DIFFERENCES AMONG STUDENT READING COMPREHENSION WITH AND WITHOUT THE READING INSTRUCTIONAL STRATEGIES INFLUENCED BY THE RTI + I MODEL

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ABSTRACT

This study was completed to find if there was a significant difference on the scores of reading comprehension quizzes with or without the use of reading instructional strategies in levels I & II in a World Language classroom. Different learning styles were taken into account when implementing the reading strategies by following the model of RTI + I in the tier I phase. Data was collected in level I and II World Language classes regarding the reading instructional strategies. The reasoning behind this research is to show whether or not supplying students with more tools over the reading helps their comprehension of the reading or not. After compiling different research covering the topics of reading instructional strategies, Response to Invention tools, and reading comprehension, it is found that these reading supplemental tools in fact do increase reading comprehension. The question about whether or not these reading instructional strategies worked in a World Language class remained until after the data was collected. It is found the there is a significant difference among both level I and II World Language classes’ reading comprehension levels. The students’ scores on the reading comprehension quizzes are significantly higher after they use the reading instructional strategies introduced by tier I of the RTI + I model.
INTRODUCTION

Background, Issues, and Concerns.

The background of the research is a Midwestern school district has been implementing reading instructional strategies that have been influenced by the RTI + I model. The reading instructional strategies help promote learning to all students ranging from the high achieving students to the students who are at-risk of being referred into special education. Within the past couple of years, the Professional Development has really focused on these instructional strategies. The concern is whether or not the classroom time dedicated to implementing these strategies has really been effective and benefited student reading comprehension.

Practice under Investigation.

The practice under investigation will be looking at level I World Language scores on reading comprehension quizzes and level II World Language scores on reading comprehension quizzes. The investigation will determine whether or not the reading instructional strategies have significantly improved the scores on the reading comprehension quizzes. This data will be provided by level I and II World Language classes taken in a high school setting. Other information discussing reading instructional strategies. Information regarding the implementation of Response to Instruction and Intervention will be discussed relating to the purpose of reading instructional strategies.

School Policy to be Informed by Study.

The study will inform public schools whether or not the reading instructional strategies influenced by Response to Instruction and Intervention are improving students’ scores on the comprehension quizzes. The data collected will demonstrate if these activities help the students learn and comprehend the material within the provided readings.
Conceptual Underpinning.

The World Language Department is always trying to find the best ways to help students understand the language better through different supplemental readings. This study helps show whether or not the activities students are provided have improved their reading comprehension. Research has shown that instructional activities introduced throughout a reading assignment improve students’ reading comprehension. Depending on the length and complexity of the assignment the activities can vary. Generally, the instructional strategy is introduced at the beginning or even before the reading assignment has begun. This strategy is a tool for the students to use during the reading. It is a tool to help them understand the reading before having to answer specific questions about the reading.

Statement of the Problem.

There is lack of knowledge about the whether or not the reading instructional strategies significantly improve students’ reading comprehension.

Purpose of the Study.

The purpose of the study is to determine whether or not the reading instructional strategies are beneficial to students’ comprehension of the reading materials tested over. In particular, is there a difference between of reading comprehension scores using the reading instructional strategies or not? Is there a significant difference among the reading comprehension scores comparing different levels of students? This study will help to show the difference that the reading instructional strategies make among students within World language classes.
Research Questions.

RQ#1: Is there a significant difference between the scores the students received on the readings using the reading instructional strategies compared with the scores students received not using the reading instructional strategies?

RQ#2: Did both levels of the World Language classes achieve a significant difference using the reading instructional strategies opposed to not using them?

Null Hypothesis.

There is no difference in student reading comprehension with or without the use of the reading instructional strategies based on the tier I RTI + I model.

Anticipated Benefits of the Study.

The anticipated benefits of this study will show whether or not students’ reading comprehension is improved by the reading instructional strategies. This study will show which levels of World Language benefit from the reading instructional. The findings of this study will show the World language classes if the materials they are using are working to help student comprehension.

Definition of Terms.

Reading Instructional Strategies: These are the materials used to help the students understand the provided reading.

Response to Intervention (RTI): It is a tiered assistance program to help students who are struggling to learn.

Response to Instruction and Intervention (RTI + I): This is the a more specific model of Response to Intervention followed by the district where the study was conducted. This model
includes an emphasis on instruction before a student entering tier 2 of the Response to Instruction and Intervention.

Specific Learning Disability (SLD): These are students who struggle in specific areas.

Summary

The study was conducted to see if there was a significant difference with and without using reading instructional strategies after reading selected readings. If the t-tests conclude that there is a significant difference, than the World Language department should use one of the reading instructional strategies after every reading conducted in class. The results will determine whether or not to continue modifying and adding these reading instructional strategies in the classroom. After this study, World Language Departments can see that by providing the students with different reading instructional strategies during the readings in class it scaffolds that material and improves their overall reading comprehension.
REVIEW OF LITERATURE

“Reading is one of the most essential components of learning,” (J. A. Cuevas et al. 2012, pg. 446). Beginning from the early days of elementary school and ending with high school or in many cases college and beyond there is not nearly enough reading in school. It is important to start the process of reading for understanding in elementary school. Often time’s students will find themselves reading just to read, and not comprehending the material within the reading. This issue needs to be addressed early in education, so that students understand how to read for understanding.

One remedy to the problem is requiring students to read more at school and at home. Although, it is important to make this reading meaningful and age appropriate, so that the students will be able to understand and learn from it. One factor that plays a big role in student comprehension is student interest (J. A. Cuevas et al., 2012).

Research was conducted with students being able to choose their reading. The students were given 20-30 minutes daily to read the book they chose for the assignment. Throughout the reading assignment, scaffolding techniques assisted their language development and understanding. Some of these scaffolding techniques were complex cognitive tasks, engagement of the learner, and facilitated high-order learning. The main influences upon the readers are their prior background knowledge of the subject, inferencing and predicting, and cognitive and metacognitive strategies (J. A. Cuevas et al., 2012). The results from the study proved that by allowing students to choose their reading and providing them with scaffolded materials along the way to be a success (J. A. Cuevas et al., 2012).

Another study has shown that there are several factors that contribute to reading comprehension. Reading comprehension is more complex than sitting down and reading a book,
especially for the students who have learning disabilities. To achieve reading comprehension the reader needs to be able to make connections with the material. The reader needs to be thinking about what they are reading while the reading is happening. This skill is a multi-tiered skill. For reading comprehension to occur, the reader must have some background knowledge of the topic. This helps the reader to make connections and relate to the information. Another skill that is necessary to achieve reading comprehension is the motivation to read the information and benefit from it. Research has shown that when the readers are taught different reading strategies for reading comprehension that they are more motivated to want to read and understand the material (Silvana M. R. Watson et al., 2012).

When beginning a reading assignment, teachers should forefront and pre-load some of the unfamiliar vocabulary, so that when the reader sees these unfamiliar words they do not shut down, but continue reading with comprehension. Teachers should select different strategies that are appropriate for the reading taking place. All readers benefit from different reading comprehension strategies. Some of these include: paraphrasing, inferencing, story mapping, and many more (Silvana M. R. Watson et al., 2012).

There are two different ways of looking at reading comprehension. There is the product of reading comprehension and the process of reading comprehension. It seems that all too often the product is stressed as the most important piece for reading comprehension when on the contrary the process is more important. Without the process, the product would not be valid or correct. The product of reading comprehension is the end result after reading the text. The product of reading comprehension comes after the student makes background connections and interprets the text in their own words. The process of reading comprehension is the journey it takes to get to the product of reading comprehension. Processing the text has multiple stages.
The comprehension that takes place during reading is partly automatic and partly strategic. The strategic process is learned and therefore must be taught as a routine. Comprehending a reading takes more than one portion of the brain to fully understand the information (van den Broek & Espin, 2012). Students need time and instruction to comprehend the material in front of them, by providing them with these different materials it gives them the time and assistance they need to understand the information.

All readers are different; therefore, their strategic processes are different. These processes are what readers do while reading. Some readers tend to look back after reading while others highlight what they feel is important. These processes are not always taught, but the struggling readers require some extra attention to these strategic processes (van den Broek & Espin, 2012).

There are several different ways to address the strategic processes. Research has shown that by facilitating students’ reading helps guide them to becoming expert readers. These methods require the teacher/facilitator to model or monitor the reading. Another common facilitation material is the graphic organizer. These organizers help the students go through the reading step by step picking up on any details or important concepts within the reading. A study conducted by Idol (1987) used story mapping as a facilitation tool. This story map required the students to record the answer to 9-10 story-grammar questions while reading the book. Idol created heterogeneous groups of students with and without learning disabilities. She hypothesized that the different types of learners would work well together. The results upheld her hypothesis and the students did much better even when reading a higher level, more different book. Other findings for the study were that the students had continued to use the text structures learned during the story mapping process after the project. In conclusion, the study showed how
story mapping helped all students enhance their reading comprehension skills (Baker et al., 2002).

Reading comprehension is widely viewed as one of the most essential parts of learning. Some students require more assistance not only with reading comprehension, but with other essential skills. This is why Response to Intervention was implemented into this district where the study was conducted. Response to Intervention is an education service system implemented into schools as a preventative and comprehensive problem solving approach. Response to Intervention also known as RTI is a tiered system that is used in Tiers to identify the different levels of need and assistance. This system is employed in the core subjects (NDE, 2013).

According to the Nebraska Department of Education, there are eight core principles of Response to Intervention:

1. We can effectively teach all children.
2. Intervene early.
4. Use a problem solving model to make decisions within a multi-tier model.
5. Use a scientific, research-based, validated intervention and instruction to the extent available.
6. Monitor student progress to inform instruction.
7. Use data to make decisions. A data-based decision regarding student response to intervention is central to RtI practices.
8. Use assessment for screening, diagnostics, and progress monitoring. (RTI Millard)

Most students fall under Tier 1, this is where little to no extra assistance is needed. The students who fall under Tier 2 require additional instruction and supplemental materials. The
third and final step is Tier 3, these students require intensive assistance which leads to individualized services. This system helps and guides students of all capabilities. Nebraska has adopted this system to help all students succeed.

The purpose of RTI is to supply students the best instruction, so they can comprehend and succeed primarily in the core curriculum. This requires all teachers to base their curriculum and teaching model around the state benchmarks for these students. Additionally, this system supplies students with additional support that is research-based instruction and interventions that match the students’ needs. This system identifies the students who are struggling early, so that they are able to provide support and assistance to enable these students to succeed.

Within the confines of this public schools’ policy, Response to Invention has another step. The official name is: Response to Instruction and Intervention. This model begins with the regular classroom teachers’ instruction who adds intervention materials and lessons into the everyday class. This model utilizes every method to increase student learning and comprehension before referring to special education. This model employs different tools that help guide students who struggle in certain subject areas within the regular education setting (Millard Public Schools, 2012).

The District Strategic Plan beginning in 2009:

“Strategy 4: We will develop and implement plans to utilize instructional best practices, formative and summative assessments, and student data designed to ensure high achievement for all students and all demographic subgroups.”

According to the this Model, there are 8 steps in their Action Plan:
1. Implement a district-wide response to intervention (RTI) model for K-12 interventions based on individual academic achievement level for any student in need.

2. Identify valid and reliable K-12 universal screening, diagnostic, progress and screening monitoring tools that have a strong positive correlation to district standards, indicators and assessment.

3. Provide professional development in the administration and scoring of assessments and the use of data for instructional planning and decision making.

4. Identify and evaluate appropriate scientific or research based core instruction and intervention.

5. Determine a menu of intervention materials available with district support and professional development for building-level implementation with fidelity.

6. Develop a process to monitor the fidelity and adherence of core instruction, supplemental programs and interventions.

7. Identify data analysis teams that use data decision making criteria for determining instructional/intervention decisions at each tier of support.

8. Evaluate the effectiveness of interventions in closing the achievement gap.

(Millard Public Schools, 2012)

This district has a District Approved Curriculum Model which includes curriculum, assessment, instructional delivery, high quality instructional materials, intervention, environment, and family. This research focused on the two components of instructional delivery and high quality instructional materials.
In order for Effective Instructional Practices to occur there needs to be instructional effective teachers, explicit and systematic lesson, and differentiated instruction. When lesson planning, effective teachers begin with the end in mind which typically is the unit or chapter test. This helps them to create each lesson and requires each lesson to have a purpose. When creating assessments effective teachers think about the different types of learners in the classroom, so that they can modify and alter the test to provide a test that incorporates all different types of learning. Effective teachers create timelines and targets for each lesson and unit, this helps with the overall picture of the lesson or unit. They create an environment that provides a variety of high-quality learning opportunities and materials.

Furthermore, explicit and systematic instruction is another key to helping all students thrive in the classroom. The instruction needs to be explicitly taught which requires a lot of modeling to take place. The teacher should gradually release the responsibility of learning onto the students. Learning is a cyclical process, which is best demonstrated and reviewed continually.

Lastly, differentiated instruction plays a role in effective teaching. Differentiated instruction mainly falls under the first tier of RTI, but it also plays a factor among the other tiers. The degrees of complexity should vary among students with different abilities. Through using the reading instructional strategies it allows all readers to end up with the same goal, while allowing them to do some of their own investigation. (Millard Public Schools, 2012)

There have been studies on the schools who have implemented the RTI system. This study conducted at the University of Texas illustrates the differences among the students who are considered at-risk of being referred into the special education program. It describes how the secondary students need support provided by remediation, supplemental support, content
recovery. This varies from the at-risk students at the elementary level who require intervening, prevention, and Specific Learning Disability identification (Pyle & Vaughn, 2012). The adolescent struggling readers need assistance in primarily these five skill areas: vocabulary, fluency, comprehension, word study, and motivation (Pyle & Vaughn, 2012). If these students are provided with instructional materials and activities that include: a daily review, targeted instruction, and multiple opportunities for learning, they will increase their reading comprehension (Pyle & Vaughn, 2012).
RESEARCH METHODS

Research Design

The study was comprised of reading instructional strategies influenced by the RTI + I model. The selected group took reading comprehension quizzes. Some of the reading comprehension quizzes were given after completing a reading instructional strategy. The independent variable was the reading instructional strategy while the dependent variable was the scores received on the reading comprehension quizzes. If an improvement is found among the reading comprehension quiz scores, then the reading instructional strategies should be used every time prior to giving a reading comprehension quiz. Furthermore, there should be more professional learning community time dedicated to these reading strategies to create more reading instructional strategies that best fit each of the reading that take place in class.

Study Group Description

All students that participated were in a level I or II Spanish classroom. Each class consisted of 14–20 students. This study was conducted during the Spring semester of 2013. According to the 2010-2011 school report card, there is only 0.27% of students who are English Language Learners. The poverty averages to be a total percentage of 7.37%. The enrollment of this school is roughly 2,221. (NDE, 2011)

Data Collection and Instrumentation

Data was compiled the secondary World language students’ scores after each reading comprehension quiz. The research regarding the RTI process and the different materials to help all students obtain better reading comprehension skills was obtained on the Nebraska Department of Education website. Research regarding the district’s Model was obtained on the district website. The other research articles were taken from the database Encore.
Statistical Analysis Methods

The research analyzed the survey data through a two different sets of t-Tests. The first t-Test compared level I World Language class scores with and without using the reading instructional strategies. This is followed at a line graph that helps visualize the difference. The second t-Test compared level II World Language class scores with and without using the reading instructional strategies. This also was followed by a line graph that helped visualize the differences.
FINDINGS

A t-Test was conducted to determine whether there was a difference in scores on the Level I World Language Reading Comprehension quizzes without implementing the RTI + I reading comprehension tools and with using the RTI + I reading comprehension tools. The following table and chart will help show the finding of the data conducted in a level I World Language class in the spring semester of 2013.

Figure 1

t-Test Analysis Results for the level 1 World Language Class’s Reading Comprehension Quiz Scores with and without the RTI + I Reading Comprehension Tools

<table>
<thead>
<tr>
<th>Source</th>
<th>Mean</th>
<th>Mean D</th>
<th>t-test</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without RTI + I</td>
<td>80.97</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With RTI + I</td>
<td>91.52</td>
<td>10.55</td>
<td>2.34</td>
<td>32</td>
<td>0.025</td>
</tr>
</tbody>
</table>

Note: Significant when p<=0.25

As shown in Figure 1, a significant difference (t-Test=2.34; p-value=0.025, mean D= 10.55). The mean scores of the level 1 reading comprehension scores without the RTI + I reading comprehension tools was 80.97%. The mean scores of the level 1 reading comprehension scores with the RTI + I reading comprehension tools was 91.52%. The null hypothesis was rejected because the reading comprehension scores were significantly higher within the level I World Language Classroom with the RTI + I reading comprehension tools than without them. These findings suggest that the RTI + I reading comprehension tools should be adopted for every reading in a World Language classroom.
Illustrated by the chart above, there were more high scores and consistent scores among the scores on the Reading Comprehension quizzes that the students were able to use the RTI + I Reading Comprehension Tools. The mean of the scores on the Reading Comprehension quizzes with the use of the RTI + I Reading Comprehension Tools is 91.51%. The mean of the scores on the Reading Comprehension quizzes without the use of the RTI + I Reading Comprehension Tools is 85%. The median of the scores on the Reading Comprehension quizzes with the use of the RTI + I Reading Comprehension Tools was 100%. The median of the scores taken from the Reading Comprehension quizzes without the use of the RTI + I Reading Comprehension Tool was 86%. The standard deviation between the Reading Comprehension scores with the RTI + I Reading Comprehension Tools is 14.17. The standard deviation between the Reading Comprehension scores without the RTI + I Reading Comprehension Tools is 18.15. There is a smaller standard deviation between the scores after using the RTI + I Reading Comprehension Tools.
Tools because there is more comprehension and understanding taking place with the supplemental tools.

A t-Test was conducted to determine whether there was a difference in scores on the Level II World Language Reading Comprehension quizzes without implementing the RTI + I reading comprehension tools and with using the RTI + I reading comprehension tools. The following table and chart will help show the finding of the data conducted in a level II World Language class in the spring semester of 2013.

**Figure 3**

*t-Test Analysis Results for the level II World Language Class’s Reading Comprehension Quiz*

<table>
<thead>
<tr>
<th>Source</th>
<th>Mean</th>
<th>Mean D</th>
<th>t-test</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without RTI + I</td>
<td>83.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With RTI + I</td>
<td>95.65</td>
<td>12.15</td>
<td>3.39</td>
<td>19</td>
<td>0.003</td>
</tr>
</tbody>
</table>

Note: Significant when p<=0.25

As shown in Figure 2, a significant difference (t-Test=3.39; p-value=0.003, mean D=12.15). The mean scores of the level 2 reading comprehension scores without the RTI + I reading comprehension tools was 83.5%. The mean scores of the level 2 reading comprehension scores with the RTI + I reading comprehension tools was 95.65%. The null hypothesis was rejected because the reading comprehension scores were significantly higher within the level II World Language classes with the RTI + I reading comprehension tools than without them. These findings suggest that the RTI + I reading comprehension tools should be adopted for every reading in a World Language classroom.
According to the line graph above, there were more consistently scores among the scores on the Reading Comprehension quizzes that the students were able to use the RTI + I Reading Comprehension Tools. The mean of the scores on the Reading Comprehension quizzes with the use of the RTI + I Reading Comprehension Tools was 95.65%. The mean of the scores on the Reading Comprehension quizzes without the use of the RTI + I Reading Comprehension Tools is 83.5%. The median of the scores on the Reading Comprehension quizzes with the use of the RTI + I Reading Comprehension Tools was 100%. The median of the scores taken from the Reading Comprehension quizzes without the use of the RTI + I Reading Comprehension Tool was 85%. The standard deviation between the Reading Comprehension scores with the RTI + I Reading Comprehension Tools is 8.29. The standard deviation between the Reading Comprehension scores without the RTI + I Reading Comprehension Tools is 11.37. There is a smaller standard deviation between the scores after using the RTI + I Reading Comprehension Tools.
Tools because there is more comprehension and understanding taking place with the supplemental tools.
CONCLUSION AND RECOMMENDATIONS

The outcomes reported from this study show that the reading instructional strategies are beneficial to students’ reading comprehension. The findings show there is a significant difference among the reading comprehension quiz scores with and without the reading instructional strategies. The t-Test results in a level I World Language class indicate that the p-value was 0.025 which proved much lower than the alpha level of 0.25; therefore, the null hypothesis tested was rejected by the findings. The t-Test results in a level II World Language class indicate that the p-value was 0.003 which also proved lower than the alpha level of 0.25. These outcomes also rejected the null hypothesis.

The conceptual underpinning demonstrates how important this study is for the World Language Department. After the findings, the World Language Department can continue what they have begun and add onto and create more reading instructional strategies for the students. After the findings, the improvement of student reading comprehension shows how important these strategies actually are when reading in a different language. Some changes or modifications that can take place in the classroom are the use of different reading comprehension strategies as well as adding to the previous one used in the classroom. Another modification can be asking the students to come up with their own reading comprehension strategy. While these strategies work, what might help facilitate more reading comprehension could be the student created reading instructional strategies.

After finishing this study, some other studies to follow up could possibly be comparing the same type of data, but with upper level World Language courses. While basic reading comprehension is important, and to determine that the upper level students are benefiting for the reading instructional strategies, similar research can be conducted. This will show if this reading
instructional strategies continue to improve reading comprehension or it could show if the reading comprehension has become stagnant or even declined.

There have been several questions about the significance of the reading instructional strategies taught within the district during professional development. There is a big focus on RTI + I and the significance of the different activities to help support student learning and comprehension. These findings prove the significance of these different instructional strategies.

Other questions arise such as: how to make this an every unit activity? This would require more planning around the different readings done within the class period. Do these reading instructional strategies benefit all of the other subject level how they benefit the World Language classes?

Professional development on this topic has been occurring over the past several years. This district believes in these strategies and that is why they are part of the district professional development. Each World Language class can now see the difference that these activities can actually make to the students’ reading comprehension; therefore, these activities should be utilized when conducting a reading with a World Language classroom. Even the smallest passage may become clear with these reading instructional strategies in place.
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