The Relationship of Reading Achievement of Students with Disabilities and Least Restrictive Environment Practices

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Abstract

The purpose of this study was to investigate the relationship between Kentucky least restrictive environment (LRE) practices and the state's assessment annual measureable objectives (AMO) in reading for students with disabilities. This research was designed to determine whether districts achieved AMO targets for reading within LRE, and whether a relationship exists between special education students' placement and assessment scores attained for the disability subpopulation in the Adequate Yearly Progress (AYP) Reports. Results from this study indicated that one district achieved the scale score for reading achievement. Nine districts achieved reading AMO targets due to safe harbor, while nine districts achieved reading AMO due to confidence interval for students with disabilities. Also, the results indicated a higher correlation for students who received services in a separate location for less than 20% of the school day.

Keywords: least restrictive environment, reading achievement, students with disabilities, inclusion

Introduction

Achievement and accountability in America's public schools have been at the forefront of educational reform for over three decades. Before the movement was effectively in motion, a number of landmark cases altered the landscape of ethical and equal opportunities for all citizens. [1] *Brown v. Board of Education* (1954) in Topeka, Kansas was the most famous landmark case affording African-[2] American children the ability to attend school with Caucasian youth. Shortly thereafter, *Equality of Educational Opportunity*, better known as the *Coleman Report*, further assessed segregated institutions for disparity. [3] Within years a report intensified the reform movement. [4] America's students were at risk of falling behind the youth of other industrialized nations, which endangered national security and future prosperity.

A Nation at Risk: The Imperative for Educational Reform propelled the United States government into a long overdue educational movement to advance achievement and productivity of the youth in its borders. This report cited disturbing inadequacies in the educational performance of America's youth. [3] The committee described the nation's secondary curriculum as a "cafeteria style plan in which appetizers and desserts can easily be mistaken for the main courses." [3] Students were afforded choices, which led to 25% of high school graduate

credits being in physical education, health, and training courses. The determination was made that expectations were menial at best, with little emphasis on advanced diploma requirements and time spent on meaningful instruction. [5] Teacher quality was found to be distressing since the majority of educators were recruited from the "bottom quarter of students." The committee suggested that the federal government had a responsibility to provide fiscal support in order to address the needs of all students.

Twenty-five years after *A Nation at Risk,* the U.S. Department of Education once again requested a review of current education practices. [6] Similar to the 1983 report, the 2008 analysis included curriculum content, standards and expectations, time, teacher quality, leadership, and financial support of education. High school coursework requirements were found to be dramatically advanced since the 1983 report. [6] By 2005, close to 65% of students were taking English, math, science, and social studies. However, a majority of students still were not required to take rigorous coursework. [7] According to the National Center for Education Statistics (2008), the reading scores of 17-year-old students were the same in 2000 as in 1983.

[8] Subsequent to *A Nation at Risk*, the standards and expectations movement gained significant renewal with the enactment of *Goals 2000: Educate America Act*. According to John Hunt (2008), this act primarily focused on demonstrated student competency in English, mathematics, science, foreign languages, civics, economics, history, and geography. Tremendous funding was attached to this act, leaving district and school administrators the responsibility to seek federal assistance through Goals 2000 grants. [5] The standards and expectations movement was once again at the forefront when "President George W. Bush called for significant reforms at the federal level which led to the enactment of the *No Child Left Behind Act of 2001."*

[6] In 1983 *A Nation at Risk* addressed concerns of teacher quality, as did *No Child Left Behind* (NCLB) legislation in 2001. NCLB included a provision that all educators must be highly qualified and compliant with this mandate. [6] Unfortunately, no evidence exists leading to a conclusion that teacher knowledge of subject matter increased with this legislation.

[8] As a result of *A Nation at Risk*, educational reforms such as NCLB redefined building administration. Curriculum content, standards and expectations, time, and teacher quality requirements forced districts to re-evaluate leadership practices. [6] According to the U.S. Department of Education (2008), spending has increased dramatically since *A Nation at Risk* and the enactment of NCLB. Unfortunately, student achievement has not maintained at the same rigor. The state of dropout and graduation rates, accompanied by low educational attainment, demonstrates that federal intervention has been trivial compared to the dramatic increase in funding (Lips, 2008). [5] Unfortunately, NCLB and *Individuals with Disabilities Education Act* (IDEA) are among many federal educational mandates that have been only partially funded.

As the reform movement materialized for the general population, legislation restructuring special education further expanded opportunities for students with disabilities in the *Individuals with Disabilities Act of 1990*. Essentially, districts were required to locate students ages 3-21 with potential disabilities through child find procedures, evaluate, consider eligibility, review placement, and develop an individual education plan (IEP), if eligible. [10] According to Jarrow (1999), schools were required to provide a free, appropriate, public education (FAPE) to students with disabilities in the least restrictive environment (LRE). Since the implementation of the *Education for All Handicapped Children Act of 1975*, LRE placements have shifted from mainstreaming to inclusion. This service delivery method provides students with disabilities the opportunity to be educated in the regular education classroom with non-disabled peers.

[11] In 1997, IDEA was reauthorized to further ensure students with disabilities access to the general curriculum. This legislation altered the landscape of special education by modifying the individual education plan (IEP) to address measurable goals and objectives, include students in district and state assessments with accommodations, and prioritize placement in the general education classroom. [12] According to the National Center on Education Outcomes (2004), IDEA 1997 emphasized that "all students with disabilities have access to the same general curriculum as their non-disabled peers and their academic progress be measured by district

and state accountability assessments as all other students" (p. 1). [11] The amendment also required that students with significant disabilities be included in testing practices by completing an alternate assessment.

In the 2004 Individuals with Disabilities Education Improvement Act (IDEIA), legislators attempted to align reauthorization provisions with NCLB requirements. [13] According to Katsiyannis, Shriner, and Yell (2006), IDEIA's goal was to improve outcomes for students with disabilities through a number of approaches, specifically, adequate yearly progress and highly qualified teachers previously addressed in NCLB. [14] Additionally, both mandates emphasized increasing outcomes for students with disabilities through instructional practices in the regular education classroom. Once again, achievement, accountability practices, and placement were at the forefront of educational advancement due to the fact that students with disabilities are re-entering the general education environment in staggering numbers.

The Office of Special Education requires the Kentucky Department of Education to generate LRE and AYP achievement targets as part of the State Performance Plan and Annual Performance Plan. KDE increases the targets each year, further expanding inclusive practices of school districts. This study was designed to examine whether placement in the general education classroom is positively impacting reading achievement scores of students with disabilities, furthermore closing the achievement gap between students with disabilities and their non-disabled peers. Furthermore, this research explores the correlation of reading outcomes and LRE placement for students with disabilities. Due to assessment and accountability, the information provided by this investigation has the potential to transform inclusive practices within the state of Kentucky as well as other states.

Methods

Kentucky Education Department (KDE) maintains annual AYP data sets for every school and district. Therefore, for this study the 2011 data sets were reviewed for this correlation investigation from the website. Also, KDE requires districts to report LRE practices in the annual December 1 Child Count Report. The relationship was statistically examined between spring 2011 AMO reading achievement scores for students with disabilities and fall 2011 LRE data sets. Likewise, reading scores of students with disabilities are maintained at KDE and included in the Kentucky Continuous Monitoring Process (KCMP) as an outcome indicator. The KCMP is intended to be a mechanism to allow school districts to self-assess their special education programs and to plan for improvement within the district. AMO data was obtained from KDE NCLB Expanded Data file to determine if the school districts contained sufficient size in order to be considered for AYP in reading for students with disabilities. Districts with less than sufficient size were also examined.

[15] The federal performance target for 2010-2011 reading was 76.52. Districts that achieved safe harbor did not meet AMO in reading but reduced the total number of students scoring below proficient by 10%. The relationship between Kentucky schools' least restrictive environment practices and No Child Left Behind AYP reading performance targets provide data for students with disabilities.

The independent variable in this study is the placement of students with disabilities in LRE. The dependent variable is test scores reported in the AYP data sets for students with disabilities. Invariably, this study investigates whether a relationship exists between placement and reading scores. Data collection required a simple frequency count of districts that achieved AMO due to federal targets, safe harbor and confidence interval in reading. The mean scores of reading were calculated for examination for the subpopulation with a disability. Also, for further data analysis a computer software program Statistical Analysis Software (SAS) was used.

To further explore the achievement of AYP for districts that contained sufficient size, 100 in Kentucky, NCLB annual yearly progress reports from 2011 were examined. [16] The reports were obtained from the KDE

Open House database, which consists of data from MUNIS, Kentucky Student Information System (KSIS), and other sources such as the state accountability system. District decisions regarding AYP performance were examined to further investigate whether the population with disabilities alone inhibited districts from achieving the objective.

To determine whether districts achieved AYP due to the confidence interval, additional data were obtained from the 2011 Kentucky NCLB annual yearly progress reports. Students within the disability subpopulation record an error band for all districts with a sufficient size. The confidence interval is adjusted for each district based on the number of students and the size of the proportion. An upper boundary and lower boundary are provided both numerically and visually within the report. Reading mean scores were individually calculated and combined for each of the three categories of LRE: removed from regular class less than 21% of the day, removed from regular class greater than 60% of the day, and served in public or private separate schools, residential placements, or homebound or hospital programs. Two groups are excluded by KDE for individuals served off campus: parental placement and correctional facilities.

Results

The federal government designed a table defining AMO targets for reading and mathematics for each school year from the inception of NCLB in 2002, when all states are required to acquire 100% proficiency in reading and mathematics content areas. Fifty-seven percent (n = 100) of schools had a size large enough to be considered for this research. Table 1 illustrates results, indicating that 1% of school districts (n = 1) achieved the AMO reading scaled score of 76.26 for students with disabilities. The reading mean of 50 indicates that many districts did not obtain AMO.

Table 1 Descriptive statistics: Reading AMO achievement to determine AYP performance for students with disabilities

AMO Performance	N	Mean Score	Minimum	Maximum
All Achieved AMO Targets	19	65.29	38.99	79.25
Achieved AMO Scale Score	1	79.25	79.25	79.25
Achieved AMO Safe Harbor	9	56.67	38.99	65.68
Achieved AMO Confidence Interval	9	72.19	68.55	80.50
Did Not Achieve AMO Target	81	46.96	24.11	62.05

Also, Kentucky and other states use the term safe harbor to define districts that failed to achieve AMO for a subpopulation with sufficient size (Kentucky Department of Education, 2011), but were still considered for this category as they achieved other components of AYP. In order to achieve safe harbor, the participation rate must be at least 95% or has reduced the total number of students in a subpopulation scoring below proficient by 10% (Kentucky Department of Education, 2011)[16]. Safe harbor is not an NCLB term; however, it is used by Kentucky to determine AYP. Nine percent (n = 9) of school districts achieved safe harbor in reading for students with disabilities. Table 1 results indicate a total of 81% (n = 81) did not achieve AMO for the 2011 assessment year.

Further examination determined that a slightly greater number of districts achieved AMO reading for students with disabilities due to confidence interval than safe harbor. The U.S. Department of Education provides states with the option to create error band percentages for proficient and distinguished scores in reading. Confidence intervals are utilized for the subpopulation category that contains sufficient size. Three years of test scores reported for a category are utilized when assigning confidence interval. Data demonstrated that 9% of school districts (n = 9) achieved AMO in reading for students with disabilities, therefore attaining AYP for the subpopulation.

The Pearson Correlation results indicated a weak, yet positive, correlation exists between the removal of students from the regular classroom less than 21% of the school day in regards to reading achievement (r = 0.14) and a weak, while a negative, correlation relationship exists between removal from regular education greater than 60% of the school day (r = -0.16) and reading achievement presented in Table 2. Results indicated that the outlier districts significantly influenced the strength of the correlation, which improved once those districts are taken into account. An unrelated relationship between placement outside the regular school and reading achievement was revealed (r = 0.04).

Table 2
Pearson correlation: Relationship between least restrictive environment categories and AMO reading and achievement for students with disabilities

Variables	N	*r*
Removed Less than 21% of the Day Reading	**100**	**0.14**
Removed Greater than 60% of the Day Reading	**100**	**-0.16**
Placement Outside the Regular School Reading	**100**	**0.04**

This study was conducted to provide school administrators information so that they could make informed decisions regarding the placement needs of students with disabilities. Also, the research is significant because federal and state governments continue to allocate funding and tremendous resources to the advancement of students with disabilities.

Discussion

Subpopulation accountability became the cornerstone of NCLB legislation in order to ensure that all students were included in outcome data while improving academically. As outlined by NCLB, by 2014 all subpopulation categories must experience yearly growth to reach the goal of 100% proficiency. [18] This outcome is designed to pressure educators to implement all necessary measures to improve student achievement. At the same time, the national results for AMO in reading was at 19% (n =19) according to a frequency count for students with disabilities. Districts who are unable to obtain the reading AMO for students with disabilities need to evaluate the achievement gap by reviewing all data, providing expanded student support, analysing what is working, and contending with issues such as low expectations.

[19] [20] The American Diploma Project (2004), suggests that reading skills correlate with a successful K-12 experience, postsecondary education opportunities, and career advancement. Academic failure places all students at risk for dropping out of school, especially students with disabilities. Furthermore, participants in this study suggested that educators strengthen the curricula's connection to the real world, improve instruction that provides support for struggling students, and create a positive school climate that encourages academic success. Obviously, high school graduation is strongly connected to academic achievement for all students.

Inclusion for many parents and educators is fuelled by moral advocacy. Generally, it is believed that students with disabilities should be educated alongside their non-disabled peers. [21] Cook, Gerber, and Semmel (1999), examined attitudes of special education teachers and principals in order to determine whether their philosophies impact inclusion practices in their buildings. Administrators and teachers often disagreed regarding inclusionary practices. The principal's frequently expressed optimistic views citing improved academic outcomes for students who received services in the regular classroom setting, while special education teachers were less supportive. Attitudinal differences need to be taken into account when considering the implementation of inclusion. This study indicates that the relationship of reading achievement increases as pull-out programs decrease.

[22] Finkel (2011), describes special education as "front and center in the regular classroom" (p. 51) with students from all eligibilities. Special education is no longer a place but a service. In order to understand this paradigm, this research evaluated the relationship between three LRE placements and reading achievement for students with disabilities. Results revealed that a weak correlation exists between removal from the regular class less than 21% of the school day and reading achievement (r = 0.14). This relationship includes districts that are outliers, which are significantly impacting the results of the Pearson Correlation.

A longitudinal study was conducted in Rhode Island to examine how low performing schools are successfully closing the achievement gap. [23] Hawkins (2007) identified a number of practices that were effective for all the schools: engaging inclusive strategies, establishing high expectations for all students, initiating quality professional development, employing highly qualified staff as well as parent involvement, teacher analysis of student work, differentiation, and increasing instructional time for literacy development. All these practices are effective approaches to closing the achievement gap at any level.

[24] Differentiation must be an integral part of the curriculum for learning to occur. A climate for differentiation must be supported by administration at each level in order to improve outcomes for all students. Classrooms that differentiate accept diversity, maintain high expectations, and generate an atmosphere open to new ideas. Students with disabilities generally feel accepted in those environments.

[25] To further explain the benefits of target learning, Davis-Bianco (2010), examined a school district's response to intervention program (RTI) that enhanced data-driven instruction and implementation fidelity, consequently improving student achievement. Students were assessed using Dynamic Indicators of Basic early Literacy (DIBELS) to evaluate early literacy skills. Results indicated that fidelity of implementation was most

apparent when teachers frequently assessed an intervention. Tracking forms were found to be a specific mechanism for monitoring and enhancing student achievement. [25] Davis-Bianco (2010), further recommends other means that provided support to teachers in order to expound upon data-driven instruction methods; reading coaches, video clips, and websites. This research determined that implementation of RTI models that embrace implementation fidelity and data monitoring improve student achievement, reduce referrals for special education services, and yield positive feedback for teachers.

Limitations and Delimitations

All data that are reported to the state is completed by special education teachers, speech therapists, and those who maintain due process documentation for LRE into the state-mandated computer program, Infinite Campus (IC). Therefore, human error is a concern as the number of individuals entering data is considerable. Along with LRE limitations, achievement must also be addressed for students who are serviced on a 504 plan, but are excluded from the LRE sets. Also, these students may use accommodations such as a reader, paraphrasing, prompting, and cueing, which affect achievement scores. Another consideration is that not all grades complete the assessments that are included in this study.

When delineations issues are considered, no results are provided for individual schools. Also, The Kentucky School for the Deaf and Kentucky School for the Blind were excluded from this study since data sets were unavailable.

Recommendations for Future Research

This research analyses the relationship between Kentucky least restrictive environment practices and KCCT assessment annual yearly objectives (AMO) in reading for students with disabilities. Expanding the research to the new accountability system known as Kentucky Performance Rating for Educational Progress (K-PREP) also would be beneficial. New legislation limits accommodations for students with disabilities beginning with the 2013 assessment. The examination of student achievement results after implementation of the new mandates are implemented would be an opportunity for further research.

Research should evaluate individual school performance, implementation of intervention programs, or inclusion rates within elementary, middle, and high schools for AMO attainment. Also, research that provides recommendations for improving inclusive practices would be equally advantage would be the impact of co-teaching.

Conclusion

Students with disabilities have experienced the combined effects of IDEIA and NCLB greater than any other population dealing with the implementation of the mandates. Inclusion has slowly begun to replace pull-out programs, and subpopulation accountability has invariably advanced curriculum and instruction.

Two conclusions can be derived: students with disabilities are being placed in regular education classrooms at astounding rates. Schools would benefit from professional development focusing on the strategies that successful schools are using. Co-teaching techniques, differentiation, and data-driven instruction are effective methods to improve student outcomes. Secondly, a number of schools are achieving AMO with disability subpopulation category in reading. Therefore, schools would benefit from conducting observations to improve instruction in their classrooms.

Kentucky was granted an NCLB waiver in 2012 due to a state mandate limiting accommodations for students with disabilities and the adoption of a new state assessment referred to as K-PREP, which will likely alter future reading achievement results for students with disabilities. This exclusion from the federal requirements has the potential to significantly transform education in the Commonwealth.

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