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Tier II Interventions: Utilizing an Interventionist at the Secondary Level

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Abstract

The purpose of this action research was to determine the impact of an interventionist conducting Tier II interventions on student achievement. The research setting was a high school English language arts classroom in Iowa where the participants included 58 ninth-grade students. In previous years, interventions were taught by the ELA teacher in the classroom; this action research dictated that an interventionist teach the Tier II intervention lesson to non-proficient students during class. Quantitative data from these participants was collected to assess the impact of an interventionist on student achievement in two reading skills: identifying the main idea and summarizing. Assessment data from the participants was then compared to assessment data from a prior year to determine the impact of using the interventionist on student achievement. The student achievement data determined there was no statistical difference in student achievement between the use of an interventionist and an ELA teacher for Tier II interventions. The researcher recommends further study be conducted, including the impact of using a long-term interventionist and how the use of an interventionist could be an asset to all students.

Introduction

When the federal government renewed the Individuals with Disabilities Education Improvement Act (IDEA) in 2004, included in this policy was a focus on Response to Intervention, or RTI. For years, there was a "wait to fail" model used by the special education program which required students to show a discrepancy in ability before they could be evaluated and possibly receive services. With the IDEA act, officials changed this requirement. Rather than requiring school systems to provide data which proved a discrepancy in ability, school districts provided interventions as soon as educators noted a student struggling with academic concepts. (Jaeger, 2016; Maier et al., 2016).

Even though the initial purpose of the RTI initiative was to decrease student referrals to special education services, there was an additional benefit. In some states, such as Iowa, it became a dual-purpose program. In an analysis of each state's progress in implementing RTI, Berkeley et al. (2009) described Iowa's model as a cyclical process that was built around meeting the needs of all students. It decreased the number of students identified as needing special education services, but it also allowed students who struggled with reading or math to receive additional instruction immediately, which would move them towards proficiency

Shortly after passage of the Every Student Succeeds Act (ESSA), elementary schools quickly adopted RTI and began using the program to assist students who struggled academically; however, high schools were much slower to assimilate RTI into the structure of their school system (Berkeley et al., 2009). While the RTI movement began over twenty years ago, there are still schools that struggle to implement an intervention policy with fidelity (Thomas et. al, 2020). Research suggests there is little resistance to reteaching skills and concepts to students who are not proficient; however, the specifics of how to change, when to reteach and what

resources teachers need are constantly debated (Maier et al., 2016). Secondly, teachers' perception of how RTI should be implemented at the secondary and elementary is different (Thomas et al., 2020).

Research has shown that RTI in the primary grades have narrowed the gap in proficiency among non-proficient students (Jaeger, 2016). Unfortunately, there is little research to dictate what system and change works best for high schools. Interviews and surveys from secondary principals found that the interventions process at the secondary level is highly autonomous (Bartholomew & De Jong, 2017). Successful secondary intervention systems are individualized for that specific school and those specific students. In other words, there is not a one-size fits all approach to interventions at the high school level (Bartholomew & De Jong, 2017; Berkeley et al., 2009; Sansosti et al., 2010; Thomas et al., 2020).

Additionally, at the secondary level, there is a much different environment and approach to intervening in a child's education when there is a skill discrepancy. Vaughn et al. stated:

> Unlike in elementary school where all students receive reading instruction, reading instruction at the middle school level may not be formal and may be represented as part of occasional vocabulary or comprehension activities in the content area. Second, most of the interventions represented in the syntheses were relatively short term (2010, p. 1).

Unfortunately, little research has been available to inform teachers on how to assist students struggling at the secondary level (Bartholomew & DeJong, 2017). Compounding this problem, secondary schools have more variables such as the structure of the school day, the individual nature of a student's schedule, and lack of resources (Sansosti et al., 2010; Thomas et al., 2020). These variables make it difficult for a one-size fits all approach to RTI. Instead, school districts are piecing together what works best for their students, districts and system.

With limited research and resources, the research site of this study worked to create and implement an RTI program in the English language arts department at the secondary level. The research site then hired an interventionist to support the RTI program. Unfortunately, the lack of structure has resulted in an underutilization of this position. With training in PLC work, the English teachers at the secondary school attempted to utilize the interventionist. In interviews with five ELA teachers, four admitted that the interventionist had been in their rooms less than once a month (S. Ham, personal communication, 2021). This situation prompted the question of how to effectively implement an RTI program with the resources available to the teachers.

It was important to collect data on characteristics of successful RTI programs; hence the framework for the following action research. This action research focused on how to best leverage the interventionist to support RTI in the high school ELA classroom. With the help of the interventionist, the researcher considered whether small-group interventions taught by the interventionist were effective. Formative and summative assessment data were collected to determine if providing small-group interventions in the classroom helped improve student achievement and answered the following question: Does the use of RTI with an interventionist in high school ELA classroom result in increased reading proficiency for students?

Literature Review

In preparation for action research centered around the implementation of an RTI model at the high school level, a review of published studies was conducted to identify research-based best practices for the implementation of an RTI program. This literature review focused on five subtopics: the evolution of RTI, the RTI model which included universal screening and the three tiers of intervention, specific considerations for high school implementation, criticism of RTI and gaps found in the research. This research has informed and guided how interventions should be implemented at the high school level at the research site.

The Evolution of Response to Intervention

Implementation

The Response to Intervention policy, born out of the IDEA act in 2004, has morphed and adapted to the needs of each state. Berkeley et al. (2009) conducted a study on the status of RTI to determine the implementation status of programs in the 50 states. In 2007, their data was collected from August to December after the federal government instituted specific guidelines for RTI. They reviewed the information on the state education departments' websites, printed relevant documents, and recorded this information using a specific coding document. Their data focused on issues ranging from method of implementation and the number of tiers to the research-based practices and fidelity of implementation. The researchers noted that states varied in their implementation. In their data collection from 2007, they noted 22 states deployed an RTI program while 10 states were working directly with schools to create a program. Only three states had no recorded RTI program. Of the 22 states developing their program, most were utilizing the standard protocol approach, which differed from the problem-solving structure. The

most significant difference was the number of tiers available in the interventions or reteaching process (Berkeley et al., 2009).

Ten years after the beginning of the RTI program, Balu et al. (2015) also conducted research to determine the evolution of the RTI program across the country. Their study collected qualitative data from 136 schools across 13 states. In their data, they segregated schools as being "impact" schools, ones in which RTI had been implemented for at least three years, and "target" schools, ones who had implemented RTI for less than three years. Balu et al. collected data from grades K-3 and found that 86% of impact schools had fully implemented RTI in their reading programs while 56% of target schools had fully implemented RTI (Balu et al., 2015).

Most recently, Berkeley et al. (2020) conducted a study which reevaluated the condition of RTI in American schools. They collected quantitative data from state education websites and gathered qualitative data from interviews. Their research found all 50 states had implemented an RTI program. They stated, "As would be expected, over the course of a decade states made substantive progress toward developing their approaches to providing systematic support to students" (2020, p. 335). Thirty-nine states had a designated model in place for districts, and eight states posted guidance and resources. There were three states that limited the details of their RTI program to school employees. Over the last 20 years, districts have made progress in implementing an RTI program in schools.

Improving student achievement

To determine whether RTI positively impacted student scores, Fisher and Frey (2009) created and implemented an RTI program at a Midwest high school. For two years, they recorded student achievement data on reading scores. They found an 11% increase in student

reading performance compared to similar schools and a 4% increase on the state reading assessments (Fisher & Frey, 2009).

Grapin et al. (2019) also conducted research to determine how interventions have influenced students' long-term reading scores. Their research focused on 489 students from an elementary school in Florida. To complete their study, they formed four RTI cohorts which had various degrees of implementation (Baseline, Phase I, II and III). The researchers then tracked these students through 3rd, 4th, and 5th grades to determine their reading comprehension growth using two different measurements: the Florida Comprehensive Assessment Test and the Gates MacGinitie test. Reading scores of the 3rd grade were mixed; however, their study showed an increase of reading comprehension across all phases in 4th and 5th grade. Their research concluded that there was long-term student growth due to the implementation of reading interventions.

Not only have researchers collected data to determine whether RTI works, researchers have narrowed their research to determine whether students' reading scores improved after experiencing specific tiers of interventions. Elizabeth Jaeger (2016) conducted research to learn whether Tier II interventions were successful in improving student reading scores. She identified 14 of 50 fourth-grade students who needed Tier II interventions in reading. She collected quantitative data from a state standards-based test and Fountas Assessment to determine growth in reading. The results of her quantitative research showed that students made two years of growth in one year.

Additionally, there is evidence that Tier III interventions have been successful. Fisher and Frey (2013) helped design and implement an RTI program for a small high school with a population of 444 high school students in the Midwest. They collected quantitative data for two

years to gauge the success of the RTI program. In their second year, noted that of 45 students in Tier III interventions, all but one student made gains.

Pyle and Vaughn (2012) also tracked the progress of below-proficient readers to determine the effect of Tier III interventions. To do this, they created a control group that did not have interventions and a treatment group that did receive interventions. When the two groups were combined after Tier III interventions there was a statistically significant difference in the median of the two groups, with a gain of .23. Pyle and Vaughn state the importance of this gain, "This finding is considered meaningful because remediating reading difficulties with secondary, struggling students has had minimal or small effects" (Pyle & Vaughn, 2012, p. 8). Their data confirmed that this growth at the high school level was significant. The research of the RTI program as a whole, and in part, shows that RTI is effective in raising student achievement.

Response to Intervention Model

The National Intervention Center on Response to Interventions has created a framework for the Response to Intervention model. They have identified the following subcategories as instrumental to any RTI program: universal screening and the 3-tiered instructional approach which includes instruction, progress monitoring and data analysis (Essential Components of MTSS, 2021).

Universal Screening

Research conducted by Sharp et al. (2016) examined whether using research-based screening in the intervention process led to improved reading scores. They interviewed 64 principals and school psychologists from 43 schools. They found that accurate universal screening tied to Tier III interventions allowed instructors to predict that student scores would

improve. The second finding highlighted the importance of identifying below-proficient students early, which helped prevent them from falling further behind their peers. Universal screening allowed teachers to identify below-grade level students immediately rather than wait until weeks later to implement interventions (Sharp et al., 2016).

A second consideration of universal screening was the use of qualitative data to determine whether students needed interventions (Kressler & Cavendish, 2020). Kressler and Cavendish conducted a study with culturally and linguistically diverse students in two Florida schools over the course of three years. They wanted to determine how to use data-based decision making effectively for diverse student populations. They collected qualitative data to screen students for interventions, which included interviews, test documents, RTI observations notes and classroom instruction. Their research found that using multiple sources of data and resources as screening tools, in addition to standards-based tests, assisted instructors in indentifying students who needed interventions. Using qualitative data to help determine the need for interventions gives teachers the freedom to use a complete evaluation of student ability.

Last, Fisher and Frey (2013) found that universal screening was necessary to build an effective RTI program. In their first year of a two-year study at a small high school, they found a lack of consistency with how instructors screened students for interventions. After creating universal competency-based assessments, they collected more accurate data about a student's academic status. This allowed teachers to identify the specific skill discrepancy of students who were not proficient. Accurate and specific universal screening leads to specific interventions that benefit the student.

3-Tiered System of Intervention

The RTI model has a tiered system of intervention which must be research-based and progress monitored at all three levels (Bartholomew & De Jong, 2017).

Tier I. Tier I is the universal instruction that is provided to all students. A foundation of Tier I instruction is that all students receive high quality, research-based instruction (Bartholomew & De Jong, 2017; Fisher & Frey, 2011; Sharp et al., 2016). Fisher and Frey's (2013) research identified quality core instruction as a key component of a successful RTI program. Before teachers focused on strategies of Tier II and III of RTI, their professional development focused on research-based instructional strategies to use in Tier I. They devoted 80% of their professional development to teaching quality core instruction, using the gradual release of responsibility model. The researchers collected data on the quality of Tier I instruction using observations and interviews. They found direct instruction dropped to an average of 12.4 minutes a lesson and peer group work increased by 50%, both of which were core components of effective instruction. Fisher and Frey determined that an essential theme of effective RTI was providing quality core instruction.

Tier I should also consist of screenings or common formative assessments to gauge a student's proficiency or mastery on specific learning targets. Andrew Johnson states, "Screening in Tier I is used to see if students are responding appropriately to the instruction found within the general education curriculum. Screening consists of (a) establishing a baseline, (b) setting goals or benchmarks, and (c) monitoring progress" (Johnson, 2017 p. 4). In Tier I instruction if 20% or more of the students are not proficient, it is an indicator that the curriculum needs to be revised. This could mean that universal instruction or assessment in Tier I does not meet the needs of all students (Bartholomew & De Jong, 2017).

Tier II. According to understood RTI models, students who are below proficient or struggle with mastering a skill should receive additional instruction to remediate the gap. The decision to place students in Tier II of the RTI process should be done using the data from assessments and screenings completed in Tier 1(Dallas, 2017; Johnson, 2017; Vaughn et al., 2010).

Elizabeth Jaeger (2016) conducted research to answer the question about the most effective structure for Tier II interventions. Fifty 4th grade students from one elementary school were screened, and 14 were below proficient in reading. She conducted qualitative research about the students' opinions of reading and quantitative research using the state standards-based test and the Fountas assessment. Throughout the year, the 4th grade teachers provided interventions in the classroom for 45 minutes, two times a week for three to five weeks. In both of the assessments, student reading scores increased. On the Fountas assessment, students demonstrated two years' worth of growth in one year and showed an increase of 40 points on the standards-based test. Last, Jaeger interviewed students about their perception of reading at the end of the school year. Of the eight questions asked, responses to five questions showed positive growth in student perception of reading.

Research conducted by Jaeger (2016) and Johnson (2017) found that Tier II interventions should be organized with the following considerations: groups should be between three and six students, and students should receive between 15-45 minutes of additional instruction three times a week. Secondly, the instruction should be targeted and immediate. Focusing on a specific learning target allowed educators to be more specific in their instruction and progress monitoring. Similar to Tier I, high quality, research-based instruction should be utilized when teaching in Tier II (Bartholomew & De Jong; Fisher & Frey, 2011; Sharp et al., 2016).

Part of Tier II instruction is progress monitoring. Progress monitoring allows educators to track and evaluate student progress towards proficiency (Bartholomew & De Jong, 2016; Bemboom & McMaster, 2013; Sharp et al., 2016). Bemboom and McMaster (2013) conducted research to determine the impact of Tier II interventions on high school students. Their results stated that to monitor students' progressions, pre and post tests should be used. One reason for this was to move students back into Tier I if they were proficient or to move them to Tier III if they show no progress. They stated, "Given the urgency to address these students' needs in a timely fashion, it would likely be ideal to find ways to quickly identify these lowest-performing students and place them immediately in more individualized Tier III interventions" (p. 11). When there was effective progress monitoring, it created flexibility in students' education which provided students the additional instruction they needed.

Jaeger's (2016) research also supported moving students out of Tier II intervention as soon as a they demonstrated proficiency. In Jaeger's research, as soon as children scored at 70% or higher, they were removed from Tier II interventions. In addition, Jaeger's research (2016) noted that students missed up to 130 hours of instruction when they were pulled out of the regular education classroom to receive interventions. She concluded that Tier II interventions required flexibility to include and remove students from remediation.

Tier III. Similar to Tier I and Tier II, Tier III interventions should be supported with high quality, research-based instruction (Bartholomew & De Jong, 2016; Fisher & Frey, 2011; Sharp et al., 2016). In addition, progress monitoring should focus on specific learning targets, and when students demonstrate proficiency, they should be returned to Tier I instruction (Bemboom & McMaster, 2013; Sharp et al., 2016).

As educators monitored students' progress, students may need to be moved to Tier III if they do not respond to previous interventions. Bartholomew and De Jong (2016) characterized Tier III interventions as longer and individualized to the specific students' learning needs and styles. They also collected qualitative data concerning implementation of RTI at the high school level. Principals from across the country with 5-23 years of experience were interviewed. The interview consisted of 15 questions and was conducted in a face-to face or online format. Eight of nine principals could not explain how their schools were providing Tier III interventions to students, and the Tier III phase of the RTI model at the secondary level was the least structured.

This statistic was staggering when educators evaluated the impact that Tier III interventions had on student achievement. Seminal research by Fisher and Frey (2013) demonstrated the power of structured and system-wide Tier III interventions. Their research was designed, implemented and assessed over the course of two years. By the second year of their study, the interventionist at the high school had 45 students enrolled in her Tier III interventions. Only one student of the 45 did not make progress and was referred to the special education department for testing.

Lastly, Pyle and Vaughn (2012) focused their research on how successful Tier III interventions were for non-proficient students. This three-year study of middle school students who struggled in reading received 50 minutes of instruction in groups of five or less every day for over a year. Students receiving Tier III interventions closed the gap of discrepancy between their on-level peers and showed statistically significant gains over those do did not receive similar interventions with a growth of the *median* = .23. This research reveals the importance of Tier III interventions.

High School Considerations

Limited Resources

While the RTI system has been popular and a staple of elementary classrooms, the secondary level does not have as much experience with the model (Sansosti et al., 2010). In fact, multiple researchers have leveled criticisms of high schools' RTI process, including the lack of resources, knowledge and scheduling (Bartholomew & De Jong, 2016; Berkeley et al., 2009; Sansosti et al., 2010).

In Bartholomew and De Jong's (2016) interview with secondary principals, there were key issues that surfaced. Principals unanimously stated that there was a lack of resources such as universal screening at the high school level to determine who needed the interventions. This led to inaccurate data being used to determine which students needed interventions. Secondly, accurate progress monitoring was not possible because schools lacked staffing and time management (Berkeley et al., 2009).

In addition to inadequate data collection, in both Sansosti et al.'s (2016) and Bartholomew and De Jong's (2016) interviews with secondary principals, the administrators admitted that their teachers did not have enough training and professional development surrounding the RTI program. The respondents believed in the importance of receiving training in RTI systems, but they acknowledged that teachers were unable to receive these training in their districts (Sansoti et al., 2010).

Meier et al.'s (2016) research focused on the implementation of RTI at the secondary level, and the data showed a lack of screening techniques which led to inaccurate records and lack of data collection. Additionally, Sansosti et al.'s (2010) study with secondary principals revealed principals believed there was a lack of data systems for implementing a true RTI

program (2010). This provides challenges for determining which students need interventions and on what specific skill. Sansosti et al. (2010) found that without a standard screening tool, it is difficult to complete the complete Response to Intervention Process.

Structure

Another concern is the structure of RTI at the secondary level. First, finding time in a secondary schedule presents multiple problems for districts. Multiple researchers have questioned how to "fit" interventions into a student's day. Fisher and Frey (2013) helped implement and then studied the results of secondary interventions for two years. Just after two months of implementing Tier II interventions, they concluded that teachers did not have enough time to effectively reteach lessons. They immediately revised their structure for interventions. This included using after school resource time, peer tutors, and longer lunch hours. Once researchers found time for interventions without pulling students out of classes, they saw direct improvements in reading scores: a 4% baseline improvement from the previous year, an 11% increase over comparable schools and a 2% decrease in special education referrals.

Thomas et al. (2020) also collected qualitative data from over 300 secondary teacher surveys, which identified scheduling as one of the most common roadblocks to implementing RTI at the secondary level. The challenge of finding time to implement an RTI program is common among high school staff. In Bartholomew and De Jong's (2016) qualitative interview with administrators, principals also mentioned the challenge of time. Peer tutors and after school instruction were offered as options.

The need to provide in-class interventions was echoed by other researchers. Jaeger's (2016) research revealed that students made two years' worth of gains in one school year when offering Tier II interventions during class. Fisher and Frey (2013) also determined that students

performed better when instructors supplemented instruction during the regular class period rather than pulling students out of class for RTI.

In addition to structuring interventions at a system level, researchers have studied the classroom structure of Tier II and Tier III interventions. Bemboom and McMaster (2013) focused their study on whether teacher-directed instruction or peer-mediated instruction was more effective. Fifty-seven sophomores were screened and the lowest 25% received peer-mediated or instructor-directed interventions. The peer-mediation intervention used the PALS strategy, a cooperative learning technique which allows students to lead small groups. The researchers collected data from both intervention structures and conducted a Cohen's d test on the data. Data revealed a medium effect of .34 on the ORF assessment and a large effect of .64 on MAP assessments. The PALS strategy showed greater student achievement than teachers leading instruction in small groups. Using peer-mediated interventions was successful at the secondary level

Criticism of RTI

While the criticisms of the RTI system were few, they were worth noting. Research done by Balu et al. (2015) questioned the success of the RTI model. Researchers conducted Tier II and Tier III research in 146 elementary schools across 13 states and found that students who were barely discrepant from their peers actually scored worse after receiving interventions. They observed, “Overall, though the findings are not consistent across grade levels, they suggest that the reading interventions, as delivered in the impact sample schools, may not have been appropriate for students in specific circumstances who were near the cut point” (p. 154). Students did not receive the specific assistance they needed through an RTI program that was well-established. Balu et al.’s second criticism of the RTI program was that while there

were gains in individual skill sets like vocabulary and decoding, the overall gains of students in their reading comprehension was much smaller. This research casted doubt on both the structure and value of interventions.

Additional research has shown the ineffectiveness of the RTI program. The raw data from the National Assessment of Education Practice (NAEP) indicated that there has been no measurable improvement in the reading scores of 4th and 8th graders in the past 20 years after the national implementation of RTI following the passage of the IDEA legislation. In fact, 2019 reading scores in 4th and 8th grades decreased from the scores in 2017 by one and three points, respectively. There was only one state that showed improvement in their students' reading scores, Mississippi (NAEP Reading Highlights, 2019).

To support the NAEP data, research by Vaughn et al. (2013) and Wanzek and Vaughn (2008) researched the success of RTI programs and found little. Vaughn et al.'s (2013) research showed only a .16 gain. Wanzek and Vaughn (2008) questioned whether the amount and intensity of interventions impacted student achievement. Over the course of two years, Wanzek and Vaughn collected data from 25 first-grade classrooms in six schools. Of the 507 participants, 57 students qualified for interventions and were randomly enrolled in the regular intervention structure or the intensive interventions structure. In their research, one group of readers received one 30-minute intervention, and the other group received at least two 50-minute interventions. Using data from DIBELS and the Woodcock Reading Mastery Test, researchers conducted a t-test which showed no statistical difference between the scores of students who received intensive interventions and scores of students who received regular interventions.

Gaps in Research

Various researchers have pointed out gaps present in the literature pertaining to RTI for high school systems. This included gaps in the research surrounding the curriculum, timeframe and resources available to teachers and schools (Bemboom & McMaster, 2013; Dallas, 2017; Sansosti et al., 2010; Sharp et al., 2016). The other significant gap noted by researchers was the contrast between the perception of interventions and the actual implementation of them (Fisher & Frey, 2013; Jaeger, 2016; Vaughn et al., 2013).

Sharp et al. (2016), in their conclusion, identified a significant gap in the research of implementation and outcomes. They state there were multiple peer-reviewed articles identifying the methodology of interventions but there was much less research on the outcomes of these specific elements. Dallas's (2017) research posed this argument as well. His study revealed there was more research on how to implement the RTI model than the instructional strategies embedded in them.

Sonsosti et al. (2010) questioned the disparity they found in their research concerning awareness rather than action. In their survey, high school administrators showed greater awareness of the importance of RTI than actual implementation. Research to determine the reason for lack of implementation would assist secondary systems in planning and structuring interventions.

Another important element that lacked research in structuring RTI was who should teach the interventions. Benboom and McMaster's (2013) research focused on whether the instructor of interventions affects a student's progress. They identified little research has been collected about the best instructor of interventions.

Vaughn et al. (2013) explored the most cost-effective structure of RTI. This action research involved 759 students across 7 schools for one year. They employed nine certified teachers to teach interventions. Their suggestion for future research was to explore what was most cost effective for schools. This research would be practical and valuable information for districts trying to structure an effective RTI program.

The last gap that was noted focused on the alignment between curriculum and the RTI model. Jaeger (2016) argued that the RTI curriculum available to teachers was not compatible and aligned with Common Core. She stated the value of melding these two programs:

> Because results from CCSS measures to date demonstrate that students are struggling with the standards covered on these assessments, a systematic intervention model is needed; this model should include content aligned with the CCSS within a structure reflective of what we have learned about student support from the RTI literature (p.2).

Fisher and Frey (2013) noted a major hurdle in implementing an effective RTI program has been the lack of consistency in the curriculum and assessments used by teachers. Once teachers began using a competency scale to align curriculum and assess students, the RTI program became more effective. Fisher and Frey (2013) note that further study of assessments and curriculum would impact RTI effectiveness.

Conclusion

Over the course of 20 years, the Response to Intervention program has evolved prompting researchers to question its effectiveness. Multiple articles pointed to the success of the RTI program, specifically in the primary grades. This research defined a successful program as having the three components. Universal screening, three tiers of interventions, and progress monitoring were all key factors in providing students with the additional education they need.

However, studies have found that at the secondary level, there were complications which impacted implementation. The complications stemmed from lack of training, limited resources and understanding how to create a successful RTI schedule. Of late, there has been criticism of the RTI program which questions its implementation and effect on student achievement. By identifying these concerns, researchers have also identified gaps in the research. The type of instruction, best structure, and lack of resources necessitate additional study. School districts across the country are attempting to find the right solution for them. The purpose of this action research was to contribute to the literature surrounding the appropriate structure for interventions at the secondary level.

Methods

Research Question

The focus of this action research centered around the question: Does the use of RTI with an interventionist in high school English language arts result in increased reading proficiency for students? To answer this question, quantitative data was collected that assessed the use of an interventionist to teach interventions during Tier II instruction in the ELA classroom.

Variables

The independent variable in the action research was the use of an interventionist. In this study, an interventionist was present in the classroom to teach the intervention lesson for students who did not achieve proficiency following Tier I interventions. The interventionist was a former high school English teacher who had experience at this research site. The dependent variable was student achievement. Achievement was indicated by students' proficiency score on their summative assessments after Tier II instruction.

Research Site

This action research was conducted in a small public high school in Iowa composed of three rural communities. The district is unique in that all three schools, the elementary, middle school and high school, are located in one building. In 2019, K-12 student enrollment at the action research site was 670. The high school enrollment was 211. The student population was 86% Caucasian, 9% Hispanic, 2.3% multi-racial, and 2% African-American. Of the 670 students enrolled at the research site, 34.8% qualified for free and reduced lunch (Iowa School Performance Profiles, 2019).

The most recent data about reading scores to indicate the condition of academic success of the school district were from 2019. In high school, 80.95% of all students were proficient in

reading. Additionally, there was an 11 to 1 student/teacher ratio in the classrooms. Overall, the high school was considered a "high performing" school by the state of Iowa. (Iowa School Performance Profiles, 2019).

Participants

The 9th grade English classroom, where action research was implemented, had 58 students divided into three different class periods. In this sample, there were 31 males and 27 females. Two separate Tier II interventions were conducted over Standard 2 Iowa Core Curriculum: identifying the main idea and summarizing. After completing the first common formative assessment of identifying the main idea, it was determined that 13 students needed interventions in identifying the main idea because they did not achieve proficiency. Of the 13 students, 8 were males, 5 were females. Four of the 13 students received special education services in reading. Following the second formative assessment focused on summarizing, 10 students required interventions because they did not achieve proficiency, 6 of whom were males and 4 were females. Of the 10 students, 3 students had an IEP with a reading goal.

Procedures

The focus for the action research centered around providing interventions for two core elements of Standard 2 from the Iowa Core Curriculum. The Reading Literature Standard 9-10.2 states, "Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text" (ELA Iowa Core, 2016). From this standard, two key skills were identified as essential: identifying main ideas and writing an objective summary. Students read an excerpt of <u>The Odyssey</u> and received direct instruction on each skill. The teacher modeled the process, students worked together in small groups, and students

independently completed a formative assessment demonstrating the reading skill. After assessing the scores of all participants, students who received a 1 or 2 were identified as not proficient in these reading skills and received interventions.

Main idea intervention

For four weeks, students read and analyzed an excerpt of The Odyssey, which contained six separate chapters. After students concluded the reading, they received Tier I direct instruction on how to construct the main idea. A gradual release of responsibility model was used to teach the main idea (Fisher & Frey, 2008). First, the teacher described and explained how she determined the main idea. Then, as a large group, the students worked on the main idea of Chapter 1 from the text, and as a class, they wrote the main idea of Chapter 1. The next day, after a brief review of the main idea, students worked with a peer partner to write the main idea of the Chapter 2. As students worked together, the instructor monitored student progress and asked for volunteers to share their main ideas. Last, students were asked to write the main idea of Chapter 3 independently. The main idea of Chapter 3 was used as the first formative assessment to determine who was not proficient.

A competency scale was used to determine which students required interventions. Then, the ELA teacher created a Tier II intervention lesson for students who were not proficient and an enrichment lesson for students who demonstrated proficiency. Four days after the initial assessment, students were organized into groups of no more than five, and the interventionist provided Tier II reteaching to students who had not reached competency. At the same time, the ELA instructor taught the enrichment lesson to the groups of proficient students. After the intervention lesson, the interventionist returned the Chapter 3 main idea assessments to students who scored a 1 or 2, and they were asked to correct their response. After they corrected the

response, the interventionist read and approved their revisions. Their next task was to independently write the main idea of Chapter 4 from The Odyssey. This was then evaluated by the general education instructor to determine proficiency and document the number of students who reached proficiency following the Tier II intervention. The data was recorded and compared to the first formative assessment.

Summarizing intervention

To build on the first lesson of identifying the main idea, students then began working on writing an objective summary. Students first received Tier I direct instruction on the essential parts of a summary and were given a graphic organizer which had the essential components of the skill. The instructor modeled how to complete the organizer using a text that students read in a prior year. The next day, the class completed the graphic organizer using The Odyssey text. When they completed the organizer, they wrote a summary of the text. Students then collaborated with their peer partners to review and revise their summary statements.

Two days after instruction, students were given a passage from ReadWorks and were asked to read the article and write an objective summary of the text. The ELA instructor then assessed this summary using a competency scale to evaluate the students' summarizing skills, and all scores were recorded for the first formative assessment. Students who did not meet proficiency required Tier II interventions. The ELA teacher created an intervention lesson and organized students into groups of 4 or less for reteaching. The students who were proficient were organized into groups to complete a writer's workshop while non-proficient students received Tier II interventions on summarizing from the interventionist.

In small groups, the interventionist reviewed the essential parts of a summary. She then showed an example of a poor summary and a good summary from a prior text. As a group,

students were tasked with correcting the poor summary. Once they had finished the task, they were given a second text and were required to write a summary. The instructor evaluated the summaries to determine proficiency and recorded the data using the rubric.

Measures

In this action research, quantitative data was collected. This data was collected with the goal of determining whether having an interventionist teach interventions improved student reading scores. The action researcher began collecting data on February 24 and concluded on March 19th.

The data collected was from teacher-created formative assessments which measured the students' proficiency in identifying the main idea and summarizing. The teacher-created assessments were scored on a competency-based scale of 1-4. The competency scale was broken down into four categories: (4) mastery, (3) proficiency, (2) developing understanding, (1) non-proficient (Evans, 2019). Data was collected and recorded on all participants, and students who earned a 1 or 2 were provided interventions for either identifying the main idea or summarizing.

The formative assessments were teacher created, so there was no reliability or validity statistic for the measurement instruments. The results of this research were not generalizable, but rather for the individual classroom teacher's use. Hence, the internal validity of the research can be determined by whether the changes in students' scores were the result of using an interventionist for in-class interventions (Mills, 2018).

Data Collection

For this action research, the data collected was quantitative. The quantitative data collected was the initial common formative assessment (CFA) completed by all students to determine which students needed Tier II interventions in identifying the main idea. This data

was assessed on a competency-based scale from 1-4. A 3 or 4 was considered proficient, and a 1 or 2 was considered non-proficient. All student CFA scores were recorded and used to determine which students were not proficient and needed reteaching. The researcher collected a second assessment after the interventionist taught the Tier II lesson to determine if student scores increased.

The researcher also collected quantitative data on the second reading skill, summarizing. The process of collecting data was the same as the first. After instruction in the specific skill, all students completed a CFA to determine their proficiency. The assessment was evaluated using a competency scale of 1-4 with a 3 or 4 being proficient and 1 or 2 being non-proficient. Students who scored a 1 or 2 received Tier II interventions. After the intervention, a second assessment was completed and recorded.

The data from student assessments was first recorded on a paper spreadsheet and then transferred to a Google Sheet. This document included student name, ID, and scores from the formative assessments. The option on Google Slides to hide the student name column guaranteed the privacy of student performance.

Once the data was collected, it was compared to data from a prior year. 2020 lacked any main idea and summarizing data because COVID prevented the instruction and data collection of these two reading skills. For this reason, assessment data from 2019 was compared to 2021 assessment data to determine effectiveness of using an interventionist to teach interventions. The 2019 data included the number of students who were proficient after Tier I instruction, the number of students needing Tier II interventions, and number of students who were proficient after receiving Tier II interventions. Tier I instruction in 2019 was the same as Tier I instruction

in 2021. However, in 2019 the ELA teacher conducted Tier II interventions, and in 2021 the interventionist taught Tier II intervention lessons.

To analyze the data, an independent samples t-test of the student achievement data from 2019 and data from the 2021 action research was completed. This test determined the significance of an interventionist in the classroom during Tier II interventions. Also, a chi squared test of association was completed to determine the statistical impact of interventions on student reading scores.

IRB Approval or Exemption

The action research was completed in a common educational setting, which involved instructional strategies for the school's RTI program and classroom management. Additionally, the research did not adversely affect student learning, and the data collected during the action research preserved student privacy by using student IDs instead of student names. Last, there was no adverse effect on teacher assessment practices or instruction. Because this research design was compliant with federal regulations for an education exemption, an IRB exemption form was submitted to Northwestern College Institutional Review Board, and that entity deemed the research was exempt.

Data Analysis

Of the 58 participants enrolled in English 9 where this action research occurred, only those students who submitted their common formative assessment were included in the data analysis. There were 11 who did not participate: one participant was not required based on her IEP, and the others were remote learners who did not attend the lesson or did not submit an assessment. For this reason, there were only 47 students who participated in the interventions/enrichment activities, and it was from these participants that the data was collected and analyzed.

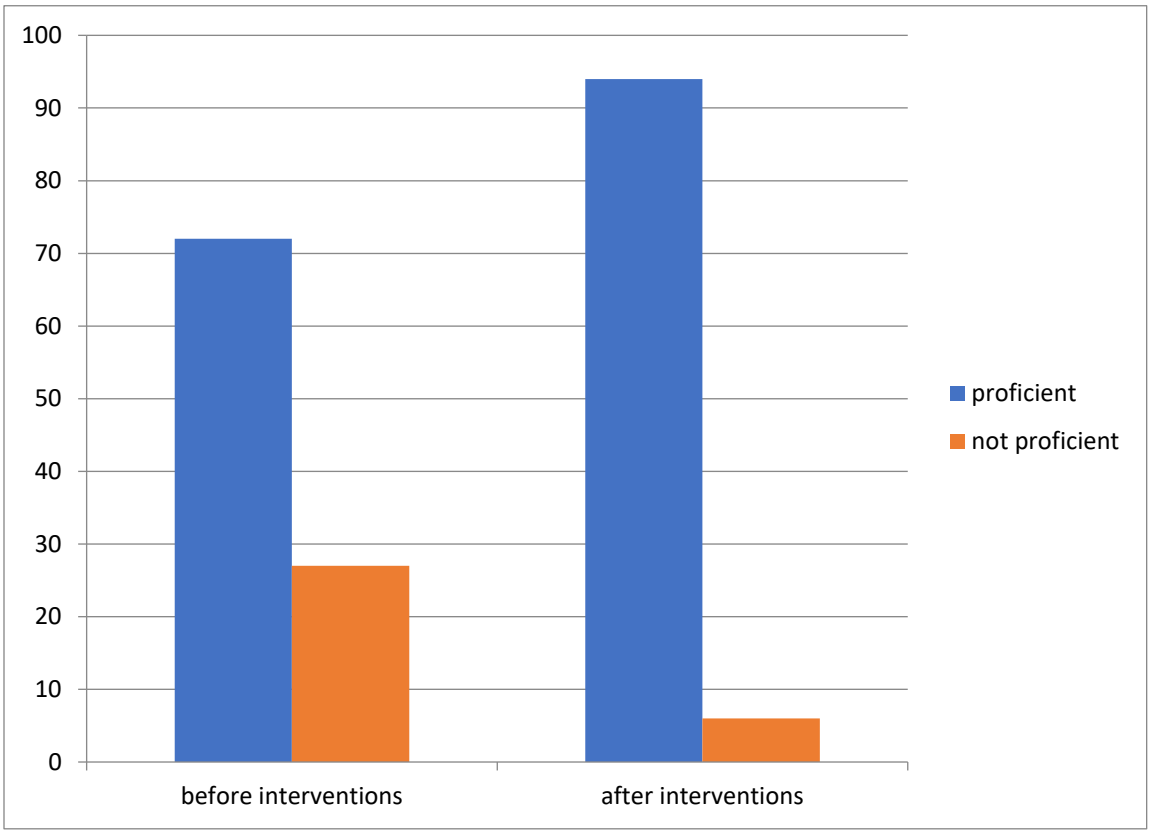
The dependent variable that was analyzed in the action research was students' scores before and after receiving Tier II interventions. The independent variable in this action research was using an interventionist in the classroom to provide Tier II interventions to students who did not meet proficiency in their first attempt on the formative assessment. Scores from the initial assessment and the last assessment for each reading skill were compared to determine the increase of student proficiency. Participant scores were then compared to scores from the same lesson in 2019 using an independent samples t-test. Improved student scores would indicate that students benefitted from having an interventionist in the classroom to teach Tier II interventions and monitor student progress of the specific skill. To evaluate the effectiveness of the RTI process, scores from the 2021 initial and summative assessment were assessed using a chi squared test of association.

The first intervention data was collected during a lesson about identifying the main idea. After direct instruction, group work and individual practice, students completed the first formative assessment. The first assessments resulted in 13 of the 47 students who were not proficient. Two days later, those students were grouped according to their scores and

participated in the main idea interventions. After the intervention lesson, non-proficient students completed a reassessment. Figure 1 shows a comparison of the first and second assessment scores. Of the 13 students who completed interventions, 10 improved their score to proficiency or mastery. As seen in Figure 1, 72% of students were proficient on their first assessment, and 27% of students needed interventions on main ideas. After the intervention lesson, 94% of the participants were proficient while 6% were not proficient.

Figure 1

Main Idea Tier II Interventions



Note. The percentage of students who were proficient before and after interventions in main ideas.

To determine the statistical increase in the number of students proficient after interventions, a chi square test of association was conducted using the data from the first formative assessment and the final summative assessment. The result of the chi square test would determine whether there was a relationship between the Tier II main idea intervention lesson and

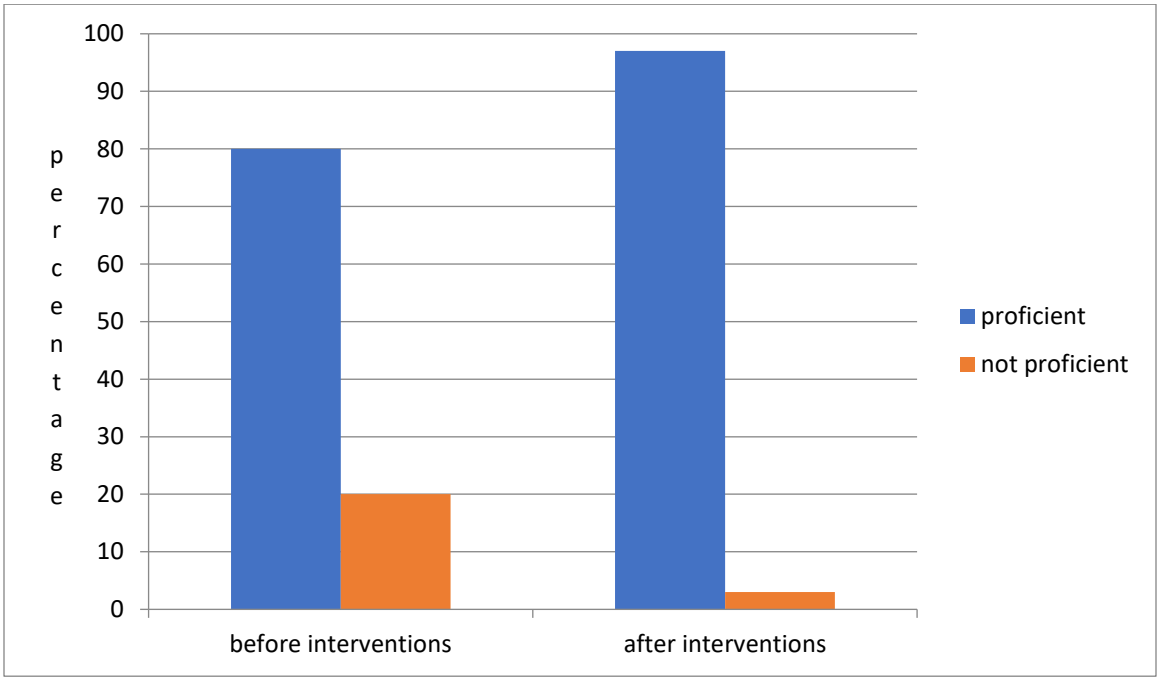
the number of students who were proficient after the summative assessment. The test result, $X^2(2, N=37), p=0$, was less than .05, indicating there was a significant relationship between interventions and proficiency.

One week later, the same 47 participants then received instruction in summarizing. After direct instruction, group work and individual practice, students completed their first assessment over summarizing. Eighty percent of the participants were proficient or mastered the skill while 20% were not proficient and required Tier II interventions. The ELA teacher and interventionist grouped the students; the interventionist taught the interventions while the ELA teacher taught enrichment. After the non-proficient students finished the intervention, they completed a second assessment to reassess their summarizing skills. The results, as seen in Figure 2, showed that of the 10 students needed interventions in summarizing, nine scored a 3 or 4 on their reassessment, demonstrating proficiency. The number of students who demonstrated proficiency or mastery of summarizing after the intervention lesson increased by 18%.

Again, a chi squared test of association was conducted to determine whether the number of proficient students were statistically higher after receiving interventions. The chi squared test resulted in $X^2(2, N=37), p=0$. The p value, 0, indicates that Tier II interventions in this action research had a significant impact on the increase in the number of students proficient.

Figure 2

Summarizing Tier II Interventions

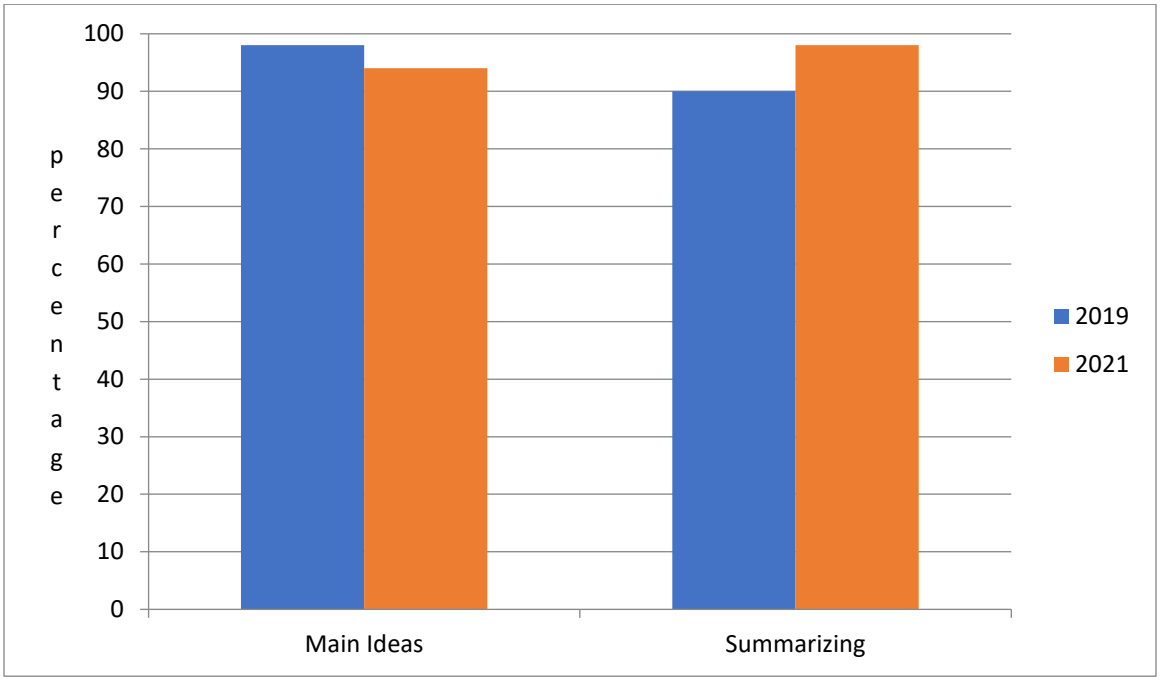


Note. The percentage of students who were proficient before and after receiving interventions.

After recording the student performance data from the action research, a comparative analysis of student achievement was conducted with the results from the same lesson taught in the 2018-2019 school year. The conditions, lessons, and resources of the lesson in 2019 were the same, but the ELA teacher taught Tier II interventions. The 2019 data from the main idea summative assessment showed that of 47 students, 46 students were proficient after completing in-class interventions taught by the ELA instructor. Additionally, the 2019 summative assessment in summarizing showed that 43 of the 47 students met proficiency standards. A comparison between the two data sets is shown in Figure 3.

Figure 3

Proficiency in Main Idea and Summarizing



Note. A comparison of students from 2019 and 2021 who were proficient in main ideas and summarizing.

To answer the research question, an independent samples t-test was completed on both intervention lessons to determine the significance of using an interventionist to teach Tier II interventions. Completion of the t-test determined that the 2019 main idea interventions (*M*=3.74, *SD*=.23, *n*=47*)* did not show significant difference from the 2021 main idea interventions *(M* =3.76, *SD* =.4, *n* =47) with an effect size of *t*(92) = -.18, *p* =.85.

The summarizing interventions saw similar results from the independent samples t-test with no statistical difference between the two groups. The summarizing intervention data from 2019, where the teacher provided Tier II interventions, was not significantly different from the percentage of students who reached proficiency in 2021 where the interventionist provided Tier II interventions. The independent samples t-test revealed that the summarizing intervention data

from 2019 (M=3.23, SD=.48, N=47) lacked significant difference from the 2021 summarizing data (M=3.4, SD=.37, N=47) with an effect size of $t(92) = -1.25$, p=.21.

Discussion

The purpose of this action research was to determine whether using an interventionist in the classroom for Tier II interventions increased student achievement. The results of the data analysis indicated that there was no statistically significant difference between the two test groups, and no statistical benefit to include an interventionist in Tier II interventions. Analysis of the student data using a chi squared test of association from 2021 did confirm, however, that Tier II interventions were effective in improving student proficiency. This confirms that providing Tier II interventions to non-proficient students to improve reading skills is significant, regardless of who teaches Tier II intervention lessons.

There were other determinants, however, that needed to be factored in using interventionists during Tier II interventions. One of these was the incidental benefit of having multiple teachers in the classroom. Incidental benefits for students could be an affirmation of skills, individualized attention in small groups or even behavior management. The benefit for the classroom instructor was also significant. The classroom teacher benefited from collaborating with the interventionist about lessons and assessments. So, while there is no statistical benefit to having an interventionist assist in Tier II interventions, there are cases where the students and teacher can benefit from this structure.

In addition to considering the benefit of an interventionist to the non-proficient students and the teacher, the proficient students benefited from this structure as well. Student proficiency data shows that student scores increased whether the ELA teacher taught interventions or the interventionist taught them. The benefit of having an interventionist in the room was that the ELA teacher was then able to teach enrichment in small groups to students who were already proficient. Using this structure, both groups benefited from having an additional teacher in the

classroom. Besides increasing student proficiency, having an interventionist in the classroom allowed enrichment for proficient students and reteaching for non-proficient students.

Another consideration is the frequency with which the interventionist is in the classroom. Test scores are often impacted not only by instruction, but social acceptance and positive relationships with staff. The interventionist in this action research was in the classroom two separate times. Allowing the interventionist to be in the classroom more often to teach interventions may have built a more secure and positive relationship with students.

Limitations

There were a number of limitations to this action research that could have influenced the results. Because of COVID, there were online learners and students who had been quarantined. While some online students did participate and submit work, it is possible that the learning environment at home, technology issues, and lack of engagement in the Tier II intervention lessons could have affected student learning and scores.

The grouping of students in various sections was a limitation as well. In one section of English 9, there were only two students who necessitated reteaching while in the other two sections there were groups of four or five. The ability to provide individualized instruction for some students and not for others may have impacted the assessment scores. Also, some students may have had concerns about the social stigma of being in interventions, depending on how small or large the intervention group was.

The other limitation of this action research was the data available from the 2019 participants. The only assessment data from the 2019 participants was the summative data. Since, the action research lacked the formative assessment data from 2019, only summative data between the two years could be compared. This limited the full extent to which

the action research could determine the impact of the interventionist on the growth of student achievement.

Suggestions for Future Research

Research has shown that a consistent weakness of secondary RTI programs has been the lack of resources and tools available to classroom teachers. Universal screening tools and formative assessments are all essential to progress monitor student success. Unlike the elementary level which has standardized assessments like the FAST, DIBELS, and Gates-MacGinitie tests to assess students progress in literacy, high school teachers have few resources. An exploration of useful research-based universal screening tools available to secondary teachers would assist in quickly identifying those students who were not proficient. Also, students' scores could then be tracked, so teachers can see a pattern of skill development or regression.

A second consideration for further research is the effect of consistent incorporation of an interventionist in the classroom. In this action research, the interventionist was only in the classroom twice in the span of four weeks. Additional research on a year-long incorporation of an interventionist in the classroom would yield more complete data on the impact of student achievement.

A third consideration is the certification of the interventionist. In this action research, the interventionist was an ELA teacher who was familiar with the curriculum, standards and structure of the classroom. Further research on who is best qualified and able to teach Tier II in-class interventions would help administrators and departments organize a structured approach to interventions.

Last, research which compares the effect of not offering Tier II interventions to non-proficient students to offering Tier II interventions taught by an interventionist would provide

insight into the overall benefit of the RTI process. Results from this research would assist school districts in determining how or if they should incorporate an interventionist in a system-wide approach or on an individual classroom basis.

Conclusion

The Response to Intervention process has focused on providing struggling readers with assistance immediately. School districts have adopted the three-tier model which focused on identification of students who need reteaching, tiers of instruction and monitoring students to determine when they have met expectations. This model has worked well in the primary grades, but its implementation in the secondary level has not been as prominent or successful. This action research sought to study and collect data on effective structures, namely the incorporation of an interventionist in the secondary English classroom.

Over the course of four weeks and two intervention lessons, data was collected on student growth in two key reading skills: identifying the main idea and summarizing. The results were then compared to data from 2019 Tier II intervention lessons which did not have an interventionist in the classroom for reteaching. The results showed that the inclusion of an additional teacher to provide Tier II reteaching did not significantly improve student achievement. However, because the teacher also provided remediation in prior years, evaluating the data from both years identified the relationship between Tier II interventions and increased student proficiency. The chi squared test of association determined that Tier II interventions did significantly increase the number of students who achieved proficiency. Even though using an interventionist for Tier II interventions offered no significant difference, the action research identified incidental benefits of using an interventionist for Tier II interventions. The research also confirmed the positive impact that Tier II interventions can have on improving student achievement.

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