

Special Education Disproportionality: A Review of Response to Intervention and Culturally Relevant Pedagogy

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ABSTRACT

Special education disproportionality for culturally and linguistically diverse (CLD) students persists as a controversial and intractable problem in our educational systems. Response to intervention (RtI) and culturally relevant pedagogy (CRP), both independently and collectively are considered to offer promise for mitigating conditions of overrepresentation in special education programs. The purpose of this paper is to review the existing research to examine the effects of RtI on minority students and the combined effects of RtI and CRP on minority students. The reviews of these works are discussed to assess whether the Morgan et al. (2015) recommendation for the U.S. Department of Education to recall its efforts to reduce minority disproportionality is justified.

With the reauthorization of the Individuals with Disabilities Education Improvement Act (IDEIA), a new framework was implemented to address issues of overidentification for the general population as well as for the disproportionate representation of minority students. Before its reauthorization in 2004, the Individuals with Disabilities Education Act (IDEA) utilized an intelligence quotient-achievement discrepancy model to identify students with learning disabilities (Yell & Walker, 2010). A major problem was that the model was predicated on an extensive period of academic failure (i.e., “wait to fail”) so that before interventions were initiated children fell far behind academically and the number of students needing services skyrocketed, resulting in tremendous demands for services (Fuchs & Fuchs, 2006; Yell & Walker, 2010). This

concern led to alternative procedures in the reauthorization for determining special education eligibility. According to the National Center on Response to Intervention (NCRTI), the goal of “RtI [response to intervention] was to minimize the risk for long-term negative learning outcomes by responding quickly and efficiently to documented learning or behavioral problems and ensuring appropriate identification of students with disabilities” (NCRTI, 2010, p. 4). These revised procedures were also intended to remedy the special education disproportionality observed among minority populations (i.e., African American, Hispanic, Native American, and English language learners [ELLs]; Sullivan & Castro-Villarreal, 2013).

As noted in previous reviews of the professional research literature and the U.S. Department

of Education reports (Cartledge & Dukes, 2009; Cartledge, Gardner, & Ford, 2009), the overrepresentation of minority students compared to White peers has been well documented. African American and Latino students, respectively, were most likely special education candidates with Whites being the least of these three groups. More specifically, African American males have consistently been the number one candidate identified for disability designation and special education placement. This is particularly true in the highincidence or mild disability categories (e.g., cognitive disabilities/mild mental retardation, emotional behavior disorders, or learning disabilities) where issues of culture and socioeconomic are influential (Harry & Klingner, 2006, 2014). The professional literature not only revealed special education disproportionality for certain culturally and linguistically diverse (CLD) groups, but also that African American students experienced more educational restrictiveness than White students where they were less likely to be taught in general education classes, to access the general education curriculum, or to receive other appropriate services such as counseling. Generally, African American and Latino students were more likely than Whites to be programmed for punishment than treatment. Another finding was that although Latino and African American children have poverty rates 2.5–3 times as high as that for Whites, the role of poverty is complex and not easily determined. For example, poverty seems to have a direct effect on the category of cognitive disabilities or mild mental retardation but the opposite appears to be the case for emotional behavior disorders. According to Skiba, Poloni-Staudinger, Simmons, Feggins-Azziz, and Chung (2005), race has been the most consistent predictive factor.

In stark contrast to these long-standing understandings, Morgan et al. (2015) contend minority children are disproportionately underrepresented in special education compared to their White counterparts. This assertion was based on their analysis of children's data in the Early Childhood Longitudinal Study-Kindergarten Cohort who entered kindergarten in 1998 and were surveyed periodically through eighth grade. These findings led the authors not only to deny minority student disproportionality

in special education but also to make the following equally disconcerting statement:

For policymakers, our results suggest that current federal educational legislation and policymaking designed to minimize overidentification of minorities in special education may be misdirected. . . including the reallocation of Part B funding to early intervening services designed to reduce minority overrepresentation in special education. . . . Consequently, federal legislation and policies may be inadvertently exacerbating education inequities by reducing access to special education services for eligible school children who are racial, ethnic, or language minorities. (p. 11)

Given the convincing evidence that minority (i.e., African American) students in special education have the poorest outcomes of all the students in our schools (Ford, 2012), the recommendation to increase the minority special education numbers is especially troubling. The overriding issue is not greater or fewer numbers in special education but how we ensure school programs that result in desired levels of academic and social competence for minority students. Before moving to increase the special education numbers, we need to first answer Dunn's (1968) question in the affirmative. That is, is much of special education justifiable?

The purpose of this paper is to review the promise of IDEIA 2004 relative to response to intervention (RtI) and its beneficial effects for minority learners. Specifically, the authors review investigations of RtI that have been conducted in elementary schools with minority populations. Because early interventions tend to stress reading in primary grades (K–2) and the greatest disproportionality occurs with African Americans, the reviews will concentrate on these factors. A second area of inquiry is the role of culturally relevant pedagogy (CRP) in the application of RtI interventions. The second part of this paper reviews the professional literature on multitiered interventions with culturally relevant methods for CLD populations. Finally, this literature is discussed in terms of the application of these interventions, pupil outcomes, implications, and whether the recommendations of Morgan et al. (2015) are warranted.

RTI IN PRACTICE

NCRIT describes RTI as a multilevel prevention system that contains three levels (also known as tiers) of instruction, with varying degrees of support for the struggling student. In the primary level (Tier 1), high-quality instruction focusing on core academics is provided to meet the needs of most students. Typically, this instruction is provided in the general education setting. To assess student achievement, progress monitoring (i.e., ongoing probes of academic or behavioral performance) is given to determine how students are doing with this level of instruction. Based on results from progress monitoring, students who are struggling to respond to instruction at this level will be moved to the secondary level (Tier 2) of the RTI framework where they will receive moderately intensive interventions through evidence-based instruction within small groups. The secondary level of prevention should address the academic and behavioral needs of most students who show risk. There is no requirement specifying what intervention(s) must be utilized; however, interventions must be determined to be evidence-based (NCRIT, 2010). When students have failed to respond to the moderately intensive intervention in the secondary level, they are moved to the tertiary level (Tier 3) where they receive more intensive, individualized support. As with all the other levels of the RTI model, progress monitoring and data are consistently collected and analyzed to determine students' achievement. If a student fails to respond to interventions at the tertiary level, it is possible that the student may have a disability and will require additional evaluation. The RTI model helps with the identification process by filtering students through the various levels and ensuring that struggling students are identified early in their academic careers. The Response to Intervention Network (2015) writes that before a special education referral can proceed to an evaluation, teachers must provide documentation that various evidence-based interventions have been in place to address the student's difficulties.

In addition to the use of RTI for eligibility determination, the reauthorization of IDEA has also changed how funding can be utilized for early intervening services (EIS). According to Fuchs and Fuchs (2006), IDEA 2004 allows school districts

to expend as much as 15% of their special education funds to address EIS. IDEA requires that school districts provide EIS through the use of school-wide academic and behavior assessments for all students as well as offer academic and behavior supports for students needing additional services (Yell & Walker, 2010). EIS present many advantages for schools, allowing them to identify students early in their academic careers, determine the best research-based interventions, and focus on student results (Vaughn & Fuchs, 2003). It especially has the potential to address the issues of special education disproportionality and minority underachievement.

RTI FOR CLD STUDENTS

The purpose of the first section of this paper is to review the professional empirical literature to assess the extent to which the RTI model has been employed successfully with minority populations. A particular focus is placed on African American students, who have been most consistently and widely identified with special education disproportionality (Cartledge & Dukes, 2009).

METHOD

A comprehensive search was conducted to find the most current (2005–2015) sources and studies that demonstrated specific interventions within the RTI framework for CLD students. After conducting a thorough search for articles and sources discussing specific interventions for CLD students, it became evident that there was a dearth of research conducted for this purpose with this population. Acquiring data presented challenges due to the sparseness of entries within the literature.

The Ohio State University is part of the OhioLINK consortium with access to more than 123 libraries shared by 93 Ohio colleges and universities (OhioLINK, 2015). Additionally, Ohio State University partnered with the Online Computer Library Center (OCLC) which is a global library co-operative containing thousands of libraries in more than 100 countries that provides shared research, technology, and original research to the library community (OCLC, 2015). Databases utilized

during this search were *Journal of Behavioral Education*, EBSCOHost, ERIC, Education Complete, Exceptional Child Education Resources, Wiley Online Library, *Journal of Special Education*, *Psychology in the Schools*, and PsycINFO. Clearing houses and peer-reviewed journals were also searched by hand.

A systematic review of CLD reading interventions in RtI published between 2005 and 2015 was conducted in December 2015. The above databases were searched for articles including at least one of the following terms within the article: *culturally linguistically diverse, urban, English language learner, English learner*; at least one of the following terms within the text of the article: *response to intervention, reading, literacy*, and the term, *intervention*, in the text of the source.

INCLUSION CRITERIA

To be included, each article needed to meet the following criteria: (a) published in a peer-reviewed journal between the years 2005 and 2015; (b) reading intervention incorporated within the RtI framework; (c) students between grades PreK–3; and (d) CLD students.

RESULTS

A primary search was conducted using the Ohio-LINK consortium. The first search yielded 20 studies that incorporated RtI and literacy interventions with diverse student populations. Initially, it was intended that the studies take place within elementary schools with a fully developed RtI model, but no studies within RtI schools with the above criteria were identified. Therefore, this particular expectation was modified to include studies that involved supplementary or Tier 2 interventions (Sullivan & Castro-Villarreal, 2013) even if they were not situated within an RtI school. Of the 20 resulting studies, only 14 of the sources included CLD populations. Among these 14 sources, only 10 incorporated actual interventions that involved student participants. Additional sources discussed the broader implications of the RtI framework. Of the 10 sources that included CLD populations, one source focused specifically on interventions

for ELL populations. The remaining nine studies discussed literacy interventions with populations where the majority of the participants were African American. Of these nine studies, three studies contained solely African American participants. The 10 sources that fit the criteria for this review are presented in Table 1 and are briefly discussed according to findings and implications.

DISCUSSION

Of the ten reviewed studies, nine focused on kindergarten to second-grade students (one on pre-school students) and the most common reading interventions focused on phonemic awareness or phonological skills, considered to be essential building blocks for reading competence (NRP, 2000). A brief discussion of these studies follows.

PHONEMIC/PHONOLOGICAL AWARENESS

Four of the reviewed studies used the early reading intervention (ERI; Simmons & Kame'enui, 2003) to improve the young learners' basic literacy skills. The ERI is an evidence-based early reading program (K–1) designed to provide 126 lessons on phonological awareness, alphabet understanding, word reading, and writing development. The instruction consisting of scripted lessons is to be conducted in small groups, using a direct instruction or model-teach-test sequence. Two of the four studies in this review used single-subject designs to assess the effects of the intervention and all of the researchers reported that the kindergarten/first-grade students with reading risk made critical gains on the taught skills. All of the studies included students from CLD backgrounds with different racial/ethnic (African American, Caucasian, Asian, and Hispanic) and language (Somali, Hispanic) groups. The Gyovai, Cartledge, Kourea, Yurick, and Gibson (2009) study was unique in that 11 of the 12 students were ELLs (10 from Somali background; 1 Hispanic). The 12th child was Asian American but not considered ELL.

The interventions for all four investigations occurred in small groups with intervention periods ranging from 5 to 16 weeks for 2–5 days a week for approximately 20–30 min per session.

Table 1

Empirical Early Multi-Tiered Reading Intervention Studies With Culturally Diverse Students

| Study | Purpose | Sample | Data collection/analysis | Findings | Recommendations |
|------------------------|--|---|--|---|---|
| Cartledge et al., 2011 | Examined the lasting effects of an ERI package of phonemic awareness on at-risk urban students' reading skills | 38 K-2, low socioeconomic, racially diverse learners from three Midwestern urban elementary schools; 100% received free or reduced lunch. | Data collection: ERI curriculum Pre- and post-scores on Letter-Word Identification (LWID), Word Attack (WA) of the <i>Woodcock-Johnson III Tests of Achievement</i> (WJ-III) and <i>Dynamic Indicators of Basic Early Literacy Skills</i> (Dynamic Indicators of Basic Early Literacy Skills (DIBELS)) benchmark assessment probes | Findings showed beneficial effects of the early literacy intervention with strong responders attaining and maintaining benchmark status and with poorer responders needing more intensive instruction to show continuous growth. Initially low-risk (nontreatment) urban learners failed to maintain their early advantage over their higher risk peers, suggesting the need for more extensive monitoring and interventions within urban settings. | Future research should replicate these findings across different contexts and with other diverse populations including specific at-risk populations such as students with emotional and behavior disorders. Future studies may focus on a more in-depth analysis of relative absolute gains made by students each year to see if these absolute gains were increasing or decreasing with time. |
| | | | Data analysis: (3-year longitudinal study) Non-randomized repeated measure design | The findings from this study support existing studies that early literacy intervention in the form of phonemic/phonological awareness can be effective in reducing reading failure and secondary disabilities for high-risk populations. | |

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Table 1 (Continued)

| Study | Purpose | Sample | Data collection/analysis | Findings | Recommendations |
|---------------------|--|--|--|--|--|
| Denton et al., 2013 | Evaluated the effects of an intensive, individualized Tier 3 reading intervention system for second-grade students who did not respond adequately to first-grade classroom reading instruction (Tier 1) and supplemental small-group intervention (Tier 2) | 72 second-grade students at-risk for reading failure participated in the study. 47 received Tier 3 intervention. Demographics of students in Tier 3 treatment: 13 African American, 27 Hispanic, 6 White, 1 American Indian | Data collection: Participants were randomly assigned to the Tier 3 group and received an adaptation of Responsive Reading Instruction (RRI; Denton & Hocker, 2006). Students needing fluency support also received an adaptation of reading naturally (RN; Innot, Mastoff, Gavin, & Hendrickson 2001). Data analysis: Multivariate analysis of variance (MANOVA) to determine if Tier 3 had adequate responders | Students who received the research intervention demonstrated significantly greater gains in word reading, phonemic decoding, word reading fluency, and sentence and paragraph-level reading comprehension for participants. Students who demonstrated low response in Tier 1 and Tier 2 required “systematic” intensive Tier 3 interventions to make meaningful gains. Individualized interventions seem to be efficacious for Tier 3 students in the primary grades. Fluency and comprehension difficulties were resistant to remediation in many Tier 3 students. | Future research should continue to examine the efficacy of intensive interventions for students who show inadequate progress in less intensive treatments. |

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Table 1 (Continued)

| Study | Purpose | Sample | Data collection/analysis | Findings | Recommendations |
|---------------------|---|--|---|--|---|
| Gibson et al., 2014 | Investigated the effects of a repeated reading intervention on the ORF and comprehension of generalization passages for students with reading risk. | Eight first-grade students, ranging in age from six to eight; enrolled in charter schools located in predominately African American communities All participants had difficulties in reading fluency and comprehension. | Data collection: Read Naturally Software Edition (RNSE), 2009 Data analysis: Multiple probe experimental design with two treatment phases | ORF and comprehension increased in both phases. However, satisfactory generalization did not occur for most of the participants until the second phase was implemented. | The study outcomes underscore the potential for computer-based programs to serve as delivery mechanisms for efficient and effective supplemental instruction for students at risk for academic failure. |
| Gyovai et al., 2009 | Examined the effects of a supplemental ERI on the beginning literacy skills of 12 kindergarten/first-grade urban ELLs at risk for reading failure | 11 ELL students from three kindergarten classrooms and one ELL student from a first-grade classroom | Data collection: The ERI curriculum (ERI; Simmons & Kame'enui, 2003) was the intervention used for all of the participants. Student progress was determined through DIBELS, curriculum-based assessment (CBAs), and Woodcock subtests. | All students increased in the number of phonemes segmented and the number of letter sounds produced correctly. Gains were commensurate with the amount of instruction received. | A functional relationship between ERI instruction and student growth is suggested from the data. |
| | | | Data analysis: Multiple baseline design across students | | |

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Table 1 (Continued)

| Study | Purpose | Sample | Data collection/analysis | Findings | Recommendations |
|-----------------|---|---|--|---|---|
| Lo et al., 2009 | Investigated the effects of ERI) on growth rates in early literacy skills for kindergarten students at-risk for reading failure | 47 kindergarten participants from an urban K-5 school at risk for basic literacy skills; 31 African American, 13 Latino, 2 Asian American, 1 Multiracial | Data collection: Treatment group received supplemental reading instruction using the ERI program. Data were collected using DIBELS, Nonsense Word Fluency (NWF), and Phoneme Segmentation Fluency (PSF) progress monitoring. Data analysis: MANOVA, hierarchical linear model | Supplemental reading instruction was beneficial to at-risk students in improving their basic literacy skills and reducing their risk status for reading failure. “The treatment-intensive/strategic students’ weekly growth rates in both PSF and NWF were significantly higher than those of the treatment-benchmark group and the non-treatment-benchmark students, suggesting that the ERI program had a significant impact on the students’ weekly growth rates and that students at higher risks might have benefited more from an explicit supplemental reading program than students at lower risks.” (p. 24) | Future research should consider having a larger student population with students from all levels of literacy proficiency. Schools must adopt explicit early literacy programs and monitor the amount and intensity of support that at-risk children need to remediate their underachievement. Further study of growth rates in specific skills may provide useful information to teachers regarding at-risk students’ progress over time to estimate the intervention duration for instructional planning purposes. |

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Table 1 (Continued)

| Study | Purpose | Sample | Data collection/analysis | Findings | Recommendations |
|----------------------|--|---|--|---|---|
| Lonigan et al., 2013 | Evaluated the efficacy of interventions designed to promote the development of emergent literacy skills for preschool children at high risk for later reading problems | 324 preschools from 13 Head Start centers; 46% girls, 54% boys, 82% African American, 14% White, 4% other | Data collection: Students were randomly placed in one of five possible intervention groups. Groups consisted of: (a) dialogic reading plus phonological awareness training (Group 1); (b) dialogic reading plus letter knowledge training (Group 2); (c) dialogic reading plus the combination of phonological awareness and letter knowledge training (Group 3); (d) standard shared reading plus the combination of phonological awareness training and letter knowledge training (Group 4); and (e) a control group that received only the ongoing classroom curriculum (Group 5). Data analysis: Descriptive and inferential statistics; meta-analytic findings | Children who received small-group interventions in dialogic reading, phonological awareness, or letter knowledge showed more growth than children who received only classroom curriculum. Combinations of different interventions did not enhance student results. | Results indicate benefit of academic skills-focused and explicit instructional activities relative to traditional early childhood curricula for increasing the early literacy skills of children with reading risk. |

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Table 1 (Continued)

| Study | Purpose | Sample | Data collection/analysis | Findings | Recommendations |
|-----------------------------|--|--|---|--|---|
| Lovelace & Stewart, 2009 | Examined the effects of a systematic vocabulary instructional technique in African American second-grade children with below-average vocabulary skills | Five second-grade African American children with vocabulary skills at least 1 standard deviation (SD) below the norm or 2 SD below the mean on one standardized test of vocabulary | Data collection: Five children were provided with robust vocabulary training through storybook usage. Storybooks were labeled as African American or Caucasian. Data analysis: Adapted alternating treatment design. | Students demonstrated superior word learning for instruction words compared to control words. This change can be attributed to vocabulary instruction. No reliable gains were noted when students used the African American books as opposed to Caucasian books. | Findings demonstrate the potential impact of robust vocabulary instruction for improving vocabulary development in children with below-average vocabulary skills. |
| Musti-Rao & Cartledge, 2007 | Investigated the effects of a supplemental ERI program on the alphabetic principle and phonemic awareness skills for kindergarten students at risk for reading failure | Seven kindergarten and one first-grade student showing reading risk All eight students were African American. | Data collection: A multiple-baseline-across-subjects design was used to assess the effects of the ERI program on the PSF and NWF reading skills of eight students identified as at risk for reading failure. Data analysis: Mean scores across baseline and intervention conditions and individual effect sizes (ES) | Early reading skills can be taught and explicit, systematic, and intensive instruction can improve reading status for at-risk students. | Future research might focus on additional supplementary reading intervention instruction to maximize literary outcomes. |

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Table 1 (Continued)

| Study | Purpose | Sample | Data collection/analysis | Findings | Recommendations |
|---------------------|---|--|--|--|---|
| Wanzek et al., 2014 | Examined the academic responding of students at-risk for reading difficulties during teacher-facilitated reading instruction in the general education classroom | 109 kindergarten students participated in the study. 74 African American, 28 Caucasian, 7 other ethnicities (Hispanic, Asian, Multiracial, unknown) | Data collection: Researchers used videotapes to chart the average number of seconds for reading instruction facilitated by the teacher and the average number of seconds students were academically responding through reading-related responses or reading print responses. | Kindergarten students who spent more time interacting with and responding to the teacher during instruction had higher reading outcomes, indicating that teacher-facilitated instruction may be a meaningful variable. | Future research could examine the academic responding of students who are on track in reading development, as well as students with reading difficulties, to compare student experiences in the same classroom. |
| | | | Data analysis: Calculated the percent of total time of academic responding; multilevel approach (MPLUS6) | | |

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Table 1 (Continued)

| Study | Purpose | Sample | Data collection/analysis | Findings | Recommendations |
|---------------------|--|--|--|--|--|
| Yurick et al., 2012 | Investigated the extent to which improvements in phonemic awareness skills could be attributed to participation in an extensive early reading intervention and if the level of treatment integrity and the total treatment duration would contribute any unique variance in students' phonemic awareness gain scores | Three elementary schools in an urban school district Treatment group: 38 students; 32.3% (13) females, 65.7% (25) males, 47.4% (18) African American, 39.5% (15) Caucasian, 7.9% (3) Latino, 5.2% (2) multiracial. All students except two qualified for free or reduced lunch. Comparison group: 32 students; 62.5% (20) males, 37.5% (12) females, 56.3% African American, 31.3% (10) Caucasian, 9.3% (2) Latino, 3.1% (1) multiracial All students but one in this group qualified for free or reduced lunch. | Data collection: <i>Dynamic Indicators of Basic Early Skills</i> subtests of NWF, Letter Naming Fluency, and Phoneme Segmentation Fluency; The Word Attack and Letter-Word Identification subtests of the <i>Woodstock-Johnson III Tests of Achievement</i> Data analysis: Multiple linear regression | Results showed Word Attack (WA) and LWID gains with large effect sizes for treatment students. Findings for treatment quality and duration were mixed, without clear indications of their effects on gain scores. | Findings from this study indicate that participation in an extensive early reading intervention can remediate some reading deficits and reduce the achievement gap between students at risk and their peers. |

Although determining ideal amounts of treatment are not possible from these data, it is worth noting that researchers for three of these studies discussed the challenges of providing consistent amounts of time during the intervention (Lo, Wang, & Haskell, 2009; Musti-Rao & Cartledge, 2007; Yurick, Cartledge, Kourea, & Keyes, 2012). Musti-Rao and Cartledge (2007) found that two of their eight students failed to meet end-of-year goals on the Nonsense Word Fluency (NWF) assessment, possibly due to variance in treatment and in another study Yurick et al. (2012) speculated on whether the duration and quality of the intervention did in fact, affect student gains. Results addressing these questions were mixed, with variable but overall encouraging gains. Treatment delivery was also a factor. In some cases, classroom teachers (Lo et al., 2009) and paraprofessionals (Yurick et al., 2012) provided the intervention while in others graduate assistants delivered the treatment (Gyovai et al., 2009; Musti-Rao & Cartledge, 2007).

Despite these questions of the amount and quality of treatment, all researchers reported positive effects with three authors (i.e., Lo et al., 2009; Musti-Rao & Cartledge, 2007; Yurick et al. 2012) documenting large and convincing effect sizes. Yurick et al. (2012) was unique in that they also included a comparison group and found the gap between the comparison and treatment groups began closing throughout the study. A subsequent follow-up study with the same population showed that the treatment group continued its upward trajectory and that approximately one-third of the treatment group not only closed the gap but also surpassed their comparison peers (Cartledge, Yurick, Singh, Keyes, & Kourea, 2011).

Denton et al. (2013) and Lonigan, Purpura, Wilson, Walker, and Clancy–Menchetti (2013) also focused on phonological skills, respectfully employing other curricula in intensive/individualized and small-group instruction to obtain large effect sizes in basic reading skills. Additionally, Denton et al. (2013) documented pupil improvements in word reading, phonemic decoding, word reading fluency, and sentence and paragraph-level reading comprehension. Although the curriculum materials differed from the preceding studies, the authors in these two group studies reported providing systematic instruction in small-group or

individual Tier 2/3 conditions. The authors reported positive results with strong effect sizes. Lonigan et al. (2013), for example, reported that the treatment preschool children in their study progressed more than peers receiving only classroom curriculum instruction.

ACTIVE ACADEMIC RESPONDING

There is good evidence that high academic responding is positively related to academic gains (Heward, 2013). High levels of student responses to reading material was the condition Wanzek, Roberts, and Al Otaiba (2014) and Lovelace and Stewart (2009) related to the reading performance of their students. Wanzek et al. (2014) observed that students who had the highest reading responses to their teachers made the most progress and Lovelace and Stewart reported that robust vocabulary training yielded greater word learning for second-grade African American children.

EARLY INTERVENTIONS FOR AFRICAN AMERICAN STUDENTS

Three of the 10 reviewed studies exclusively intervened with African American students (Gibson, Cartledge, Keyes, & Yawn, 2014; Lovelace & Stewart, 2009; Musti-Rao & Cartledge, 2007). African American students were singled out for this review because they are the one minority group consistently identified for special education disproportionality, especially in the subjective or mild categories (Cartledge & Dukes, 2009). As noted, these findings are functional with good effects, showing the beneficial returns of early interventions for young African American learners. With few exceptions most of the children in these studies were in urban settings and low income. Although encouraging, the small sample sizes and limited number of studies point to the critical need for more research with this population along with large-scale efficacy studies.

Musti-Rao and Cartledge (2007) used the ERI supplemental training kit to help seven out of eight African American first graders achieve desired levels of phonological skills. Study results showed convincing evidence of a functional relationship

between instruction and student skills. Even though participants continued to receive whole-group instruction in the classroom, it was only when this intervention was implemented that gains for the participants were noted. Gibson et al. (2014) used a supplemental computerized software program, which is also a packaged intervention, to address oral reading fluency (ORF) and comprehension skills for African American first-grade students with reading risk. The researchers focused on ORF and findings confirmed the positive effects of the treatment on subsequent student gains. Lovelace and Stewart (2009) implemented vocabulary instruction using storybooks to improve the word knowledge among African American second-grade students. Also a single-subject design, the alternating treatment design revealed that robust vocabulary instruction was effective in producing gains in word knowledge for all participants. The authors attributed this progress to the robust nature of the instruction.

Given the poor outcomes typically associated with CLD students who show risk, it is important to highlight positive research returns. For example, one feature of all of these studies is the intensive instruction. These data repeatedly show that even though the children were receiving comparable instruction in their classrooms, they did not show substantial movement until they were engaged in intensive small group instruction. In one case (Gibson et al., 2014), the instruction was intensified beyond initial prescribed levels to enable students to reach desired goals; in some cases, the students reached end-of-year benchmarks. Orosco and Klingner (2010) also report the importance of intense, well-developed interventions for reading gains among ELLs.

The primary purpose of this literature review was to identify evidence-based ERIs provided to African American students within an RtI framework. After conducting an extensive literature search and finding only three studies that met the specific search criteria, it was evident that research in this area is sparse. Reviews from these three studies indicated that providing EIS for African American students at risk for reading failure did have beneficial effects on students' reading gains. Two of the three studies reported using evidence-based scripted materials. The common element for

all of these studies is that the instruction was intensified, requiring high rates of accurate responding for all learners. Investigations that systematically study materials and strategies most effective with these students under varying circumstances are needed.

CULTURALLY RELEVANT/RESPONSIVE PEDAGOGY AND RTI

As noted previously in this paper, several authorities proposed the potential of the early intervention of the RtI model to impact positively special education disproportionality among CLD populations (Donovan & Cross, 2002; Vaughn & Fuchs, 2003). It is further speculated that combining culturally relevant/responsive pedagogy approaches to RtI may prove to be even more advantageous for urban and minority students (Klingner & Edwards, 2006; Paris, 2012). One purpose of the second section of this paper is to examine the extent to which culturally relevant factors, if any, have been applied to evidence-based interventions with enhanced effects. What follows is a discussion of the CRP concept, a review of the professional and empirical literature on CRP-RtI, a discussion of practice implications, and conclusions.

CULTURALLY RELEVANT/RESPONSIVE PEDAGOGY DEFINED

Stemming from multicultural education, CRP is not limited to students of color but is transformative in nature and calls for radical change in the education of all students. Ladson-Billings, who is one of the most prolific and earliest teachers of CRP and is noted for the term CRP, asserts that the use of CRP educational methods and strategies help to balance the existing asymmetrical power relations within this society (Ladson-Billings & Tate, 1995). Furthermore, CRP honors the linguistic and cultural differences of students of color (Bartolome, 1994; Delpit, 1998; Gutiérrez, 2008; Moll & Gonzalez, 1994; Smitherman, 1977). In addition, Ladson-Billings (1995) contended that CRP resulted in students who achieved academically, evidenced cultural competence, and were able to understand and critique the existing social

order. Within this pedagogy, educators used the children's culture as a vehicle for learning and it enabled educators to gain greater insight into themselves and the structures for a more equitable society. It teaches through the strength of the students, but there is not a one size fits all for employing CRP within the classroom.

Gay (2000) uses the term "culturally responsive pedagogy" to reinforce and elaborate on the work of Ladson-Billings (1995). Along a similar vein, Gay emphasizes meaningful experiences for the learner and the importance of taking on critical social justice issues. According to Gay (2010), culturally responsive teaching is validating, comprehensive, multidimensional, empowering, transformative, and emancipatory, challenging teachers to esteem their students' intellectual capacity. Such teaching is characterized by rigor, courage, the ability to build interpersonal relationships with students that encourage engagement, and knowledge of the values, learning styles, legacies, and contributions of various ethnic groups.

Both scholars are prolific in their advocacy for CRP for urban and minority populations, with comparable concepts and examples. Gay (2000, 2010) appears to put more emphasis on preparing educators to implement the practices, while Ladson-Billings (2014) focuses more extensively on student outcomes. Recognizing the overlapping nature and interchangeable use of these terms in the professional literature, for purposes of simplicity and clarity, the term CRP will be used throughout this paper, as we explore CRP-RtI interventions for urban and minority populations.

CULTURALLY RELEVANT PEDAGOGY- RESPONSE TO INTERVENTION

The research literature in this area is very limited. Employing the same procedures presented previously in this paper with The Ohio State University Library (OhioLINK, 2015) and the Online Computer Library Center (OCLC, 2015), the researchers inserted the following search terms: *special education, reading, early interventions, urban, CLD, minority, black, English language learners, and African American*. More than 10,000 responses were reported. Applying *culturally*

relevant and *culturally responsive* to the search criterion yielded zero responses. This is consistent with the findings of Lindo (2006) who reported that out of 971 studies recorded within popular academic journals, only 14 examined the impact of reading interventions on African American students. Lindo joined Lee (2002) in questioning whether this gap was indicative of little concern for the reading achievement of minority students. The researchers of the current review conducted a hand search of the most popular special education journals, which revealed one study that met the criteria CRP within an RtI elementary school with a focus on reading in the primary grades. This qualitative case study, discussed later in this paper, did not report pupil outcomes but did examine the application of CRP within an RtI model (Orosco & Klingner, 2010).

Although not empirically based, several discussions on the beneficial effects of CRP applications on multitiered interventions appear in the literature. In their literature review of CRP-RtI applications, Klingner and Edwards (2006) concluded that the model for effective interventions should include (a) a balance between skills and holistic instruction; (b) teachers knowledgeable in reading and second language instruction; and (c) student-centered competency-level tasks that engender success as well as challenge students. Moreover, Klingner and Edwards (2006) noted that placing blame on the student for failure was problematic and that academic failure of students is not static: A student at risk in one subject may be considered gifted in another. The authors added to this intervention framework the terms, *accommodation, incorporation, and adaptation*. The notion that literacy begins at home is the driving force behind accommodation: Educators, administrators, and stakeholders can build upon what has been already established within the student's home environment. Incorporation involves bringing community practices into the classroom and curriculum, validating the community they serve and building mutual understanding to better meet the needs of the students and their families. Adaptation involves helping students and families develop societal knowledge and values, while still honoring their cultural values, to be competitive within our global society. Klingner and Edwards (2006) concluded this work by advocating CRP across RtI tiers such

as employing teams of experts versed in CRP to tailor techniques according to specific student needs. They also noted the absence of empirical studies vital to validating any proposed instructional practice.

Graves and McConnell (2014) also reviewed the related literature and emphasized the importance of CRP within RtI, but unlike Klingner and Edwards (2006), who emphasized a framework or guidelines for implementation, Graves and McConnell (2014) drew upon existing themes within the CRP literature to recommend. They advised, for example, that interventions include family origins, religions, history, and traditions to foster a sense of inclusion and community among the students. They also encouraged educators to emphasize the responsibility that students have for each other, to confront their biases and create caring classrooms, and to have high expectations for student success. Similar to Klingner and Edwards (2006), Graves and McConnell (2014) believed that CRP and RtI can become the basis for supporting reading development of all learners, particularly CLD students who show school risk.

Research evidence of the effective use of culturally relevant CRP within RtI or multitiered intervention models is extremely limited. The authors of this paper were able to identify, through a hand search, one study that met the criteria of investigating CRP within a school-based RtI (Orosco & Klingner, 2010). A second investigation presents elements of CRP within a multitiered model but is not a controlled study (Struck & Vagle, 2014). A third controlled study does employ CRP material within a Tier 2 format but is not situated within an RtI school. All of these studies are reviewed. A key concept within CRP is to stress meaningful experiences for the students and one means for achieving this is to have students draw upon their own stories or those of peers to learn and comprehend class content (Ladson-Billings, 1995). This relates to making content relevant, pulling upon background and personal knowledge.

Accordingly, Struck and Vagle (2014) examined the use of students' stories in literacy instruction in an effort to showcase CRP within a Tier 2 intervention. The authors described an intervention involving two CLD students: one student from India whose native language was Hindi and one student

from Somali with a Somali language. A third native English-speaking White student was also discussed. A key feature of these scripted lessons was to augment them with conversations along with sources of information from the students about their lived experiences. These conversations, observations, and reciprocal teaching activities led the authors to speculate that these were factors that bolstered learning and deepened comprehension. Although lacking in experimental controls, the authors could not draw definitive conclusions about findings but they did advocate the use of CRP within RtI interventions. Such practices would increase access and inclusivity for student populations that would otherwise be marginalized with literacy disengagement.

In the controlled study using CRP within an RtI/multitiered intervention, Cartledge, Keeseey, Bennett, Gallant, and Ramnath (2015) also used children's personal experiences/background to provide instructional materials. As part of a larger study, the researchers interviewed 50 urban students to get information about their lives such as their favorite in-school and after-school activities, foods, books, music, pop culture, television, and so forth. In addition to conducting the interviews, the researchers observed the children during school hours, questioned teachers and parents about the children's preferences, and reviewed popular children's books for additional content. The children were low-income urban first and second graders. Except for two White children and five children from a Somali background the remaining children were native born English-speaking African Americans. The authors used this information to develop 100- (first grade) to 200- (second grade) word passages for the students (see Cartledge, Keeseey, Bennett, Gallant, et al., 2015; Cartledge, Keeseey, Bennett, Ramnath, & Council, 2015 for details on the development and equating of the passages). The authors (Cartledge et al., 2015) found that second-grade students who showed reading risk read more fluently culturally relevant passages that reflected their personal experiences/backgrounds than they did second-grade passages considered to be nonculturally relevant. In a second study (Cartledge et al., 2015), the students not only responded favorably to the culturally relevant passages, but also indicated that they valued most the ones

that they personally identified with compared to those that involved helping someone, doing something exciting or learning something. A subsequent preliminary study using the same passages (Bennett, Gardner, Cartledge, Council, & Ramnath, in press) showed that second-grade urban African American students with reading and special education risk made convincing progress in their reading fluency and comprehension. Additionally, the findings showed that the improvements generalized to non-CR passages (i.e., AIMSweb, n.d.), suggesting that CRP can be instrumental in a wide range of critical classroom learning.

Orosco and Klingner (2010) conducted a qualitative case study of one school's application of RtI with Latino ELLs. An in-depth examination and analysis of interventions across tiers uncovered several key points relative to CRP instruction under these conditions. The researchers observed misalignments of instruction and assessments in that teachers attempted to implement activities and assessments that were not synched with the students' skills and had unrealistic expectations of how students should respond or how they could facilitate the children's learning. Accordingly, the teachers had inadequate preservice or in-service education on how to teach students who were English learners. The authors also found a negative school culture where teachers had little understanding of the children's culture and were inclined to blame the children and their families for poor achievement. Limited resources and outdated materials were additional factors the authors felt undermined the RtI model for the students in this school.

DISCUSSION

Although limited in number, the studies reviewed on RtI with CLD populations all represent supplementary or Tier 2 interventions. Ideally, RtI schools would have strong Tier 1 applications that support 80% of the students within general education settings. The instruction is effective, evidence-based and differentiated according to student need (Hernández Finch, 2012; Proctor, Graves, & Esch, 2012). None of the reviewed studies in the first section of this paper reported school-based RtI models and the interventions were more consistent with piecemeal approaches

rather than recommended comprehensive instructional models (Hernández Finch, 2012). Nevertheless, the CLD primary-aged students identified for showing reading/special education risk systematically received evidence-based interventions resulting in consistent and convincing gains. Although encouraging, the findings of the reviewed studies do not provide definitive evidence of the positive impact of RtI on minority disproportionality. Although there are suggestions of positive returns (e.g., Proctor et al., 2012; Sullivan & Castro-Villarreal, 2013), for the most part the data are equivocal (Proctor et al., 2012) with a general consensus on the need for well-designed longitudinal studies (Proctor et al., 2012; Sullivan & Castro-Villarreal, 2013).

One of the criticisms typically leveled at Tier 2 interventions is that they inadequately define the intervention, inadequately define the student population, and fail to disaggregate their research findings according to pupil diversity. From our review, interventions and student populations were adequately defined but none of the studies with mixed populations disaggregated the results in terms of diversity. The three studies that exclusively targeted African American students were the exception in this set, but this needs to be viewed cautiously because many urban districts will list Black students as African American when the students actually have cultural differences such as a background in another country (e.g., Somali or Haiti) and are ELLs.

RtI school models can be very expensive to implement and particularly taxing on urban districts with limited resources and large minority, low socioeconomic populations (Hernández Finch, 2012; Orosco & Klingner, 2010). The relationship between academic underachievement and poverty are well established with recent evidence that the achievement gap between poor children and their affluent peers is increasing (Siegel, 2016). If poor districts are disproportionately burdened with large numbers of students who would benefit from RtI models that are too expensive to implement, it is unlikely that we will see the desired effects of reductions in special education and disproportionality unless much greater sums are generated beyond 15% of the special education budget authorized in IDEIA 2004.

The role of CRP within RtI models remains a major question mark. Only one study was identified that studied CRP within an elementary RtI school (Orosco & Klingner, 2010). Although specific outcomes were not reported for the Latino ELLs, the numerous teacher inadequacies underscored that the school, likewise, was failing the students. A critical finding was the obvious need for professional development for school personnel of CLD learners. The negative culture of blame on children and their families is not uncommon when schools are challenged with low-income, culturally diverse, hard-to-teach children.

A related problem is that existing research has not clearly determined which instructional models or approaches are best for which groups of students (Hernández Finch, 2012). We often make assumptions about the relevance and usefulness of materials without group or individual assessments. Lovelace and Stewart (2009), for example, found that their intensive training helped to improve vocabulary development but no added gains resulted from using African American versus Caucasian books. The use of culturally relevant materials did seem to aid some of the children in the fluency studies (Bennett et al., in press, Cartledge et al., 2015) but more robust, extensive studies are needed for a conclusive statement on the most facilitating reading materials for this population.

CONCLUSION

The authors of this paper examined the recent professional and empirical literature relative to RtI applications within a CRP context. Although a current professional source (i.e., Morgan et al., 2015) indicate a debate over the disproportionate and overrepresentation of minorities in special education, this review circumvented that debate and, instead, focused on the established educational needs of low-performing CLD learners and the potential promise of RtI and CRP paradigms. This review did solidify the need for more research of urban and CLD/African American populations showing risk for special education. There is a tremendous void in the literature that speaks to CRP-RtI interventions that are specifically designed for urban minority and African American learners. The previously noted special education disproportionality and poorer school outcomes underscore the

urgency for CRT evidence-based interventions that are universally employed for this population. In this review, the Tier 2/3 interventions reported positive effects for CLD learners but these interventions were not positioned within RtI schools. There was only one controlled study showing the beneficial use of culturally relevant materials and the study of linguistically diverse students within an RtI school pointed to the tremendous need for professional development for both RtI and CRP. Nevertheless, this and other reviews (e.g., Hernández Finch, 2012; Proctor et al., 2012) are sufficiently encouraging to unconditionally reject the Morgan et al. (2015) position. This rejection is based on the lack of evidence that the current special education programs are advantageous for CLD children (Ford, 2012), particularly those in high-incidence categories (Harry & Klingner, 2014) and that rigorous, CRT/RtI scientific interventions appear to show promise. Rather than rethink the push to reduce disproportionality, policymakers need to greatly multiply efforts to increase resources and the professionalism needed to equip CLD students with fully functioning, evidence-based, culturally relevant, and multitiered schools. These efforts include funding of research projects and service centers to provide guidance for effective practices and applications.

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