chopra & Westland, 2015; French, 2003; Giangreco, Smith, & Pickney, 2006). Research suggests the absence of paraeducator training is disruptive to student learning and violates ethical and professional standards (Da Fonte & Capizzi, 2015; Giangreco, 2010a; 2013; Giangreco, Doyle, & Suter, 2012). The inadequacy of training and professional development paraeducators receive render them unqualified to implement evidence-based practices (Chopra & Westland, 2015), and may constitute a violation of students with disabilities' right to FAPE, or a free and appropriate education (IDEA, 2004).

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Paraeducator Training and Supervision. As the responsibilities of paraeducators continue to shift from duties that were considered primarily clerical to ones which instructionally and behaviorally support students with disabilities, identifying the most effective ways to provide training to paraeducators is critical for student success (Sobeck, 2016). Researchers have voiced concerns for decades regarding the lack of adequate training and supervision paraeducators receive for the roles and responsibilities they are expected to undertake (Breton, 2010; Carter et al., 2016; Downing, Ryndak, & Clark, 2000; French, 2001; Giangreco & Broer, 2005; 2007; Giangreco, Suter, & Doyle, 2010; Suter & Giangreco, 2009).

Without effective training, paraeducators' support to students is unlikely to improve learning outcomes and may in fact be a hindrance to this goal (Giangreco, Broer, & Edelman, 1999; Giangreco, Suter, & Doyle, 2010; Stockall, 2014). As the availability and adequacy of training for paraeducators remains a persistent need, paraeducators continue to operate with high levels of autonomy, make instructional decisions, and provide the bulk of instruction to some students (Giangreco et al., 2001; Suter & Doyle, 2010). As a result, it is perhaps not a surprise paraeducators often view their training and the effectiveness of their supervision as inadequate (Breton, 2010; Downing, Ryndak, & Clark, 2000; Etscheidt, 2005; French, 2001; 2003; Giangreco & Broer, 2005; Giangreco, Smith, & Pickney, 2006; Suter & Giangreco, 2009).

The required in-service training or professional development for paraeducators within the state of Connecticut, for example, although minimal, is comparable to other states across the nation (CSDE, 2014). Paraeducators do not receive instructional or special education training as a prerequisite for working with students with disabilities (CSDE, 2014). In fact, the Connecticut State Department of Education (CDSE) reports that on average, paraeducators receive less than three hours of professional development before the start of the school year (CSDE, 2014).

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Although many contend professional development opportunities and training programs are available for paraeducators, paid time off from regular duties remains a barrier (CSDE, 2014).

As most paraeducators hold high school diplomas as their terminal degree and often have little, if any, formal teacher training, special education teaching staff are most often placed in supervisory roles to train paraeducators (Brock & Carter, 2015). However, the majority of special education teachers report they receive little, if any, preparation for the responsibilities associated with supervising paraeducators (Douglas, Chapin, & Nolan, 2016; French, 2001; Fisher & Pleasants, 2012; Goe & Matlach, 2014). In Suter's (2009) study, special educators reported high student caseloads with the added responsibility of supervising an average of three paraeducators, with only 2% of their time being spent in supervision activities with paraeducators (Suter & Giangreco, 2009). French (2001) similarly found special education teachers reported having little preparation for supervision, and only a few held regular meetings with the paraeducators they supervised.

Supervising and working with paraeducators is the training area most requested by special education teachers (Berry et al., 2011). However, despite the lack of preparation and support, paraeducators are often responsible for instructing students in ways similar to certified classroom teachers including creating and implementing lesson plans; designing, administering and grading tests; and assuming the role of disciplinarian within the classroom (Shyman, 2010). This is problematic, in part, because paraeducators can become viewed as the primary instructor for students with disabilities (Causton-Theoharis, 2009; Fisher & Pleasants, 2012; Giangreco et al., 2001; Giangreco & Hoza, 2013), and are heavily relied upon to perform roles traditionally reserved for certified teachers (Giangreco et al., 2005).

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In one study investigating paraeducators' perceptions of their roles and responsibilities in inclusive classrooms, paraeducators described a high level of responsibility for the education programs of students with moderate to severe disabilities, exemplified by a great deal of independent decision making. Further, in a similar study conducted by Giangreco and Broer (2005), nearly 70% of paraeducators interviewed reported making curricular and instructional decisions without always having oversight by a teacher or special educator (Downing, Ryndak, & Clark, 2000).

Inadequate training and supervision practices for paraeducators assisting students with disabilities in schools remains a wide-spread and multifaceted problem. A meta-analytic study of forty-seven legal cases pertaining to paraeducator responsibilities, preparation, training, and supervision practices, reported findings which suggested, contrary to the popular assumption that paraeducators must work under the direction and supervision of qualified professionals, they largely operated independently and autonomously, isolated from direction and supervision (Etscheidt, 2005). These are problematic findings, considering federal law mandates paraeducators are supervised by qualified teachers and must work in close and frequent proximity with classroom teachers (ESEA, 2015; NCLB, §200.59(c)(2)). Etscheidt's (2005), findings emphasize that although paraeducators by law may not serve as the sole designer, deliverer, or evaluator of a student's program, self-reported case data suggest otherwise.

The inadequacy of credentialing, training, and supervision practices for paraeducators raises serious concerns about students' legal right to a free, appropriate public education (Breton, 2010; Etscheidt, 2005; Giangreco et al., 2010), particularly when one looks at the current evidence on the effectiveness of their support.

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Effectiveness of Paraeducator Support

Paraeducators are utilized in different capacities and often have varying roles and responsibilities across school settings. As already mentioned, the research around the effectiveness of paraeducators is mixed at best and is derived from a considerably small body of studies. The research as a whole suggests students who receive the most paraeducator support actually make far less progress than similar students who receive less support (Farrell et al. 2010; Blatchford, Webster, & Russell, 2012). There is also a growing body of national and international research indicating that one-to-one paraeducator support can result in a host of unintended detrimental effects on students including social separation from peers, interference with peer interactions and teacher engagement, unnecessary dependence, stigmatization, and lack of personal control (Giangreco, 2015).

However, there is also research to suggest, when provided with the appropriate training and supervision, paraeducators can positively influence student learning. For example, several studies find students who received paraeducator support for targeted reading interventions improved their reading performance more than students in control groups who did not receive the support (Bingham, Hall-Kenyon, & Culatta, 2010; Brown, Morris, & Fields, 2005; Vadasy, Sanders, & Tudor, 2007). In their review of the literature, Causton-Theoharis et al., (2007) found numerous studies suggesting paraeducators improved academic outcomes of students who were at risk or had learning disabilities. Their review shows when paraeducators implemented research-based approaches and received extensive training on the approaches used and behavior management, provided supplemental (rather than primary) instruction to students, and were monitored and given ongoing feedback about their instruction from regular and special education teachers, student performance improved. However, when paraeducators are not afforded the

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appropriate training and supervision to guide their instruction, the outcomes for students tend to be more negative than positive (DaFonte & Capizzi, 2015).

Two major longitudinal studies completed in the U.S (2000-2005) and the U.K. (2003-2008) found students receiving paraprofessional support tended to perform lower academically than students with similar disabilities who did not receive such support (Blatchford et al., 2009; Wagner & Blackorby, 2007). Findings from the Blatchford et al. (2009) study suggested the more paraeducators support a student received, the less support they received from the classroom teacher. At both the elementary and secondary levels, there was also a negative correlation between the amount of paraeducator support a student received and the amount of progress made in English and mathematics (Blatchford et al., 2009). Additionally, the emphasis in working with a paraprofessional was on task completion rather than ensuring the student was learning and understanding the material (Blatchford et al., 2009).

One meta-analysis conducted by Giangreco and colleagues (2001) summarized and analyzed the mere forty-three pieces of professional literature pertaining to paraeducator supports for students with disabilities published between 1991 and 2000, found there was insufficient data to conclude paraeducators had a positive impact on student outcomes. On the whole, paraeducators studied did not receive adequate training, supports, or supervision to be directly instructing students with disabilities (Giangreco et al., 2001).

One reason the results continue to be mixed is the lack of strong outcomes measures regarding the impact of paraeducators (Giangreco, Suter, & Doyle, 2010). In a follow-up literature review conducted by Giangreco, Suter, and Doyle (2010) summarizing more recent research on special education paraeducator issues and practices between 2000 and 2007, among the thirty-two included studies, only 22% reported some type of directly measured student

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outcome on a combined total of only twenty-six students with disabilities. Even without adequate outcome data regarding paraeducator efficacy, the number of paraeducators supporting students with disabilities in schools continues to grow (Giangreco, Suter, & Doyle, 2010).

Inclusive Practice and Paraeducators. Between 1989 and 2013, the percentage of students with disabilities in inclusive settings for 80% or more of the school day increased from about 32% to nearly 62% (National Center for Education Statistics, 2015). A central aim of inclusive practice is to provide effective instruction that improves student outcomes for all students regardless of disability (McLeskey & Waldron, 2011). While inclusion is undoubtedly linked with the principles of equity and social justice, the ways schools actually implement inclusive practices may perpetuate systems of oppression (Lloyd, 2008; Wedell, 2008). An example of this is the overreliance upon a service delivery model highly dependent on minimally trained paraeducators for the inclusion of students with disabilities in general education settings (Giangreco & Broer, 2003; Mueller, 2002). Without proper training, academic, behavioral, and social success of their students may be compromised, ultimately hindering the goals of inclusion (Sobeck, 2016).

How inclusion should be applied in practice to ensure equity is a topic of controversy (Florian, Rouse, & Black-Hawkins, 2011; McLeskey & Waldron, 2011), and the evidence indicating strong academic outcomes for students with disabilities in inclusive settings is mixed (Lindsay, 2007; Waldron, McLeskey & Redd, 2012; 2014). Although some studies suggest students with disabilities educated in inclusive settings show improvement in their performance on standardized state tests and graduation rates (Luster & Durrett, 2003; Rea et al., 2002), scholars have simultaneously voiced concerns regarding the lack of strong, empirical evidence

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supporting reported positive academic outcomes for students with disabilities in inclusive settings (Mastropieri & Scruggs, 2004; Wapling, 2016; Zigmond, 2003).

The use of paraeducators continues to be considered a necessary method to support inclusive education in schools, although its implementation remains riddled with problems associated with the most minimally trained staff supporting students with disabilities—especially students with severe and low-incidence disabilities³ (Giangreco & Broer, 2007). This service delivery model lacks both the theoretical and empirical support to be considered an equitable model to support students with disabilities (Giangreco, 2010b). To evaluate equity in inclusive education, a probe into the myriad issues inherent within our current service delivery models utilizing paraeducators to provide instructional support to students with disabilities must take place. These types of new inquiries can help ensure reform efforts are able to successfully address these underlying issues.

A Call for Critical Approach

Marginalized students are defined as those students who do not have equitable access to educational opportunities and resources (U.S. Department of Education, 2010). Students from low-income backgrounds, Students of Color, English language learners, students with disabilities, students from diverse cultures and linguistic backgrounds, and students in rural areas are among identified marginalized populations in the nation (U.S. Department of Education, 2010). Schools have historically attempted to support marginalized students by providing remedial (i.e., teaching strategies which improve skills) and compensatory (i.e., teaching replacement skills) interventions and supports, rather than addressing the deeply-rooted systemic

³ Low incidence disabilities are disabilities which occur less frequently in the population and include autism spectrum disorders; hearing impairments; orthopedic and other health impairments; traumatic brain injury; deaf-blindness; severe or profound intellectual disabilities; visual impairments; and multiple disabilities (Boon & Spencer, 2010).

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and social factors which reinforce barriers to equitable education (Bass & Gerstl-Pepin, 2011; Lloyd, 2008; Wedell, 2008).

Arguably, the largest socioeconomic barrier to equity in education are state and local school funding policies for districts affecting low-income students and Students of Color (U.S. Department of Education, 2015). According to the U.S. Department of Education (2015), in 2015, twenty-three states across the nation with districts serving the highest percentage of students from low-income families spent less money per pupil than districts with fewer students in poverty (U.S. Department of Education, 2015). Further, twenty states spent less state and local dollars on districts with a high percentage of Students of Color, than districts with fewer Students of Color (U.S. Department of Education, 2015). In 2015, Former U.S. Department of Education Secretary Arne Duncan estimated that about 6.6 million students from low-income families in twenty-three states had limited access to quality education opportunities as a result of local and state policy funding disparities (U.S. Department of Education, 2015).

Low-income students and Students of Color are also more likely to attend low-quality, low-performing schools that lack equitable access to teachers, instructional materials, technology, critical facilities, and physical maintenance (Hart et al., 2009; U.S. Commission on Civil Rights, 2018). Such inequities can negatively impact a student's health, access to quality education, and may exacerbate existing inequities in student outcomes (U.S. Commission on Civil Rights, 2018).

In addition to inequities in resources and funding policies for Students of Color, there exist deeply embedded cultural factors which influence teachers' racial attitudes and perceptions of Students of Color (Pope-Davis & Ottavi, 1992). Racial attitudes and perceptions are thought to be reflective of an individual's racial socialization, or the processes in which past experiences

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and messages from society become internalized and shape understanding of race (Wilson, Foster, Anderson, & Mance, 2009). Teacher perceptions and biases are linked to negative achievement and disciplinary outcomes for Students of Color (Skiba et al., 2002; Hua-Yu, 2017).

It is well-documented within the literature that teacher bias negatively affects student discipline procedures (Skiba et al., 2002; U.S. Commission on Civil Rights, 2017). African American students receive more teacher referrals for disciplinary action (Gregory, NyGreen, & Moran, 2006; Skiba, Michael, Nardo, & Peterson, 2002), receive harsher punishments and restrictions for behavior (Butler, Joubert, & Lewis, 2009), and are more likely to be suspended and expelled than White students (U.S. Commission on Civil Rights, 2017). Students of Color with disabilities are at the highest risk for out-of-school suspensions and face higher rates of exclusionary discipline practices overall compared to all other student groups (U.S. Department of Education, 2016).

Perspectives which focus on individual student deficits rather than educational practices affecting educational equity fail to address larger, more complex systems of oppression (Goodley, 2007) and underlying sociocultural and political contexts (Liasidou, 2012). Deconstructing said pedagogies and systems which perpetuate inequalities and oppression is critical in the movement away from deficit-oriented approaches and towards addressing wider social and educational disadvantages of marginalized groups of students (Liasidou, 2012). Challenging the individual pathology model also shifts the responsibility of academic achievement from students to policy-makers and states to address and remedy the larger systems and institutions impacting student achievement (Bass & Gerstl-Pepin, 2011).

Proponents of fostering more socially equitable models of education delivery call for education policy and practice reform with schools as mediating institutions in addressing the

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wider societal and educational inequalities facing disadvantaged populations (Bringhouse, 2010). Equitable education is described by the Organization of Economic Cooperation and Development (OECD) as systems which are, “fair and inclusive and support their students to reach their learning potential without either formally or informally pre-setting barriers or lowering expectations” (OECD, 2012, p.16). Challenging the complex sources of inequality requires an awareness of the ways educational systems perpetuate social inequalities; thus critical forms of thinking leading to transformational change at the ideological and institutional levels is imperative for the success of future reform efforts (Liasidou, 2012). Liasidou (2012) highlights the importance of understanding the educational structures and institutions which create and further inequality:

Understanding the intersections of systems of oppression and challenging the multiplicity of factors that disable certain groups of students entail critiquing dominant ideologies, educational policies and institutional arrangements that maintain and perpetuate social and educational injustice (p.170).

Critical analysis into the larger and more complex issues of race and disability is explored in the scholarly work on critical pedagogy (Goodley, 2007; Giroux, 2011). Critical pedagogy challenges the notion that social class, gender, sexuality, ability, disability, and race as identity markers are inevitably linked to educational outcomes, but are instead the result of systems which continue to marginalize vulnerable student populations (Lingard & Mills, 2007). As such, educational policies and practices which do not recognize or conceptualize the underlying discriminatory practices they are built upon may do more to further exclude disenfranchised groups of students from equitable educational opportunities (Youdell, 2006). Discriminatory practices embedded within the special education referral, identification, and placement process for Students of Color is one example of a system perpetuating inequitable educational outcomes for marginalized groups of students (Skiba et al., 2008).

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Overrepresentation in Special Education. Racial disparities within special education rates (Artiles et al., 2010; Harry & Klingner, 2006; Office of Special Education Programs, 2011; 2015; 2016; Parish, 2002; Zhang, 2014) remain what many scholars identify as one of the key indicators of inequity in education (Skiba et al., 2008). Students belonging to certain racial/ethnic groups are not only overrepresented in special education populations, but are also overrepresented within specific disability categories (OSEA 2015; 2016). Students associated with two or more races are more likely to be served under IDEA for developmental delay and emotional disturbance than all other racial/ethnic groups combined (OSEA, 2015; 2016). African American students are more likely to be served under IDEA within every disability category except autism, deaf-blindness, and orthopedic impairments, and are twice as likely to be given an emotional disturbance or intellectual disability label than students in all other racial/ethnic groups combined (OSEA, 2015; 2016).

African American students continue to be overrepresented within high-incidence and low-incidence disability categories including intellectual, learning, and emotional disturbance disability categories (Zhang et al., 2014, Office of Special Education Programs, 2011; 2015; 2016; U.S. Commission on Civil Rights, 2009) and within more restrictive educational environments than all other racial/ethnic groups (Harry & Klingner, 2006; Office of Special Education Programs, 2015; 2016; Skiba et al., 2006). Studies examining overrepresentation in special education have pointed to several factors including teacher bias, school-level factors (e.g. student population size, rural/urban school district classification), student- and parent-level factors (e.g. socio-economic status, parental education attainment, student disability category), and inconsistencies across referral, evaluation, and placement processes in special education

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(Skiba et al., 2008); however, the research is inconclusive and does not adequately address causal factors (Hosp & Reschly, 2004; Skiba et al., 2008; Strassfeld, 2017).

A study conducted by Craft and Howley (2018) investigated the negative consequences associated with the disproportionate placement of African Americans in special education and found the consequences of such placement far outweighed the positives. Negative consequences for African American students included the experience of being stigmatized by peers, making limited academic progress because of a slow-paced curriculum, and facing barriers that kept them from returning to general education placements (Craft & Howley, 2018).

Education policy addressing the overrepresentation of Students of Color in special education has attempted to regulate and remedy the policies, practices, and procedures for the identification and placement of students suspected of having a disability. The issue of disproportionality was federally recognized within education law in 2016, when the U.S. Department of Education issued regulations to guide states regarding special education practices. The new regulations under IDEA required states take steps to determine the presence of significant disproportionality, and, if present, to address and to remedy disproportionate placement (34 C.F.R. §§ 300–99).

The regulations also established that states must determine whether significant disproportionality exists, must clarify their existing requirements for the review and revision of relevant policies, practices, and procedures, and must identify and correct the factors that contribute to significant disproportionality (34 C.F.R. § 300.226). However, recent reports indicate that despite the regulations, states are under-reporting, failing to report, or do not face severe enough penalties or sanctions when found to have significant disproportionality (U.S. Department of Education, 2016a). Stricter sanctions and penalties for failure to adhere to the

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regulations should be addressed in federal legislation, although penalties do little to remedy the complex underlying issues which contribute to issues of racial disproportionality. Higher exposure to poverty as well as risk factors associated with poverty (e.g. access to health care, nutrition, parental employment, housing conditions, housing instability), inequitable school funding, inexperienced and uncertified staff, the subjective nature of eligibility criteria for special education, and the misunderstanding of culturally-specific behaviors as disabilities have all been cited in the research as factors contributing to racial disproportionality (Artiles et al., 2002; 2010; Donovan & Cross, 2002; Kozol, 2005).

If the overarching problem of racial disproportionality in special education is to be adequately understood, our lens must widen to include the ways in which myriad forms of institutionalized and systematic discrimination may result in lower expectations, over-referrals, and over-identification practices for certain groups of students (Artiles et al., 2002).

Multiply Marginalized Students. IDEA (2004) lists thirteen disability categories under which students may be eligible for services in school through the age of twenty-one. Although providing labels to students allows for the provision of special services critical to supporting students with disabilities develop, learn, and succeed in school and other settings, the possibility of negative outcomes regarding social relationships, mental health, self-esteem, and self-efficacy must also be taken into account (Banks & Woolson, 2008; Georgiadi et al., 2012; Little & Kobak, 2003; Lackaye & Margalit, 2006).

Students labeled as having a disability have higher incidence rates of depression and low self-esteem (Banks & Woolson, 2008). Further, students with exceptionalities experience significantly lower feelings of social belonging and empowerment than their non-exceptional counterparts (Bramston, Bruggerman, & Pretty, 2002). These feelings may lead to social

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disadvantage, stigmatization, and exclusion from society (Gillman, Heyman, & Swain, 2000; Keil et al., 2006).

Indeed, identification with multiple oppressed groups stigmatizes students in complex ways (Mayes & Moore, 2016). Research on the intersectionality of race and disability shows African American students who experience disability and racial stigmatization may display problem behaviors, develop poor self-esteem and poor self-efficacy skills, and are at greater risk for underachievement, and school failure (Ford et al., 2008; Fowler, 2011; Milner & Ford, 2005; Moore et al., 2005; Robinson et al., 2014; Waitoller et al., 2010). As negative stereotypes and messages surrounding race conflate with the stigmas associated with having a disability for Students of Color, they are more likely to dissociate and withdraw from the educational environment, impacting later quality of life (Robinson et al., 2014).

The lasting implications of identification with multiple oppressed groups include higher rates of dropout, arrests, juvenile incarceration, lower status employment and wages, and lower rates of independent living (Losen et al., 2015; Losen & Wellner, 2001). As previously mentioned, African American students are also more likely to receive their instruction in more restrictive special education placements (Skiba et al., 2008; U.S. Department of Education, 2016a). Restrictive school settings are termed a “warehouse” for African American students, ultimately feeding the school-to-prison pipeline (Brown, 2010; Krezmien, Mulcahy, & Leone, 2008; Morrison & Epps, 2002). The layers of stigma experienced by Students of Color with disabilities are undoubtedly multifaceted and exist within a historical and social context of injustice (Annamma, Connor, & Ferri, 2012).

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Disability Critical Race Theory

With the aim of answering questions about the pedagogies, practices, and systems perpetuating educational disadvantages for marginalized groups of students, I draw upon Disability Critical Race Theory (Annamma, Connor, & Ferri, 2012), or *DisCrit*. DisCrit emerges from the larger theoretical framework embedded in Critical Race Theory (CRT), which, among other things, views policy as a process shaped by the interests of the dominant White culture (Gillborn, 2014).

DisCrit theorizes about the ways socially constructed categories of race and ability are situated within the dominant White culture and are embedded into larger educational policies, interactions, procedures, activities, institutions, structures, and discourses (Crenshaw, 1993; Solorzano & Yosso, 2001). DisCrit further recognizes the material and psychological impacts of being labeled as raced or disabled (Annamma, Connor, & Ferri, 2012). Social constructions of race and disability are conceptualized as interdependent and existing within complex layers of stigma and social injustice (Annamma, Connor, & Ferri, 2012). DisCrit pushes back on the dominant cultural view that deviations from White, able-bodied norms are viewed as socially subordinate identities (Annamma, Connor, & Ferri, 2012; Ferri & Connor, 2010).

Historically, individuals with disabilities are viewed as subordinate identities, facing widespread discrimination, stigmatization, oppressive marginalization, and exclusion from society (Winter, 2003). Disableism refers to a set of assumptions and practices promoting the differential or unequal treatment of people based upon actual or perceived disabilities (Campbell, 2008). Similarly to racism, disableism examines the attitudes and barriers that contribute to the subordination and discrimination of a targeted group of people. Instead of focusing on disableism

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as a construct, refocusing the discourse on ableism allows us to deconstruct the subjective nature of disability. Ableism is defined by Campbell (2001) as:

... a network of beliefs, processes and practices that produces a particular kind of self and body (the corporeal standard) that is projected as the perfect, species-typical and therefore essential and fully human (p.44).

The cultural devaluing of individuals based on real or perceived attributes undergirds this emerging counter-discourse of how “normalizing” groups of individuals based upon proximity to some subjective standard maintains their power and privilege within a society. By focusing on ableism and moving the lens away from disableism, we can begin to critically dissect the illusion of the “species-typical” human standard. The subjective nature of eligibility criteria for special education as well as the misinterpretation of culturally-specific behaviors as problematic deviations from the “norm” are some obvious manifestations of racism and disableism in schools (Campbell, 2001). The juxtaposition of all individuals against a White, culturally normative standard is perhaps the dysfunctional belief system which lies at the crux of the American education system and society at large (Tomlinson, 2015). Proponents of socially just school reform proposals argue institutions of education in the West are absolutely founded on racial, class, gender, and disability divisions that “advantage and disadvantage some groups of students” (Tomlinson, 2015, p. 157).

I chose DisCrit as a theoretical lens for this study because it emphasizes how institutionalized racism and ableism affect Students of Color in ways fundamentally different than their White counterparts and considers how legal, ideological, political, and historical aspects of race and disability have interfaced and resulted in multiple marginalities of certain groups of people (Annamma, Connor, & Ferri, 2012). Drawing upon Disability and Critical Race studies provides a multi-dimensional backdrop from which to evaluate how societal

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constructions of being “White” and “Able” privilege certain individuals to more high-quality educational opportunities (Broderick & Leonardo, 2015); therefore, recognizing Whiteness and Ability as Property and that advancements for people labeled with disabilities are largely made as the result of interest convergence⁴ of the dominant White culture (Annamma, Connor, & Ferri, 2012).

However purposeful or inadvertent, the legal, ideological, historical, social, economic, and political aspects of race in this country have contributed to Students of Color with disabilities being the recipients of segregation, stigmatization, and disparate educational outcomes (Hart et al., 2009), ultimately institutionalizing educational inequity and racializing disability (Liasidou, 2012). Examining the complexity of intersectionality between race and disability has allowed researchers to evaluate the multiplicity of dimensions inherent within specific contexts (Annamma, Connor, & Ferri, 2012). DisCrit, Disability studies, and Critical Race studies together consider the legal and historical aspects of disability and race and how each is used to deny the rights of some citizens (Annamma, Connor & Ferri, 2012).

As previously stated, paraeducators are often assigned to students with disabilities as cost-effective, remedial instructional staff, despite research indicating this strategy has negatively affected equity for this student population (Giangreco, 2010b). The pairing of the most minimally trained instructional staff with students identified as having the biggest educational needs raises serious concerns regarding equity (Carter et al., 2009; Fisher & Pleasants, 2012; Giangreco, 2013; Giangreco & Broer, 2005; 2007; Giangreco, Doyle & Suter, 2012; Giangreco et al., 2005; Suter & Giangreco, 2009). According to a study by Giangreco, Suter, and Hurley (2011), the most common student disability categories assigned one-to-one paraeducators were

⁴ Interest convergence theory holds that the subordinate party's interests will not advance unless that interest does not benefit the majority party (Bell, 1980).

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severe, low-incidence disabilities including autism, health impaired, emotional disturbance, intellectual disability, multiple disabilities, and developmental delay, respectively. Fisher and Pleasants (2012) powerfully summarize this pairing: “the least qualified staff are teaching students with the most complex learning characteristics and in some cases with little oversight or direction” (p. 288).

The current model of special education service delivery, which is heavily dependent upon paraeducators, may lead to low expectations and double standards for students with disabilities (Giangreco, 2003; 2010a; 2010b). As such, if a student is not disabled, they receive their instruction from a qualified teacher with the required credentials. Conversely, if a student has a disability, especially if it is considered significant and pervasive, they may likely receive the majority of their instruction from a paraeducator of minimal qualification (Giangreco, 2003; Giangreco, Suter, & Doyle, 2010; Giangreco, Suter, & Hurley, 2011; Suter & Giangreco, 2009).

Paraeducator support often excludes students from the general education milieu, which may further isolate and stigmatize students with disabilities. In his Special Education Funding and Service Delivery (2015) testimony to the Education Committee of the Vermont Senate, Dr. Giangreco explains how such vulnerable populations may be more prone to these “micro-exclusions”:

Even in schools and classrooms where students are counted as being placed in general education classrooms 80% of the day or more (the highest federal reporting category), we have students who experience what is termed "micro-exclusion"; they are physically in the classroom but spend a substantial amount of time separated within the classroom, such as at the back of the classroom doing separate work with a paraprofessional rather than being fully part of the life of the classroom (p.1).

What DisCrit as a theoretical framework does not address is the “triple threat” to educational equity— how paraeducator assignment as a method of special education service delivery intersects with race and disability for trice marginalized students (Figure 1). In fact,

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there are a lack of research studies examining the intersectionality of student race, disability, and paraeducator assignment (Giangreco, 2010a). DisCrit theory provides a unique conceptual framework to investigate disparities in paraeducator assignment and race as a means to evaluate this dimension of educational equity in special education service delivery models for students with disabilities.

With the aim of investigating disparities in paraeducator assignment to students with disabilities, the following research questions will be examined through a DisCrit lens within the current study: 1). Is there an increased likelihood of paraeducator assignment based on student characteristics? and; 2). Does student race/ethnicity influence the risk of paraeducator assignment?

Method

Prior to this current study, I piloted a qualitative study investigating how race and disability intersected for three Students of Color with disabilities in a high school setting. A semistructured interview protocol and photovoice method were utilized to capture the perceptions of students and to allow them to voice their individual experiences through their interpretation of chosen photos. Students were asked to use their personal cameras to take photos of objects, subjects, and spaces that are meaningful and reflective of their experiences in school. Students were prompted to capture their unique experiences of identifying as a student with a disability, a student supported by a paraeducator, and a student of color.

DisCrit was employed in the pilot study as both a theoretical framework and guiding methodology to investigate the intersectionality between race, paraeducator assignment, and disability as experienced by pilot study participants. Three major findings were extracted from the data related to the student experience of stigma. The first finding suggested that students'

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perception of stigmatization was most salient for race. Although each participant explicitly expressed feeling stigmatized as a student with a disability and as a student working with a paraeducator, their responses around race illustrated that this area in particular was most prominent to their experience of stigmatization in school. One student experienced the following:

If a bunch of white people are hanging out and one Indian girl is hanging out, I don't know, maybe that's why they don't want to hang out. There's like one brown girl and all these White girls and that would make it look weird.

Students also reported that paraeducator support most negatively influenced peer social interactions and relationships, expressing that an unfortunate consequence of this pairing was the barrier it created in forming social relationships with peers. In one student's words:

They think [peers] if I have a para and they follow me around at school, they can't be my friend, but that's sad because I don't have any friends. People are just not accepting of that. It's not like the para is stopping me or always with me, but it makes it hard to interact.

The student goes on to explain how working with a paraeducator can sometimes affect the way her peers perceive her and even inhibit her ability to have social interactions with peers:

Having a para makes me feel more isolated from the other kids sometimes. So it makes it harder for them to talk to me; they don't want to like interfere with that. I think people see this teacher following me all the time in the hall, so they think I'm like socially awkward and won't barge in to talk to me.

Last, student reports of negative self-concept as it related to intellectual ability appeared to be most highly influenced by the presence of paraeducator support. According to one student interview:

I'm slower than other people and I don't get school as easily as other people do and it's just something that's been a lot harder for me. I feel like, not a loser, but uh, stupid. I feel like when I have a paraprofessional, I feel like that's where I'm really severely slow, like I need someone next to me at all times. People think that you are weird or something, or that something's wrong with you.

All student participants reported that race stigma, disability stigma, and paraeducator support stigma had at least some detectable, negative effect on their self-concept. One student

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reflected on how the convergence of these stigmas together made her feel different from other students in school:

So it makes it harder for me to make friends because people see that is different and they find it hard to accept differences. Sometimes people aren't accepted for their differences here—like if you are different you are not as good as other people.

This pilot study investigating the student voice provided critical insights into how paraeducator assignment, disability, and race interacted and influenced the student's perception of stigma and provided a foundation for the current study. What the pilot did not address, however, was whether study participants were more likely to be assigned a paraeducator due to other factors associated with overrepresentation in special education such as race/ethnicity.

There is an extraordinary degree of complexity inherent within the myriad systems, institutions, and socio-cultural conditions affecting educational equity. Traditionally, research within the social sciences focused on qualitative and mixed methodological data approaches due, in part, to the complexities embedded within social realities. Especially for researchers utilizing frameworks grounded in Critical Race Theory (CRT) to guide their research methodology, the oral narrative and authentic experience of traditionally marginalized populations have primarily focused on qualitative data collection and analysis methods (Crenshaw, 1988).

In fact, the nefarious origin of quantitative statistics in biologically-based racial studies is rooted within the eugenics movement⁵ (Zuberi, 2001). Statistical models based upon the principals of eugenics were used for the purpose of classifying African Americans as innately and biologically inferior to Whites (Zuberi, 2001). As prominent social scientists began challenging these approaches in the early 1900's and decoupling eugenics logics from statistics, there was movement away from quantitative methodologies in racial studies (Zuberi, 2001).

⁵ The study of or belief of improving the qualities of the human species, especially by such means as discouraging reproduction by persons having genetic defects or presumed to have inheritable undesirable traits (Galton, 1883).

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More recently, social scientists have pushed back on these methodological ideologies, calling for the use of rigorous quantitative data approaches for racial liberation and advancement of social justice for oppressed groups (Gillborn, 2010; Zuberi, 2001). The blending of quantitative methodologies and CRT principals underlies the theoretical framework known as QuantCrit (Gillborn, 2010). The tenets of QuantCrit include that data cannot ‘speak for itself’ and critical analyses should be informed by the experiential knowledge of marginalized groups (Gillborn, 2010). In addition, QuantCrit holds that statistical analyses have no inherent value on their own, but can play a role in advancing social justice (Gillborn, 2010).

As such, this study was informed by the previous pilot study, which drew upon the experiential knowledge of Students of Color with disabilities assigned paraeducator supports. The current study builds upon findings from the pilot, and utilizes a quantitative approach based upon the foundational principals of CRT, DisCrit, and QuantCrit.

Multivariate logistic regression analysis is utilized in this study to accommodate the various types of complexities which characterize the multiplicity of factors impacting educational equity, with a focus on student race/ethnicity as a predictor variable for paraeducator assignment. Proponents of using qualitative research methodologies to address complex social issues may argue variable-based linear models are overly simplistic and reductionist--or otherwise inadequate to properly investigate the layers of social and educational injustices described herein. However, the goal of such a model is not to provide an explanation as to why or how such intricacy exists with respect to the aforementioned complexities, but rather to provide a reasonably clear linear explanation as to whether there is a relationship between paraeducator assignment and student characteristics while including controls for other factors that may simultaneously influence this relationship.

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Thus, quantitative methodologies are utilized within this study to investigate whether current models of special education service delivery, which rely heavily on paraeducator supports, may be further marginalizing students with disabilities. Such service delivery models may be educationally inadequate to meet the needs of our most vulnerable student populations.

Based on a review of the current literature on paraeducator assignment and race and disability status, there are few published studies investigating the relationship between paraeducator assignment and student race. This is highly problematic as education policy cannot adequately attempt to address disparities with regard to student race and paraeducator assignment if no such data regarding this potential relationship exists.

Data Collection: Target Population and Sample

The purposive sample consists of 322 students served under IDEA in grades PK-12 for the 2015-2016 school year. The dataset from one school district in Connecticut was examined as a secondary data source and contained the following de-identified student information: disability category, race/ethnicity, grade level, gender, and paraeducator assignment status. Paraeducators training, roles, and responsibilities vary greatly by context, but for the purpose of this study, paraeducators fit the following definition: unlicensed instructional personnel within the school setting who provide direct academic and/or behavioral support to students served under IDEA (2004) identified as having a disability.

Data Analysis Techniques

Research Q1: To answer my first research question, “Is there an increased likelihood of paraeducator assignment based on student characteristics?” I employed a quantitative research design utilizing multivariate logistic regression analysis with control variables. This method was chosen to examine the relationship between paraeducator assignment status and all other

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predictor variables included within the model: student race/ethnicity, grade level, gender, and disability category. Logistic regression analysis produces an odds ratio, or an estimated likelihood of a student being assigned a paraeducator based on the individual student characteristics.

Odds ratios are defined as the odds an outcome will occur given a particular exposure, compared to the odds of the outcome occurring in the absence of that exposure. For example, an odds ratio will provide a comparison of the odds of a particular racial/ethnic group receiving a treatment or experiencing a particular outcome to the odds of the remaining racial/ethnic group receiving the same treatment or experiencing the same outcome. If a particular racial/ethnic group's odds ratio is 2.0, it means students from that group are twice as likely to receive a certain treatment relative to other students; while an odds ratio of 1.0 means that students from that racial/ethnic group are equally likely to receive a certain treatment as other students. If a racial/ethnic group's odds ratio is 0.50, it means that students from that group are less than half as likely to receive a certain treatment as other students. In this study, the treatment received is paraeducator assignment.

Predictor variables including student race/ethnicity, disability category, gender, and grade level were chosen after careful review of the scholarly literature, as suggested by Field (2005): "predictors [in a regression analysis] should be selected based on past research" (p. 159). Based upon the scholarly literature on the overrepresentation of Students of Color in special education (Artiles et al., 2010; Harry & Klingner, 2006; Office of Special Education Programs, 2011; 2015; 2016; Parish, 2002; Zhang, 2014), it is hypothesized that the strongest predictor of paraeducator assignment in the current study will be student race/ethnicity.

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Research Q2: To answer my second research question, “Does student race/ethnicity influence the risk of paraeducator assignment?” I further drew upon this data set to calculate a relative risk ratio, or a number describing the likelihood of an events’ occurrence (i.e., paraeducator assignment) after exposure to a risk variable (i.e. student race/ethnicity) as compared with the likelihood of its occurrence in a control group. Similarly to the risk ratios calculated by states for reporting overrepresentation on the basis of race and special education identification under the provision in Part B of IDEA (2004), a relative risk ratio larger than 1.0 will indicate overrepresentation, while a risk ratio less than 1.0 will indicate underrepresentation (Skiba et al., 2008).

I provide descriptive summary statistics on all of the variables of interest. I used the statistical computer software STATA to assist in all of the analyses.

Trustworthiness

This study relies on data obtained from a single source, preventing the triangulation of multiple data sources to occur. Additionally, there are unobservable factors which undoubtedly influence how paraeducator assignment decisions are made, which are not included in the current study. Such omitted factors (e.g. unconscious bias, litigation, student socioeconomic status, available school district resources) might also influence the relationship between paraeducator assignment and student characteristics. Triangulation methods where data is collected from a variety of sources with a variety of data collection techniques would corroborate findings and strengthen internal validity; therefore this method is suggested for future research. This investigation does boast strong construct validity as there is a clear link between the data collection and analytic

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procedures with operationalized constructs—in other words, the study measures what it purports to measure.

Reliability describes the consistency, dependability and replicability of a study's findings (Nunan, 1999). This study describes data which is easily quantifiable and analytic procedures which can be reproduced and independently verified by other researchers, which strengthens the study's consistency and replicability. Additionally, there is a high degree of dependability and consistency in the collection of data, as student data is maintained for state mandated reporting purposes by the district and reflects accurate student data.

Results

Means and standard deviations for the student sample are provided in Table 2. The majority (81%) of the student sample was White, 12% was African American, and the remaining seven percent were American Indian/Alaskan Native, Hawaiian Native/Pacific Islander, Asian American and two or more races, respectively. The majority (61%) of the sample was male.

The largest student disability category was for Specific Learning Disability, which comprised 46% of the sample, followed by 18% for Other Health Impairment, nine percent for Autism, and seven percent for Serious Emotional Disturbance. 64% of the student sample had a high incidence disability. Of the sample, 30% of students were assigned a paraeducator with 21% assigned full-time paraeducator support (33.75 hours per week), and nine percent assigned part-time paraeducator support (19 hours per week). The majority of students receiving special education (58%) were attending a district elementary school, followed by the high school (28%), and the middle school (14%). Student characteristics and district enrollment by individual school are also provided in Table 3.

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Table 2

Descriptive statistics (n=322)

Student Variable	M	SD
<i>Race/Ethnicity</i>		
White	.811	.392
African American	.121	.327
American Indian/Alaskan Native	.003	.056
Asian American	.040	.197
Hawaiian Native/Pacific Islander	.003	.056
Two or More Races	.002	.146
<i>Disability Category</i>		
Autism	.090	.287
Multiple Disabilities	.068	.253
Other Health Impairment	.180	.385
Developmental Delay	.034	.182
Speech or Language Imp.	.068	.253
Learning Disability	.466	.499
Emotional Disturbance	.075	.263
Intellectual Disability	.015	.124
Visual Impairment	.003	.056
<i>Disability Incidence Rate</i>		
High Incidence	.643	.479
<i>Paraeducator Support Level</i>		
Full Time	.214	.411
Part Time	.096	.295
<i>Gender</i>		
Male	.615	.487
<i>Grade Level</i>		
Elementary	.581	.494
Middle	.139	.347
High	.279	.449

Table 3

District enrollment by school

2015-2016	Enrollment Total	Enrollment Grade	Enrollment Race/Ethnicity	Enrollment Gender
Elementary School A	439	K-70 1 st -87 2 nd -90 3 rd -93 4 th -99	American Indian/Alaskan-1 Asian/Pacific Islander-74 Black-28 Hispanic-24 White-298 Two or More Races-14	Male-220 Female-219
Elementary School B	198	K-30 1 st -45	American Indian/Alaskan-0 Asian/Pacific Islander-4	Male-108 Female-90

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		2 nd -38 3 rd -46 4 th -39	Black-4 Hispanic-11 White-172 Two or More Races-7	
Elementary School C	376	PK-46 K-61 1 st -64 2 nd -64 3 rd -59 4 th -82	American Indian/Alaskan-0 Asian/Pacific Islander-5 Black-5 Hispanic-13 White-348 Two or More Races-5	Male-191 Female-185
Intermediate School	435	5 th -226 6 th -209	American Indian/Alaskan-0 Asian/Pacific Islander-30 Black-14 Hispanic-18 White-361 Two or More Races-12	Male-219 Female-216
Middle School	434	7 th -212 8 th -222	American Indian/Alaskan-0 Asian/Pacific Islander-24 Black-20 Hispanic-19 White-360 Two or More Races-11	Male-222 Female-212
High School	773	9 th -179 10 th -208 11 th -180 12 th -206	American Indian/Alaskan-3 Asian/Pacific Islander-28 Black-31 Hispanic-37 White-649 Two or More Races-25	Male-380 Female-393

**National Center for Education Statistics, 2015-2016 school year data (U.S. Department of Education, 2016b).*

Results Q1:

To answer my first research question, “Is there an increased likelihood of paraeducator assignment based on student characteristics?” I conducted multivariate logistic regression analyses. Chi-square and McFadden’s pseudo R-squared values are reported as measures of goodness of fit for models predicting full-time ($\chi^2 = 59.45$, $R^2 = .178$) and part-time paraeducator assignment status ($\chi^2 = .016$, $R^2 = .722$). It is important to note no African American, Native American/Alaskan Native, or Hawaiian Native/Pacific Islander students were assigned part-time paraeducators during the 2015-2016 school year, reducing the sample size for the part-time paraeducator analysis to 206 students.

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The multivariate logistic regression model with included predictors produced proportional odds ratios after controlling for all other variables in the model. These are reported with the corresponding two-tail p-value and the 95% confidence interval for each variable. Odds ratios were calculated to control for potential compounding variables and to answer questions about the likelihood of students receiving the full-time or part-time paraeducator support treatment.

Results of the multivariate logistic regression analysis yielded some significant findings. Students with high incidence disabilities were significantly less likely (odds ratio=.168, $p<.001$) to be assigned full-time paraeducator support compared to students with low incidence disabilities. Additionally, students at the middle school (odds ratios=.212, $p<.05$) and high school level (odds ratio=.258, $p<.01$) were found to be significantly less likely to be assigned full-time paraeducator support compared to students at the elementary school level. Table 4 summarizes this data.

Table 4

Odds ratios for full-time (n=322) or part-time (n=206) paraeducator assignment

Student Variable	Odds Ratio (Standard Error)		[95% Conf. Interval]	
	FT	PT	FT	PT
Black or African American	1.73 (.793)	1 (Omitted)	[-.351, 1.45]	
Asian American	1.72 (1.15)	1.46 (1.22)	[-.763,-1.85]	[.282, 7.53]
Native American/Alaskan Native	1 (Omitted)	1 (Omitted)		
Native Hawaiian/Other Pacific Islander	1 (Omitted)	1 (Omitted)		
Two or More Races	.670 (.787)	.932 (1.04)	[-2.70, 1.90]	[.105, 8.26]

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Male	1.25 (.4024)	.528 (.2084)	[-.405, .855]	[.244, 1.14]
Middle School	.212* (.124)	.999 (.5024)	[-2.70, -.403]	[.373, 2.68]
High School	.258** (.102)	1 (Omitted)	[-2.13, -.579]	
High Incidence Disability	.168*** (.052)	1.07 (.444)	[-2.39, -1.17]	[.471, 2.41]

*p<.05. **p<.01. ***p<.001

Results Q2:

To answer my second research question, “Does student race/ethnicity influence the risk of paraeducator assignment?” relative risk ratios were calculated. The absolute number of events in the treatment group (i.e., students assigned a paraeducator) were divided by the absolute number of events in the control group (i.e. students not assigned a paraeducator) for the variable of interest (student race). Computed risk ratios for this analysis are found in Table 5. Both the general and special education enrollment data for the sample reflect the same school year (2015-2016) to ensure consistency in data and analytic techniques.

Findings suggest, holding all else constant, Asian American students have an elevated risk of being assigned a full-time paraeducator (*risk ratio*=1.86) or a part-time paraeducator (*risk ratio*=1.64) relative to all other students included within the sample. African American students have an elevated risk (*risk ratio*=1.23) of being assigned a full-time paraeducator relative to all other students included within the sample when holding all else constant. Students of two or more races have an elevated risk of part-time paraeducator assignment (*risk ratio*=1.48) when compared to other students and holding all else constant.

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Table 5

Risk ratios by student race/ethnicity (n=322)

Student Race/Ethnicity	Risk Ratio	
	FT	PT
White	.77	.18
African American	1.23	0
Asian American	1.86	1.64
Native American/Alaskan Native	0	0
Native Hawaiian/Other Pacific Islander	0	0
Two or More Races	.66	1.48

Discussion

This study investigated the relationship between paraeducator assignment and student characteristics while utilizing a quantitative research design. Using quantitative research for social justice purposes has the potential to impact public policy, uncover systems of inequality, and promote equity for marginalized and oppressed populations (Vera & Speight, 2003). As public education policy is largely informed by quantitative data (Bennett, Barth, & Rutherford, 2003), this research has the potential to inform policy makers of inequities experienced by the students in this study, and may inform future research investigating a larger trend in paraeducator assignment and student race across the country.

According to Giangreco (2010a), the available data on paraeducator assignment trends are severely limited:

Although there are national estimates on the use special education paraprofessionals, there are inadequate data on one to-one paraprofessional

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supports to follow trends in their use or to inform policymaking and practices at federal, state, and local levels (p.2).

With the virtual absence of published data pertaining to the relationship between paraeducator assignment and student race, little can currently be done in terms of informing educational policy recommendations and reform efforts to address the utilization of paraeducators. As such, the potential benefits of the research to society are to contribute to the literature regarding the relationship between student race and paraeducator assignment and to identify potential structural discriminatory practices within special education service delivery models which utilize paraeducator supports. Ultimately, results of this study have the potential to bring attention to the issue of equitability in student access to competent instruction from qualified teachers and special educators.

The purpose of this study was to investigate the relationship between student characteristics and paraeducator assignment. My first research question investigated whether individual student characteristics (i.e., race/ethnicity, disability category, gender, school level) were predictive of paraeducator assignment. Findings of the odds ratio analysis yielded some significant results for the variables analyzed. Students with high incidence disabilities and students attending the middle school and high school were significantly less likely to be assigned full-time paraeducator support when compared to students with low incidence disabilities and students attending district elementary schools.

Given the research that suggests students with severe, low-incidence disabilities are more likely to be assigned full-time paraeducators (Giangreco, Suter, & Hurley, 2011; Suter & Giangreco, 2009), this finding appears to be supported within the literature. Findings from the odds ratio analysis also supported a relationship between school level and paraeducator

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assignment, which appears to be a trend in the state of Connecticut. State data indicates that students at the elementary school level are more likely to be assigned paraeducator support than students at the middle and high school levels (Connecticut State Department of Education, 2014).

Most surprising was that calculated odds ratios did not support an increased likelihood of paraeducator assignment based on student race/ethnicity. One might assume that because the research suggests that Students of Color are overrepresented in special education (Artiles et al., 2010; Harry & Klingner, 2006; Office of Special Education Programs, 2011; 2015; 2016; Parish, 2002; Zhang, 2014) and paraeducators are heavily relied upon to support students with disabilities (Chopra & French, 2004; Suter & Giangreco, 2009; Education Association, 2016; U.S. Department of Education, 2010; 2012), that Students of Color might with disabilities may be more likely to be assigned a paraeducator. This relationship was not supported within the first statistical model. It is hypothesized that the small sample size utilized within the current study may have impacted the data in this regard.

My second research question focused on determining the risk of paraeducator assignment based on student race/ethnicity. Findings of the risk ratio analysis suggest African American and Asian American students have an elevated risk of full-time paraeducator assignment, and Asian American students and students of two of more races have an elevated risk of part-time paraeducator assignment when compared to all other students included in the sample. Data derived from the risk ratios analysis further indicates that African American students are less likely to be assigned a part-time paraeducator when compared to all White students, Asian American students, and students of two or more races within the sample.

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These results should be interpreted with caution due to the small sample size of African American students ($n=39$), Asian American students ($n=13$), and students of two or more races ($n=7$). The risk ratio reported for African American students is suggestive they are more likely to be assigned a full-time paraeducator. However, further analysis of the data indicates this result may be driven by an unexpectedly large number of African American students with full-time paraeducator supports. Specifically, four African American female students at the elementary level were assigned full-time paraeducators and had high-incidence disabilities. This last finding pertaining to school level and disability category has not been supported within the literature and may be indicative of interactions between sample-specific variables within the current study.

Additionally, according to the National Association for Bilingual Education, Asian American students are actually less likely to be identified for special education services than other culturally and linguistically diverse populations (NABE, 2002). As such, the aforementioned findings pertaining to Asian American students and paraeducator assignment may not have relevant policy and practice implications and may largely represent the presence of confounding variables associated with the small sample size.

Although one should interpret results of the risk ratio analyses with caution due to the small sample size, findings may be indicative of larger trends pertaining to risk of paraeducator assignment for specific student subgroups. As previously stated, there is a lack of state (CSDE, 2016) and national data (Giangreco, 2010a) pertaining to student race/ethnicity and paraeducator assignment to confirm or deny a connection between these variables. In fact, I was unable to find any state or national data on student race/ethnicity and paraeducator assignment in my extensive review of the literature. It is important to consider how increased risk of paraeducator assignment

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for specific student subgroups identified within the current study negatively affects access and quality of educational opportunities.

Limitations

The small sample size and the purposive sampling technique utilized create limitations regarding the interpretation of results and the generalizability of data. Student data pertains only to those students identified under IDEA receiving special education supports and services in a single school district, and is not reflective of other student populations across other academic years. Generalizations about the data cannot be made about other school districts or states outside of this study's sample and comparisons across school years cannot be made. As such, replication of this research design with larger sample sizes across various school districts and states is recommended to further evaluate reported findings. Results of such larger studies could help determine the broader impact of paraeducator service delivery models across a wide spectrum of student and program characteristics.

The absence of Latinx students identified under IDEA from the student sample is a further limitation of this study. According to sample demographics, during the 2015-2016 school year there were twenty more Latinx students than African American students attending district schools, yet not one student was identified under IDEA. As Latinx students under the age of eighteen represent the largest minoritized student population in the nation (Morse, 2003), there has simultaneously been an increase in Latinx students identified under IDEA for special education services (Alliance for Excellent Education, 2006), especially within certain disability categories (OSEA, 2016). Nationally, Latinx students are more likely to be labeled as speech and language impaired than other students in all other racial/ethnic groups combined (OSEA, 2015; 2016). However, data derived from this study did not support any of these larger national trends.

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According to Salas (2004), Latinx parents often report feeling marginalized by overt or covert messages that indicate their input in educational decision-making processes are not valued or welcomed. Such cultural perceptions coupled with linguistic barriers (Quezada et al., 2003) for Latinx families may make it exceedingly difficult to advocate for their children's educational needs (Kalyanpur, Harry, & Skrtic, 2000). It is beyond the scope of this study to determine which factors may have affected special education placement decisions for Latinx students in the district studied.

Another limitation of this study is it focused exclusively on between-group differences, leaving in-group differences unexamined. The social construction of race results in the assumption of homogeneity within racial/ethnic groups (Richeson & Sommers, 2016). It is problematic to assume every individual belonging to a particular racial/ethnic group shares the same experiences or trajectories with respect to the study's findings. Such assumptions based on racial categorizations negate in-group differences, may perpetuate negative stereotyping and prejudice (Richeson & Sommers, 2016), and raises serious concerns regarding the validity of making sweeping generalizations (Whitfield et al., 2008).

This study compared differences in paraeducator assignment across student racial/ethnic categories. As is true for this study which utilized White students as the control group, White individuals are primarily used as the comparison or control group in research studies examining differences between groups. This comparative design may actually reinforce the assumption that, "Caucasians represent some sort of standard from which ethnic minorities deviate" (Whitfield et al., 2008, p.301). Future research is needed to examine how much variability exists within racial/ethnic groups to gain greater understanding of the factors which influence inequality in education with respect to paraeducator assignment.

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One of this study's limitations concerns the way paraeducator supports are reported by the school district studied. During the data gathering process, I learned students within the district may be accessing self-contained and special education programs staffed by paraeducators for a variety of reasons. For example, students with disabilities returning back to district schools from psychiatric hospitalizations and therapeutic placements often access self-contained special education programs full-time until they are able to transition into the regular classroom setting. These students may not be "assigned" a paraeducator per their Individualized Education Plan (IEP), but may receive the bulk of their instruction from these support staff members as a result of such circumstances. As paraeducators within these programs are often considered classroom or program staff as opposed to being individually assigned to a particular student or group of students, actual service time is not consistently reported within an IEP. Further, students who are suspended from school or expelled may receive long-term direct instruction from a paraeducator outside of school until they are able to return. Students with disabilities who require home-bound instruction for a variety of reasons including mental and physical health issues may also receive long-term instruction from paraeducators in community settings arranged by the district. These special cases are difficult to track and are not consistently recorded or reflected within a student's IEP.

As such, it can be difficult to determine which students are accessing instruction and how much instruction they are accessing from paraeducators staffed within these programs. Within the current study, I was not able to determine the duration and frequency of such supports for students accessing self-contained classrooms staffed by paraeducators. Without accurate reporting practices regarding student access to paraeducator supports in special education and

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self-contained programs, it is unclear whether a more significant racial disproportionality in paraeducator assignment within the school district studied actually exists.

Last, a limitation of this study surrounds the drawbacks associated with using a secondary data source. This data was originally collected by the school district to comply with the statutory reporting mandates imposed on Connecticut state school districts. Among these mandates is the provision that school districts must provide the State Department of Education (SDE) with information on race, ethnicity, and disability category of children requiring special education (Office of Legislative Research, 2013). As such, data was originally collected for this purpose and not to answer my proposed research questions, which is a threat to the study's validity.

Additionally, the secondary data source utilized was deidentified; and although this protects participants' confidentiality, it simultaneously prohibits the opportunity for follow-up questions and additional data collection. Further, because I did not participate in the original data collection process, I am unable to critically evaluate data quality and assess how accurately data was collected and recorded by the district. I do, however, have confidence that the school district's recording and reporting procedures are practiced with a high degree of fidelity as to ensure compliance with state reporting mandates.

Implications for Students

Findings indicate Asian American and African American students are at higher risk for full-time paraeducator assignment. Excessive, prolonged adult proximity has been associated with interference with ownership and responsibility of students by general educators, separation from classmates, dependence on adults, impact on peer interactions, limitations on receiving competent instruction, loss of personal control, and interference with instruction of other students (Broer, Doyle, & Giangreco, 2005; Giangreco et al., 1997; Giangreco, Boer, & Edelman, 2001;

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Malmgren & Causton-Theoharis, 2006). Further, as mentioned previously in the literature review, paraeducator support is associated with a host of negative student social-emotional outcomes including feelings of isolation and stigmatization (Al Zyoudi Krull, 2010; Broer, Doyle, & Giangreco, 2005; Campbell-Whatley, 2008; Causton-Theoharis, 2009; Giangreco, 2003; Giangreco et al., 2005; Giangreco et al., 2010b; Giangreco, Broer, & Edelman, 2002; Giangreco & Hoza, 2013; LaBarbera, 2008; Suter & Giangreco, 2009).

These detrimental outcomes may be further exacerbated for students who identify with multiple oppressed groups, stigmatizing them in even more complex ways (Mayes & Moore, 2016). The lasting implications of identification with multiple oppressed groups include higher rates of dropout, arrests, juvenile incarceration, lower status employment and wages, and lower rates of independent living (Losen et al., 2015; Losen & Wellner, 2001). As such, African American students with disabilities appear to be at a disproportionately higher risk for the aforementioned negative outcomes associated with paraeducator assignment within the sample studied.

Findings of this study indicate African American students are less likely to be assigned part-time paraeducator support when compared to White students, Asian American students, and students of two or more races. In fact, there were no African American students receiving part-time paraeducator support during the school year studied. The question as to why African American students are at a higher risk of full-time paraeducator assignment, the most restrictive support protocol, may be related to biases associated with this student population. Studies investigating teacher perception of Students of Color have found that White teachers perceive African American students as having less motivation (Diamond et al., 2004), fewer social skills (Wigfield et al., 1999), more behavioral problems (Skiba et al., 2002), and poorer academic

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performance relative to White students (Anderson-Clark et al., 2008; Tenenbaum & Ruck, 2007; Wigfield et al., 1999). As such, teacher's racial attitudes and biases regarding Students of Color may potentially influence the relationship between student race and more restrictive paraeducator assignment protocols.

For these students at a disproportionately higher risk of full-time paraeducator assignment, there are serious implications concerning special education identification and placement practices, as they may constitute a violation of the free and appropriate education (FAPE) and least restrictive environment (LRE) requirements of Part B of the Individuals with Disabilities Education Act (IDEA 2004). Under federal law, schools must ensure a free, appropriate public education in the least restrictive environment for all students with disabilities receiving special education and related services (IDEA, 2004). In addition, students cannot be placed in special education settings solely based on category of disability, severity of disability, configuration of the service delivery system, availability of educational or related services, availability of space, administrative convenience, or other reasons that violate their rights under IDEA (34 CFR §300.116). Disproportionate student groupings by race/ethnicity in more restrictive special education placements or for more restrictive support protocols (e.g. 1:1 paraeducator support), no matter how inadvertent or purposeful, limits student access to educational supports and services from highly qualified and adequately trained school personnel.

Implications for Schools: Troubleshooting the Training Trap. Findings of this study suggest certain marginalized student groups may have an elevated risk of paraeducator assignment. As such, these vulnerable student populations may be more likely to receive the majority of their instruction from unqualified and uncertified school personnel. This finding presents implications for schools to provide more high-quality training to paraeducators

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supporting these student populations, and to address the wider systemic issues influencing paraeducator service delivery models.

While providing better training for paraeducators as well as the staff working with and supervising paraeducators is critical, simply targeting training protocols will likely fall short of remedying the host of problems associated with the nation's growing overreliance on paraeducators (Giangreco, 2015). Referred to by Giangreco (2015) as the "training trap," providing more training to paraeducators and then expecting them to function like more cost-efficient versions of special education teachers is unlikely to solve the problem (Giangreco, 2015). Any training must be situated within appropriate roles of paraeducators, as paraeducators are not teachers and do not engage in the same quality of instructional practices (Da Fonte & Capizzi, 2015; Giangreco, 2015). Therefore, to address the wider systemic issues which stem from a dysfunctional special education service delivery model, the focus must become broader than paraeducators alone.

In his *Special Education Funding and Service Delivery* (2015) testimony to the Vermont House of Representatives, Michael Giangreco highlights how reactive approaches to special education service delivery have continually failed to address the underlying issues:

The absence of proactive models of inclusive special education service delivery leaves many school schools in a reactive posture. So when a perceived stress on the system occurs (e.g., a new student with a disability arrives who has intensive support needs) a common response has been to hire more paraprofessionals to relieve pressure on the system. This has delayed attention to root problems in how general and special education operate and are funded (p.4).

Cost-neutral alternatives to the overreliance on paraeducators have been identified by researchers. They pinpoint factors that have contributed to the expanded and inappropriate use of paraeducators in schools. For example, Giangreco and Broer (2003) designed the *Project EVOLVE* resource which is a school-based self-assessment tool which supports the identification

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and evaluation of existing service delivery strategies for students with disabilities in schools and offers alternative strategies. These alternative strategies aimed at improving the quality of special education service delivery includes: increasing the number of special educators, implementing co-teaching models, employing teachers dually certified in regular and special education, reassigning paraeducator responsibilities to more clerical roles, hiring certified teachers to carry out instruction planned by lead special education teachers, providing training for educators to support students with disabilities in general education settings, reducing special educator's caseloads, exploring peer-tutoring models, and encouraging students with disabilities to play a more active role in making decisions about their own supports (Giangreco & Broer, 2003).

Schools which have utilized this self-assessment planning tool have shown significant positive results across schools in regards to two areas: a decrease in special educator caseloads and an increase in the number of full-time special educators supporting students in schools (Giangreco, 2008). These findings support increasing the number of certified special education teachers and moving away from the current model of overreliance on cost-effective, minimally trained special education paraeducators to support students with disabilities (Giangreco, 2008).

Consequently, the problem with hiring more special education teachers to address overreliance on paraeducators is the chronic and persistent shortage of special educators nationally (U.S. Department of Education, 2017). According to the U.S. Department of Education (2017), half of all schools and 90% of high-poverty schools are experiencing a significant special education teacher shortage. As these statistics suggest, teacher shortages often have a disproportionate effect on the most vulnerable student populations. Unfortunately, the demand for special educators is expected to increase by 17% through 2018, which is a rate greater than what is predicted for all other occupations (Bureau of Labor Statistics, 2009).

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Research indicates that the retention of special education teachers once they are hired is also problematic with annual attrition rates at 13%, or twice the rate of general education teachers (Plash & Piotrowski, 2006). Excessive paperwork, high caseloads, parental demands, poor working conditions, and a lack of administrative support have all contributed to the national shortage and retention issues (Otto & Arnold, 2005). Further, according to a study by Giangreco, Suter, and Hurley (2013), special education teachers cited high student caseloads and a large number of paraeducators to supervise as primary factors impacting the time they engaged in student instruction.

As such, paraeducators are often utilized as an “add-on” support in a reactive approach to relieve workload pressure from special education teachers, who are increasingly unable to provide high-quality instruction to students due to time constraints created by excessively high caseloads and paperwork demands. This “cycle of reactivity” does little to address the complex underlying issues affecting special education service delivery for students with disabilities or their over-burdened special education teachers (Giangreco, Doyle, & Suter, 2012).

Additionally, school administrators wishing to gain a greater understanding of the factors influencing equity in special education service delivery may consider how racial attitudes and bias might influence paraeducator assignment practice. Tools such as the Implicit Association Test (Greenwald, McGhee, & Schwartz, 1998) assess unconscious racial bias and may be used by schools to examine racial attitudes, biases, and stereotypes which might influence paraeducator assignment practices. Such attitudes and stereotypes are intricately connected to subjective thoughts and feelings (Nosek, Greenwald & Benaji, 2007), which may influence how school teams make these decisions.

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Implications for Policy: A Call to Action. Findings of this study suggest historically marginalized students may have an elevated risk of paraeducator assignment. These findings present policy implications regarding special education service delivery for minoritized students with disabilities. The need for uniformity across credentialing, training, and supervision standards for paraeducators—especially those supporting marginalized student populations—may support the implementation of more equitable special education service delivery models. As previously mentioned, there is a widespread lack of consistency across local, state, and national education agencies which have contributed to variability in best practice standards for virtually every aspect of paraeducator credentialing, training, and supervision procedures. Researchers suggest a variety of recommendations to inform best practice standards for paraeducators in schools. These scholars have offered evidence-based solutions to the myriad problems associated with paraeducators as special education service providers including targeted professional development (Causton-Theoharis, et al., 2007; Da Fonte & Capizzi, 2015; Lane et al., 2007; Leblanc, 2005; Liston, Nevin, & Malian, 2009; Keller, Bucholz, & Brady, 2007; Brock & Carter, 2013, 2015), supervisory performance feedback (DiGennaro, Martens, & Kleinmann, 2007; Yoon et al., 2007), alternative route teacher programs (Burbank, Bates, & Schrum, 2009; Sindelar et al., 2012), on-site learning communities (Hughes & Valle-Riestra, 2008), shifting support from special education to regular education activities (Giangreco, Smith, & Pinckney, 2006), school wide, paraprofessional improvement planning (Giangreco, Edelman, & Broer, 2003), peer-support models (Carter et al., 2016; Carter et al., 2007), supervision and consultation supports (Conley, Gould, & Levine, 2010), and exploring ways to fade one-to-one paraprofessional support over time (Broer & Giangreco, 2005; Giangreco & Doyle, 2002; Giangreco, 2009; Giangreco & Broer, 2005, 2007). Despite the efforts of researchers to

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investigate the efficacy of these practices, discretion is left up to individual school districts and states to determine which, if any, are implemented.

If we are to truly begin to understand the complex matrices and ontologies which undergird the current education system, a wider discourse on the ways in which institutionalized racism and disableism have both shaped the way we approach special education service delivery is crucial. This work contributes to the discourse on racism and disableism; the latter being a socially and culturally constructed concept which is arguably as deeply embedded within the fabric of our culture as racism. By refocusing the discourse on the problems inherent within these “normed” paradigms and confronting our reliance upon culturally-devised standards which individuals in this country are measured against, we can begin to examine how ideologies of ability and race permeate education. This discourse could ultimately lead to activism and action affecting social-justice-based education policy reform.

Perhaps the most impactful socioeconomic and political factor affecting educational equity for Students of Color with disabilities and requiring reform at the policy level are inherent within school funding policies (Roza & Hill, 2004). Significant disparities in state and local school funding policies for districts affecting low-income students and Students of Color have been identified across the nation (U.S. Department of Education, 2015). Although inaccurate, traditional viewpoints traditionally point to variations in schools’ per-pupil spending as a result of property-tax rates across school districts (U.S. Department of Education, 2012). However, about 40% of variation in per-pupil spending occurs within school districts and not at the federal or state level, indicating inequities in spending are also happening at the local school level (U.S. Department of Education, 2012). Loopholes in federal laws affecting reporting of funding practices by districts has been cited in the research as a major issue which has not been

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adequately addressed within current legislation (Roza & Hill, 2004; U.S. Department of Education, 2012).

The two states in the nation with the highest funding discrepancies for Students of Color in 2012 were California and Texas (U.S. Department of Education, 2012; 2017). California schools serving 90% or more Students of Color spent \$191 less per student than all other schools, and \$4,380 less than schools serving 90% or more White students (U.S. Department of Education, 2012). In Texas, schools serving 90% or more Students of Color spent \$514 less per student than at all other schools, and \$911 less than schools serving 90% or more White students (U.S. Department of Education, 2012).

According to a national study conducted by Spatig-Amerikaner (2012) for the U.S. Department of Education, schools across America spent \$334 more on every White than their non-White counterparts. Further, mostly White schools spent \$733 more per student than mostly non-White schools nationwide (Spatig-Amerikaner, 2012). According to Spatig-Amerikaner (2012), “This means that the average school serving 90% or more Students of Color would see an annual increase of more than \$443,000 if it were to be brought up to the same spending level as its almost-entirely-white sister schools” (p. 7). Proponents of equitable education policies argue that current funding policies prohibit equal access to educational resources and opportunities, thus violating the Supreme Court ruling in *Brown v. Board of Education* (1954) in that public education is a right which must be made available on equal terms to all students (U.S. Department of Education, 2015).

One of the primary mechanisms perpetuating discrepancies in funding are rooted in inequitable teacher assignment practices (Dynarski & Kainz, 2016; Office of Civil Rights, 2016; Roza & Hill, 2004). According to the research, school districts across the country have teacher

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assignment practices which place the least-experienced teachers in high-minority, high-poverty schools (Dynarski & Kainz, 2016; Office of Civil Rights, 2016; Roza & Hill, 2004). As new teachers earn less in salary yearly, the total spending at these high-needs schools is likely to be lower than spending at schools in wealthier neighborhoods that are more likely to have veteran teachers (Roza & Hill, 2004). Under current legislation, districts are mandated to report average teacher salaries instead of actual teacher salary expenditure, allowing such funding discrepancies to continue undetected at the school level (Roza & Hill, 2004).

There is a great deal of discretion left to state and local education agencies regarding spending practices and allocation of federal and state funds. Amendments to ESEA (2015) for the next reauthorization cycle are necessary to close current loopholes in funding reporting required by districts. These amendments should mandate that districts calculate per-pupil expenditures based on actual cost and actual teacher salary, as opposed to average spending as is seen with current teacher salary reporting practices (Roza & Hill, 2004; U.S. Department of Education, 2012; 2015).

Reforming policy to mandate stricter school funding practices has the potential to positively impact special education service delivery for Students of Color. With adequate funding, we may move away from current models which rely heavily upon low-cost, undertrained paraeducators as direct service providers and towards models which ensure equitable access to high-quality teaching staff. Federal policy reform is required to dismantle the aforementioned structural discriminatory practices and to uphold public education as a right which must be made available on equal terms to all students regardless of race or ability (*Brown v. Board of Education*, 1954; U.S. Department of Education, 2015).

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Figure 1

Intersectionality of student characteristics

