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Effective Approaches in Reducing Reading Discrepancy Scores between Students in General Education and Special Education

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This research study examined curricular and instructional approaches that help students who receive special education services meet common Illinois state standards as measured by annual state standardized testing. Despite having supportive accommodations and modifications, Illinois students who receive special education services have lagged behind their general education peers in meeting academic standards as measured by annual Illinois state testing. Participants included personnel from schools that were identified as being high performing while also having the smallest discrepancy between students in general education and special education. These schools were investigated to determine what approaches they use to have this reduced achievement gap. Teachers and administrators from these schools were interviewed to gain insights regarding effective instructional and curricular methods. The results suggest that schools closing the achievement gap implemented instructional approaches including co-taught and inclusion classrooms, differentiation, and time for professional planning and collaboration. Additionally, these schools offered purchased, researched-based reading curricula that were implemented with high fidelity. Teachers in both special education and general education had the same materials to reference and offer students. Implications for practice and future research directions are reported.

Keywords: Achievement gap, co-teaching, reading, standardized testing
number increased to 3.8% of children if they were of multiple mixed (non-Hispanic) races (Cortiella, 2007). Additionally, students falling below the poverty line have been disproportionately represented for special education services. Cortiella (2007) indicated 4.1% of children in low socio-economic status households received special education services under the learning disability category, as compared to 2.7% of children not falling below the poverty line.

Studies directed by researchers, such as James S. Coleman and Michael Planty, have been conducted in an effort to identify the causes of these achievement gaps with the ultimate goal to reduce these discrepancies (Lafitte, 2012). In a 1966 examination of the achievement gap between minorities and their white middle-class peers, James S. Coleman, along with others, wrote what has become known as the Coleman Report. Coleman indicated in this document that students from diverse backgrounds experienced a closing in the achievement gap when they attended white, middle-class schools (Coleman, Hobson, McPartland, Mood, Weinfeld, & York, 1966). This was due to a number of factors including, but not limited to, curriculum materials, teacher education, home life, building conditions, and behavior of students (Coleman et al., 1966).

When examining the state of Illinois, data from the Illinois Interactive Report Card (2015) demonstrated that 69% of Caucasian third-graders met the state reading standards for reading. This percentage may be compared to 36% of African-Americans, and 39% of Hispanics, meeting the state reading standards at the same grade level. In 2014, Illinois also included the subset scores of students with IEPs. As information from the Illinois Interactive Report Card (2015) was examined, only 23% of students with IEPs met the state reading standards for this testing year. Students with disabilities continue to see a gap in achievement in comparison with general education peers as the school years progress.

According to Cortiella and Hororwitz (2014), there are 2.4 million students in the U.S. that are served under the learning disability category. This equates to 42% of the entire population of students served under IDEA. At least a fifth of students with learning disabilities at the secondary level are behind their general education peers by five or more years in both reading and math. Almost half of these students are three years behind, and a quarter of them are one year behind (Cortiella, 2007). As the achievement gap widens, it becomes more difficult for students with disabilities to catch up to their same-age peers who are in full-time general education. Frustration among students at the secondary level is high. This frustration, in turn, leads to higher drop-out rates and less entrance to formal schooling beyond the high school years (Cortiella, 2007).

According to the Illinois Interactive Report Card (2014), students in special education fall far below their full-time general education peers consistently, year after year, in meeting state academic standards. In the years 2011 and 2012, only 41% and 42% (respectively) of students in special education met the state standards in reading. In 2013, after the cut scores had been raised for meeting standards, only 20% of students in special education were able to meet these standards (Illinois Interactive Report Card, 2014). General education students in the years of 2011 and 2012 met state standards at a rate of 84% and 85%. With the implementation of the
2013 cut scores, 65% of these students met state standards (Illinois Interactive Report Card, 2014). Though the new, more challenging, cut scores have impacted the interpretation of many students’ test scores, both in special education and general education, the discrepancy between these two populations of students continues to be of great concern for educators.

**Purpose**

Illinois Report Card information has indicated that year after year students with special education diagnoses demonstrate much lower performance on state tests than their general education counterparts. Students who continually underperform educationally are at a greater risk for dropout and decrease the pursuit of higher education. In an effort to identify strategies to decrease the achievement gap between general education and special education, and, therefore, increase performance of students in special education, this study focused on answering the following research question: *What are the best approaches in reducing the discrepancy between students in general education and students in special education in meeting Illinois third grade state reading standards?*

To identify the best approaches, two areas of sub-research were examined. These included: curricular approaches and instructional approaches.

**Curricular Approaches**

Curriculum can be a difficult concept to define. On its surface, most educators would probably think of a curricular approach as being the stated outline or syllabus for learning of content by students during an individual year, and eventually through a school career. More progressive ideas such as John Dewey’s proposals during the late 19th and early 20th century focused on the integration of academic knowledge and content with actual application in daily life (Herrick, 1996). As American school populations changed, so have approaches to curriculum to meet the needs of diverse students (Stanford, Crowe, & Flice, 2010). Without a successful curriculum, students from diverse backgrounds, including those with disabilities, are destined to struggle and lose engagement in the learning process (Tomlinson et al., 2003). Examples of curricular approaches can include but are not limited to, curriculum mapping, curriculum material centers, and Universal Design for Learning.

One approach is curriculum mapping. Curriculum mapping refers to the overall path that teachers and students take to produce the desired learning (Gulikers, Bastiaens, & Kirschner, 2004). Teachers cannot forget to secure the evidence of student learning even when they are using a prescribed program. Though these programs generally promise to teach every standard, often there are missing standards or a standard that is not covered in depth (Herbold, 2012). Herbold (2012) established that curriculum mapping uses the purchased programs as a tool for teaching standards while considering the learning needs of each child. To add structure to the process of curriculum mapping, an educational team may break the map down into several parts that can order an approach to instruction. When participating in curriculum mapping, all teachers must address the standards as outlined by the state. Teachers should work together to ensure that all students receive appropriate accommodations and are afforded appropriate means of representation of taught skills. Teacher collaboration offers not only the
opportunity to brainstorm the best strategies with one another but also holds teachers accountable to one another in implementing these practices (Brinkman & Twiford, 2012). Reflections are the final piece of meaningful curriculum mapping. The reflections portion is always left blank until the unit of study is complete and it is intended to be a time of collaboration and self-evaluation in the meeting of the established standard (Herbold, 2012).

Another approach in developing an engaging and effective curriculum is that of using a curriculum material center (CMC). Curriculum material centers are generally found at higher places of learning, or academic libraries (Madray & Catalano, 2010). A collection of teaching resources to support pre-service and current teachers, the CMC offers many items to reach the needs of every learner (Madray & Catalano, 2010). Madray and Catalano (2010) indicated these items may include but are not limited to, books on tape, games, flashcards, music, manipulatives, toys, various visual representations, and computer software. The focus of the CMC is to provide educators with the materials needed to build an effective and engaging curriculum. The effective CMC is one in which many learning styles are addressed (Madray & Catalano, 2010). An effective CMC offers these materials in many subjects including math, language arts, science, social studies, foreign languages, health, career science, and special education (Madray & Catalano, 2010). These materials may also extend into social and emotional areas of study as well, therefore offering selections appropriate for other school professionals.

A final curricular approach is that of the universally designed curriculum (UDC). Though this is a newer concept, it is gaining in use and popularity. As diversity in schools drives the need for programs that interest and engage students from various cultural backgrounds and ability levels, a universally designed curriculum becomes more and more appealing (Abell, 2006). Universally designed curriculum is an approach that is based on learning styles, ability levels, scaffolding needs, and student interest inventories.

A universally designed curriculum should include the following six basic characteristics: “1) Provides clear direction and reduces students’ confusion; 2) Clarifies purpose by helping students understand why they are doing the work and why it is important; 3) Keeps students on task by providing structure and clear pathways to learning. Students can make decisions about which path to choose or what things to explore along the path but they cannot wander off of the path, which is the designated task; 4) Clarifies expectations and incorporates assessment and feedback using individualized models of exemplary work, rubrics, and superior student work samples; 5) Points students to worthy sources that reduce confusion, frustration, and time and offers them choices; and 6) Reduces uncertainty, surprise, and disappointment by offering multiple routes to success (Abell, 2006, p. 4).” The ultimate idea in applying universal design to curriculum and instruction is to allow more students more ways to succeed (Abell, 2006).

Instructional Approaches

Instructional approaches for students in special education must evolve to where students are expected and are able to meet state standards as measured by standardized tests (Allbritten, Mainzer, & Ziegler, 2004). Annually, IEP teams come together to establish a student’s Least
Restrictive Environment (LRE) for instruction. Common approaches include co-taught, inclusion classrooms, where the special education teacher and regular education teacher work together to support all students in the general education curriculum (Howard & Potts, 2009). Small group instruction is another approach employed by schools to support their special education population. This structure is where the special education teacher pulls small interactive groups of students to focus on skills that have been identified as areas of weakness for these students (Vaughn & Thompson, 2003). A combination of these two approaches may also be employed with minutes divided between settings to establish the least restrictive environment for instruction (Aron & Loprest, 2012).

In recent years, despite dissenting views, inclusion and co-taught classrooms have been the progressive models for instruction of students with special needs. The increase of this practice is due in part to No Child Left Behind’s (NCLB, 2001) expectation that all students will meet standards, regardless of disability diagnosis, and the reauthorization of the Individuals with Disabilities Education Improvement Act (IDEIA, 2004) that indicated all students must have access to the general education classroom. With this increased expectation and practice of inclusion and co-teaching models, districts and individual schools must find the instructional approaches that not only offer opportunities for exposure to the general education curriculum but also support success for all students in meeting state and common core standards.

Tomlinson et al. (2003) indicated that no matter the instructional environment, differentiation may be applied, and is thought of as a pedagogical rather than organizational approach. Differentiation is generally categorized into three areas of focus. These areas include student readiness, interest, and learning profile. If these areas are considered and addressed successfully, the teacher will have a classroom that supports students from varying backgrounds that may include socioeconomic status, race, culture, gender, and special education diagnosis (Tomlinson et al., 2003). McTighe and O’Connor (2005) established that successful assessment practices can lead directly to successful instruction and offer a guide for effective differentiation. The three core assessment types are diagnostic, formative, and summative. All of these assessment types are used often in the classroom, and each has its own benefit to teachers in understanding their students’ learning needs.

Method

A basic qualitative structure with basic qualitative design was used to address the following research question: What are the best approaches in reducing the discrepancy between students in general education and students in special education in meeting Illinois third-grade state reading standards? Similarities across high performing districts, with low discrepancy between students in general education and special education scores, were sought out in an effort to identify best approaches that may be generalized to other districts.

Procedures

Initial data that was analyzed included individual schools’ scores for the Illinois Standardized Achievement Test (testing years 2013-2014) across two counties located in the southwestern region of Illinois. High performing schools with the lowest discrepancy in scores between
special education (IEP) and general education (non-IEP) students were targeted for further investigation.

The first step involved identifying the districts whose high-performing schools demonstrated low discrepancies between students in general and special education specifically in third-grade reading. Four districts were selected that each had an elementary school demonstrating high performance and low discrepancies. The following table identifies student demographic information for four schools selected to participate in the study.

<table>
<thead>
<tr>
<th>School</th>
<th>School Demographics</th>
<th>Population with IEPs</th>
<th>Low Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>School A</td>
<td>675 White 90.2% Multi-Racial 4.6% Asian 4% Black 2.2% Hispanic 1.2%</td>
<td>15.1%</td>
<td>31%</td>
</tr>
<tr>
<td>School B</td>
<td>732 White 70.1% Multi-Racial 6.4% Asian 2.5% Black 16.7% Hispanic 4.4%</td>
<td>17.2%</td>
<td>19.8%</td>
</tr>
<tr>
<td>School C</td>
<td>423 White 81.8% Multi-Racial 3.3% Asian 1.9% Black 10.2% Hispanic 2.8%</td>
<td>10.2%</td>
<td>40.4%</td>
</tr>
<tr>
<td>School D</td>
<td>527 White 94.5% Multi-Racial 2.3% Asian 8% Black 0.2% Hispanic 2.1%</td>
<td>21.8%</td>
<td>34.5%</td>
</tr>
</tbody>
</table>

Note: M = 16.075% for population of students with IEPs.

Each school’s testing performance reports from ISAT and School Report Card determined the following subgroups. Data for School A demonstrated 65.8% as “all students meeting and exceeding” expectations. From that data, 67% of students without IEPs “meeting and exceeding” and 40% of students with IEPs
“meeting and exceeding. This showed a 27% discrepancy between students without and students with IEPs. School B data showed that 76.1% had “all students meeting and exceeding”. Of those without IEPs, 85.7% were “meeting and exceeding” compared to only 50% of students with IEPs. This was a 35.7% discrepancy between students with and without IEPs. School C has 68.8% of “all students meeting and exceeding” expectations. Students without IEPs were 78.8% while students with IEP’s made up 18.2% of this. This presented a discrepancy of 60.6%. Finally, 65.8% of all School D students were “meeting and exceeding” expectations. Students without IEPs made up 67% while students with IEPs were 40%. A 27% discrepancy was present.

**Participants**

District superintendents were contacted to obtain permission to participate in the study. Once study approval was obtained, the principals of the top performing elementary schools were contacted regarding the study and to schedule interviews. Identified school principals provided the names and contact information of the top performing third-grade teachers to serve as participants in the study.

A total of 25 participants from four schools agreed to be interviewed for this study. Of the 25 participants, 100% identified as white, with 90% being female and 10% being male. Twenty of the participants were third-grade teachers with 7 being special education teachers and 13 being general education teachers. Five of the participants were school administrators. The average teaching experience was 13.68 years working with students at the third-grade level. Administrators averaged 9.5 years of experience in working with students and faculty who teach at the third-grade level. Administrators made up 20% of those interviewed, special education teachers made up 28%, and 52% of those interviewed were designated as general education teachers.

**Setting**

Individual interviews were scheduled with each of the 25 participants approximately one week prior to the interview date. Participating principals set up the interview dates or teacher interviews were scheduled via email. One-to-one interviews were conducted in each of the four participating elementary schools. Interviews with teachers were conducted in the teachers’ classrooms, and administrator interviews took place in the individual’s office. Interviews lasted an average of 35 minutes per participant.

**Data Analysis**

After the data was collected, analysis was conducted to identify relationships and themes between curriculum and instructional approaches across these schools that were high performing, yet demonstrated low discrepancy between their students in full time general education and students with IEPs. The shared experiences in this study sought to pinpoint the approaches that offer the best chance of success for students in mastering common educational state standards. Examples of instructional approaches may include, but are not limited to, pull-out (small group) instruction, push-in (whole group) instruction, and co-teaching (special education and general education teachers provide instruction as a team) models. Additionally, similarities in curriculum approaches were examined. These examples may include but are not limited to, curriculum materials centers,
Results

Qualitative research was gathered through information garnered from interviews with identified and cooperating teachers and administrators. Curricular and instructional approaches utilized in these districts were examined and information was divided between teacher and administrator responses. The highest response for teachers regarding curricular approaches used for students with IEPs was that special education teachers have the same general education curriculum guides and materials to use with their caseload students as their full-time general education colleagues. Eighty percent of teachers interviewed indicated the access for special education teachers to general education reading curriculum guides as part of their curriculum approach in working with special needs populations was a part of their successful curriculum approaches. These purchased curriculum guides were indicated by teachers to have an intervention component that might also be used in working with students having a special education diagnosis, or with students falling into the Tier II or III intervention levels of Response to Intervention (RTI). The next highest response by teachers for curricular approaches was the use of purchased curriculum guides with intervention components. Sixty percent of teachers indicated that purchased reading curriculum guides were used on a daily basis supporting their students in special education. Additionally, 50% of teachers interviewed stated that the curriculum guides were followed to fidelity with little or no enhancement, and 45% of teachers indicated that purchased curriculum guides were followed to fidelity with moderate enhancements. Specific responses from teacher participants included:

- Respondent B – “Our push-in program offers the same materials to special education students as general education students. At times these materials are modified, but not often.”
- Respondent D – “The Wonders reading curriculum is followed very closely to meet Common Core and PARCC standards.”
- Respondent F – “There are two classes for language arts/reading. All of the students with IEPs are pushed-in with the special education teacher or an assistant. Approximately 95% of the time the curriculum is followed closely, though activities may be changed from the guide. Modifications are made as needed.”

For administrators, the most common reading curriculum approach indicated was the use of purchased curriculum guides. Eighty percent of administrators indicated the use of purchased curriculum guides as being part of the curriculum approaches in working with students with IEPs. Additionally, 80% of administrators stated that curriculum guides were followed with strong fidelity with little or no enhancements. Twenty percent of administrators also indicated the importance of special education teachers having access to the same curriculum materials and guides as general education teachers. Specific responses by participants who were administrators included:

- Respondent A – “This is our fourth year with Wonders. We ensured that it was researched-based and
standards-based. We use it to high-fidelity.”

- Respondent B – “Curriculum may not necessarily guide an instructional approach. An example may be that a special education teacher uses a lower grade level’s curriculum if this is what is appropriate for the student.”

- Respondent C – “Purchased curriculum is followed to high fidelity. The structure of the curriculum makes it easier to follow and align with standards. **Wonders** intervention series is used in addition to the approaching level in **Wonders**.”

Overall, in regard to curriculum approaches, three areas of consideration and importance were shared by these two groups of interviewees. These three identified areas include - purchased reading curriculum with intervention components were used in the classrooms, purchased curriculum was followed with little/no enhancements, and special education teachers had the same materials and resources to utilize as the general education teachers. Purchased curriculums that were mentioned included the **Wonders** reading program by McGraw-Hill (two schools), **Language Literacy Instruction** by Fountas and Pinnell (one school), and one school’s interviewees stated that their reading curriculum was older and moderate to heavy enhancements were made to meet standards and support students.

In addition to questions focused on curriculum, instructional approach questions were also included during the interviews. The majority of teachers (70%) who were interviewed indicated that push-in/inclusion classrooms are a part of their school structure in supporting students with special needs. Teachers interviewed described their inclusive classrooms as those that include students with IEPs and other diverse needs alongside their peers in general education. Additionally, 40% indicated that co-teaching is part of their school’s instructional structure in supporting students with IEPs. The co-taught approach, indicated by interviewees, included the special education and general education teacher working alongside one another in the classroom. The teachers may take turns teaching the lesson while the other instructor keeps students focused and works one to one, or in small groups as needed. Additionally, at times, two smaller groups of students may be taught in the same classroom by general and special education teachers simultaneously. Of the teachers interviewed, forty-five percent indicated communication and collaboration is important as it takes planning to make the co-teaching structure and approach successful. Additionally, 40% of participants responded that differentiation was a part of their instructional approach for all students. Specific responses during the interviews included the following:

- Respondent A - “Team planning is available at the beginning and end of the day, special education paired with general education teachers to co-teach math and reading, and resources are allocated to both teachers to support inclusion.”

- Respondent B - “Without these classes, I do not think students with IEPs would be successful. It is important to find a balance of support.”

- Respondent C - “Co-taught classes help close the gap for higher-functioning students with IEPs.”
Respondent D - “We try to make a class where students do not know who is the general education teacher versus the special education teacher.”

All of the administrators (100%) indicated that they have push-in/inclusion models in place for students with special needs. Of the individuals interviewed, 80% stated that students were supported in co-taught classrooms for reading. Additionally, 40% of those interviewed shared that team communication was also something they viewed as being a part of the instructional approach for supporting students with special needs. None of the administrators specifically stated that differentiation was a part of their teachers’ instructional practices. Specific responses included:

- Respondent A - “We have to consider the teacher personalities when planning for co-taught classrooms.”
- Respondent B - “Everything is based on student need.”
- Respondent C - “We always apply the least restrictive environment in supporting students.”
- Respondent D – “We get to know each student as an individual and meet all of those needs.”

In regard to instructional approaches, three areas of consideration and importance were shared by these two groups of interviewees. These responses included that students with IEPs were members in a push-in/inclusion classroom structure, co-taught classes were a part of the instructional approach for students in special education, and staff communication and collaboration were important for the design of daily instruction.

**Study Limitations**

The study was focused on four school districts in two neighboring counties located in southwestern Illinois. The current limitations include that the study was completed among only four school districts with four identified schools in the same region. Twenty-five participants participated in the study through one to one interviews. Though the questions answered during the interviews identified approaches pertinent to the study, the sampling is still relatively small and limited to one regional area in Illinois.

**Discussion**

The themes found in the participants’ responses are important to public school districts supporting students with identified disabilities, as educators in these most successful schools offer insights into what has allowed their students in special education to succeed in meeting Illinois state standards. An achievement gap between general education and special education students’ standardized test scores is something that challenges most school districts. Beginning in 2014, Illinois indicated subset scores for students with IEPs. As information from the Illinois Interactive Report Card (2015) was examined, only 23% of students with IEPs met the state standards for this testing year. Students with disabilities continued to see a gap in achievement in comparison with general education peers as the school years progress (Illinois Report Card, 2015). Identifying similarities in approaches between districts that are high performing, but with low discrepancy between students with IEPs and their full time general education classmates, may assist other districts in applying approaches that have worked in similar settings to help all
students meet common academic state standards.

Results from the study found similarities and themes in interviewee responses. Administrators and teachers may consider the results of this study as they implement and revise approaches in supporting students with special needs to meet Illinois state academic standards. General themes emerged for both curriculum and instructional approaches between administrators and teachers who were interviewed and responded to the survey questions.

For curriculum approaches, the most common identified themes included: purchased reading curriculum with intervention components in the classrooms; purchased curriculum followed with little/no enhancements; and, materials and resources were the same for general and special education teachers. This means, for teachers, that following a reading curriculum that aligns with standards and offers intervention components is a productive method to employ when working with populations that have special needs. Additionally, following these curriculum guides with fidelity, and with little or no enhancements, was found to be beneficial in most of the schools that were the focus of this study. Finally, special education teachers may take away from this research that they should advocate to have the same curriculum guides and materials as their colleagues who teach students in full-time general education.

For teachers, this final theme was identified as being the most important curriculum approach in supporting students with special needs. Administrators may consider purchasing a formal reading curriculum aligned with standards, providing professional development that discusses how best to use the reading curriculum to fidelity, and providing universal materials to all teaching staff regardless of the teachers’ focus in instructing students in general or special education.

The most common themes for instructional approaches included: students with special needs were members in a push-in/inclusion classroom structure; co-taught classes were a part of the instructional approach for students with special needs, and staff communication and collaboration were important for design of daily instruction. Teaching staff may learn from the results of this study that students with special needs should be included in general education classes as much as possible. Additionally, teachers should work together to plan co-taught class lessons, and require time to collaborate to develop these lessons. Administrators may consider how to best implement a co-taught structure, provide meaningful professional development that helps instruct educators in building a successful inclusion/co-taught environment, and provide shared collaboration and planning time to teachers who are co-teaching classes and lessons.

Conclusion

The problem this study focused on was the persistent discrepancy of state test scores between general education and special education students. Current laws and initiatives raise expectations for all students, including those with special needs. As a result, educators must find the means to assist these students in learning content successfully at their grade level. The study focused on instructional and curriculum approaches employed by successful districts with low discrepancy figures in an effort to identify similarities and themes in these approaches. The
answer to the question, “What are the best approaches in reducing the discrepancy between students in general education and students in special education in meeting Illinois third grade state reading standards?” was hoped to be answered as similarities and themes in districts were identified. For curriculum approaches, the most common identified themes included: purchased reading curriculum with intervention components in the classrooms; purchased curriculum followed with little/no enhancements; and, materials and resources that were in use were the same for general and special education teachers. The most common themes for instructional approaches included: students with special needs were members in a push-in/inclusion classroom structure; co-taught classes were a part of the instructional approach for students with special needs, and staff communication and collaboration were important for design of daily instruction. While this research was focused on 2014 Illinois state standards, future research with a focus on meeting Common Core State Standards would be pertinent in helping districts build supportive classrooms for all students.

References


