THE RELATIONSHIP OF READING APRENTICESHIP AND FRESHMAN
EXPLORE READING SCORES


By


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ABSTRACT

The purpose of this study was to determine the effect of Reading Apprenticeship on ninth grade reading comprehension scores as determined by the Explore test.  All students were required to take the Explore test in the spring of their eighth and ninth grade years.  Students participating in this study were divided into experimental and comparison groups.  Students in the experimental group were exposed to Reading Apprenticeship during their ninth grade year.  The control group did not have exposure to Reading Apprenticeship.  The data did show growth for the experimental group.  Therefore, it appears that Reading Apprenticeship may have an impact on reading comprehension scores

TABLE OF CONTENTS

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**CHAPTER 1**

**INTRODUCTION**

Creating opportunities to learn the skills necessary to succeed in life post high school is a main focus at a northwest high school.  One main area of concern is currently the student's ability to read and successfully comprehend texts at grade level.  In order to have the skills necessary to succeed in post high school settings students will need to improve their college readiness reading scores.

Mark Bauerlein (2011), author *of to Dumb For Complex Texts,* reports on a study conducted by Strong American Schools in 2008.  The study suggests a staggering number of students entering their freshman year of college did not have the skills necessary to pass college level classes.  Twenty-nine percent of freshmen enrolled in four-year public universities had to first take remedial non-credit classes to gain the skills required at the college level.  This number jumps to forty-three percent at two-year public colleges.

These numbers reflect a reading deficit at the high school level.  Teachers must turn this trend around.  In order to accomplish this task students will need to be introduced to more rigor and challenges in the classroom.  This will include more opportunities to read increasingly challenging texts and becoming aware of their

own reading process.  Jane G. Coggshall (2012) a Senior Research and Policy Analyst at the National Comprehension Center for Teacher Quality, suggests that teachers must allow students more opportunities in reading complex nonfiction texts and require students to use evidence from rich disciplinary texts to support their understanding.

   The introduction of new technology does not offer an easy fix.  Bauerlein (2011) argues that the introduction of technology does not necessarily help students in reading readiness because it does nothing to address the need of comprehension.  The teacher must play a key role in helping students increase their reading proficiency.  Introducing new forms of text and teaching students proper strategies to interpret and make connections to the text will be key in preparing students for success.

   To tackle the deficit in reading comprehension the ninth grade staff, at a northwestern high school, with the encouragement of administration, faculty began an intensive reading program known as Reading Apprenticeship (RA).   Reading Apprenticeship provides proven strategies that encourage students to increase their reading fluency, comprehension, and metacognitive skills.  It is the goal of the staff that the implementation of RA will directly address Common Core State Standards and increase student reading readiness scores.  For the purpose of this paper the researcher will be specifically looking at data derived from the pre ACT test known as the Explore, which is given to ninth grade students with the hope that reading scores will improve when compared to classes that have not been involved in Reading Apprenticeship.

**CHAPTER 2**

**REVIEW OF THE LITERATURE**

Creating an environment where students can become better readers requires thought and carefully implemented plan.  Reading is a complex process of syntax, fluency, and comprehension.  For many this can be a very difficult task, often one that turns many individuals away from reading.  Manzo (2006) suggests that students actually lose momentum in reading during their High School years.  However, now maybe more than ever reading is increasingly important.  The goal for educators is to meet the Common Core State Standards that are established in forty-five of the fifty states. The ten Core Literacy Standards for ninth grade social studies students are as follows:

1. Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information.

2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary of how key events or ideas develop over the course of the text.

3. Analyze in detail a series of events described in a text; determine whether earlier events caused later ones or simply preceded them.

4. Determine the meaning of words and phrases as they are used in a text, including vocabulary describing political, social, or economic aspects of history/social science.

5. Analyze how a text uses structure to emphasize key points or advance an explanation or analysis.

6. Compare the point of view of two or more authors for how they treat the same or similar topics, including which details they include and emphasize in their respective accounts.

7. Integrate quantitative or technical analysis (e.g., charts, research data) with qualitative analysis in print or digital text.

8. Assess the extent to which the reasoning and evidence in a text support the author's claim.

9. Compare and contrast treatments of the same topic in several primary and secondary sources.

10. By the end of grade 10, read and comprehend history/social studies texts in the grades 9-10 text complexity band independently and proficiently.

As educators try to meet the ever increasing demands of the Core Literacy Standards it becomes increasingly important to implement the correct strategies and reading programs.  Gewertz (2012) suggests schools of thought on reading instruction have been set in opposition in an attempt to find the perfect program. This would even include a program that allows students to access the text and

provides equal opportunity for all students.  How can we reflect upon previous teaching strategies and move forward with new strategies and ideas to facilitate reading comprehension among learners?

<div align="center">Read 180</div>

There are currently numerous reading programs that focus on improving reading.  Read 180, a program developed by Scholastic offers reading instruction for three levels: elementary, middle, and high school.  It takes a specific approach geared toward students with learning disabilities who are lagging behind in reading.  By using whole group, small group, and individual reading, Read 180 aims at making reading gains with students.  The Scholastic website summarizes Read 180 objectives as follows:

> An intensive reading intervention program that helps educators confront the problems of adolescent literacy and special needs reading on multiple fronts, using technology, print, and professional development.  Read 180 is proven to meet the needs of struggling readers whose reading achievement is below proficient level.  The program directly addresses individual needs through differentiated instruction, adaptive and instructional software, high-interest literature, and direct instruction in reading, writing, and vocabulary skills.  Reading Apprenticeship offers itself nicely to the above Core Content Standards. (http://read180.scholastic.com/reading-intervention-program/about 2013)

Read 180 has a focus on students whom have a reading deficit and not those students who score proficient in reading and is therefore taught in an

exclusive setting away from students that are proficient in reading. While in class students rotate among three stations. The first station is interactive software with which students work on comprehension skills. The second station involves reading books based on the student's lexile score, a numeric representation of an individual's reading ability. The lexile score is determined by a software program at the beginning of the year to identify text that will be appropriate for each individual student. Students take the test several times a year to verify that they are reading correct text and to measure any gains throughout the year. The third station is small group work with direct instruction from the teacher.

## Reading Apprenticeship

The foundation of Reading Apprenticeship is based on a four dimension concept which incorporates social dimension, personal dimension, cognitive dimension, and knowledge building dimension all based around metacognitive conversation. Each component is equally important to the success of students and all four must be included within the classroom for it to be a Reading Apprenticeship environment. There is also a focus on reading throughout a student's educational career. Schoenbach, Greenleaf, and Murphy (2012) suggest that most people view reading as a skill that must be learned in the first few years of school with responsibility placed on primary grade teachers. The need to teach reading through increasingly challenging texts is a must as students progress through school. To help students understand that reading is a complex problem-solving process the program has developed many routines that allow students to think about their own thinking and reading process.

Many of the routines found within RA directly address one or more of the aforementioned Core Literacy Standards.  The authors of Reading for Understanding: *How Reading Apprenticeship Improves Disciplinary Learning in Secondary and College Classrooms*, offer insight to the goal of RA and their reasoning for writing the book.  Schoenbach, Greenleaf, Cziko, and Hurwitz (1999) wanted to write a book to explain how youth have come to understand reading in new ways.  With a focus on middle and high school students they also wanted to help students become engaged, fluent, and competent readers of both academic and recreational texts.

Metacognition

Metacognitive theory is often referred to as thinking about ones thinking which is derived from the late 1970's by John H. Flavell a developmental psychologist.   While reading many students mistake fluency for comprehension. Many students read text and feel if they were able to read the words then they were successful.  However, there is a disconnect when it comes to true understanding.

The teacher must be viewed as the master reader in the room while the students take on the role of apprentices (Greenleaf, Schoenbach, Cziko, & Mueller 2001).  The teacher must model reading and reading strategies by previewing and introducing students to new techniques within the content area they teach.  This creates an environment of collaboration and exploration as students read subject area texts.

Emphasizing metacognition and introducing strategies that students can use forces them to think about what they are reading, ask questions, and relate to

sections that connect with their own experiences.  This allows students to make

thinking visible and recognize their strengths and weaknesses.  In a Reading

Apprenticeship classroom metacognitive conversation is integral to student

success.  The "conversation is both internal, as individual readers observe their own

minds in action, and external, when readers discuss what they are noticing, what

they are stumped by, and how they are solving reading problems." (Schoenbach,

et.al. 2012  pg. 89) By making the thinking process visible it allows others to see the

strategies their peers use while reading.  Metacognition is crucial and at the center

of Reading Apprenticeship framework and can be achieved by modeling and

teaching students how to make their thinking visible.

Figure 1: Reading Apprenticeship Framework



(Schoenbach, et.al. 2012)

Social Dimension

The social dimension of Reading Apprenticeship classroom includes community building in the classroom, including recognizing the resources brought by each member and developing a safe environment for students to be open about their reading difficulties (Schoenbach, et.al. 2012). The social dimension must be obtained from the beginning of the year and onward.  One way to set a social classroom is by starting the year off with personal icebreakers.  This allows the students to get to know each other and feel comfortable sharing.  A report conducted by Carnegie Corporation of New York's Council on Advancing Adolescent Literacy emphasizes that the social dimension of a classroom focuses on creating and maintaining a supportive learning environment where students may feel comfortable making mistakes and asking questions (Levin, Catlin, & Elson 2010).  Reading Apprenticeship will not be successful if students are unwilling to share in their success and struggles.  Students must feel comfortable sharing at all times.  It must be a collaborative effort in which learning is visible to all, including the teacher.  The teacher must also model their difficulties and help students create strategies to overcome these shortcomings.  This visible conversation about reading in a Reading Apprenticeship classroom is known as "text talk".  This is more than simple highlighting of text.  It requires students to interact with the text by asking questions, identifying difficult vocabulary, predicting, visualizing, and interpreting

text.  This interaction is then shared with others to show how other students interact and interpret similar text.

Personal Dimension

The personal dimension in Reading Apprenticeship is defined as developing students' identity and self-awareness as a reader, as well as their purpose for reading and goals for reading improvement (Schoenbach, et.al. 2012).  To help students gain a reader identity or an understanding of their reading ability,  Reading Apprenticeship has teachers conduct a personal reading history with each student. Jordan, Jensen, & Greenleaf (2001) connect the personal dimension with a focus on developing and extending students' individual identities and self-awareness as readers.  This exploration of reader identity happens in many ways.  Students are allowed to explore their reading interests.  They are allowed to read text that they personally find interesting.  Many reading Apprenticeship classrooms incorporate a silent sustained reading program.  Students can choose their own book regardless of content.

Within the personal dimension purpose for reading is established.  Often students are asked to read without understanding the purpose of their reading. Within a Reading Apprenticeship classroom students are given a specific purpose. This can include questioning, which asks students to focus on questions that arise while reading or questions about vocabulary. It also includes visualizing, trying to create an image of what they are reading.  Predicting, which asks the students to predict what they feel will happen next or what has already happened to get the text.  Making connections, which asks the students to connect the text with topics

they already know and summarizing, which asks the student to identify the main idea and identify why the text was written and the message the text is trying to get across. (Schoenbach, et.al. 2012) The importance of the personal dimension, suggests that creating a personal connection allows students to explore new aspects of their identities.  Schoenbach, Braunger, Greenleaf, and Litman (2003) With these new identities teachers help students work with the skills they have in and out of school to become more strategic and purposeful about their reading.  It is this collaboration of teachers and students that allows students to recognize their own reading process to become persistent in tackling new more challenging and unfamiliar texts. (Schoenbach, et.al. 2012)

Without a personal connection to reading students lose interest and motivation to read.  Reading is not an easy process that requires specific skills, even experienced readers must continue to hone skills of comprehension.  The above authors state that when "students feel they are not good readers, frustration, embarrassment, or fear of failure can prevent them from engaging in reading" (Schoenbach, et.al. 2012 pg.5).  By creating a personal connection it gives students a better opportunity to continue working on their reading processes and become more established readers.

Cognitive Dimension

The cognitive dimension of Reading Apprenticeship is frequently the entire focus of reading comprehension instruction.  Work within the cognitive dimension helps develop the reader's mental strategies as well as problem solving strategies such as creating summaries, questioning, and making sense of text. (Greenleaf, et.

al. 2001)   Coupling the above with "personal and social activities that engage students and teachers in thinking about and sharing their reading process , the different ways in which readers approach reading begin to emerge" (Greenleaf, et. al. 2001 pg. 12).

Researchers indicate that there are many different cognitive strategies that can be used by experienced readers to navigate through challenging and difficult text and  "that these cognitive strategies can be taught to students who do not use them spontaneously on their own" (Beck & McKeown, 2006 pg. 30).  Once students see these strategies and learn how to use the strategies they will begin to gain confidence in their own reading process.   In a Reading Apprenticeship classroom this must be done with modeling and a collaborative setting.  Reading Apprenticeship offers several options in approaching text.  These include identifying text types and sources, skimming, read through confusion, read ahead to clear up confusion, and reviewing the big picture to check for comprehension (Schoenbach, et.al. 2012).

Monitoring comprehension is also a key component of the cognitive dimension.  Baker (2002) states "weaker readers are frequently unaware of how well they are understanding a text, but numerous intervention studies demonstrate that this critical awareness, and then control, of comprehension can be taught" (pg.85).  It is crucial to make readers aware of what they do comprehend.  In order to accomplish this task a Reading Apprenticeship classroom will check to make sure comprehension is occurring, test understanding by summarizing or paraphrasing the text by self-questioning, and decide through formative assessmnet

whether to clarify any misconceptions at this time. (Schoenbach, et.al. 2012)  It is necessary to check comprehension often to make sure students are understanding the material.

Research has shown that "to help developing readers make sense of what they read, it is important to help them maintain their mental engagement with texts while reading" (Baumann, & Duffy, 1997, pg.12).  Often readers become disengaged while reading and thus fail to comprehend the text at hand.  By using strategies such as "Talking to the Text", questioning the text and its authors, and visualizing the text, it forces readers to be active in the reading process and engaged therefore building comprehension.

Lastly, students must learn how to identify the purpose when reading. Different text require different purposes.  "Proficient readers read texts differently depending on their purpose for reading" (Schoenbach, et.al. 2012, pg. 210).  In a Reading Apprenticeship classroom students will learn through modeling, inquiry, and sharing different purposes that can be used.  Engagement also contributes to students being able to assess strategies on their own reading.

Knowledge Building Dimension

The last of the four dimensions of Reading Apprenticeship is knowledge building.  The knowledge building dimension "involves identifying and expanding the knowledge students bring to a text" (Schoenbach, et.al., 2003, pg. 136).   Studies show that readers "interact with texts, bringing their own stories of knowledge into play as they attempt to shape possible text meaning" (Anderson, 1984, pg. 251). As students read they recall their own background knowledge.  In a Reading

Apprenticeship classroom this is known as schema, what a person knows or can connect with at a personal level when referring to a specific topic.

Through schema "knowledge and information are activated as individuals read and add to their existing schemata as they encounter new information" (Anderson, 1984, pg. 251). Schemata varies for each individual and often times can be triggered with one word. These personal experiences will impact and draw interest to reading. The impact of schema on reading cannot be overstated. Studies have revealed "that students with prior knowledge of the topics they will encounter in a text comprehend more of the text and also recall more information from it than students who lack this knowledge" (Bower, 1976 pg. 529). In order for students to benefit from other schema several strategies can be used. Before reading students can brainstorm and share knowledge about the topic, take a stance on the topic, or imagine themselves in the same situation (Schoenbach, et.al. 2012).

Beyond schema students can build a knowledge of texts, learning how certain structure and organization can lead to identification of key points. Research also shows "when students are taught to identify text structures through the use of such supports as graphic organizers or text previewing, their comprehension increases" (Akhondi, Malayeri, & Samad, 2011, pg. 370). Providing these opportunities is crucial for students to progress on to more challenging texts and learning how to identify patterns in structure across genres (Schoenbach, et.al. 2012).

Building knowledge of language is also an integral part of the knowledge building dimension. It is crucial to differentiate the difference of academic and social language. It can be challenging for some to identify the audience and pair it with the correct terminology. Direct instruction to help students recognize different situations is a must. "By engaging students in inquiry into word and sentence construction and meaning, teachers can help develop the metalinguistic awareness and skill that students need to bring to bear in becoming academic code-breakers" (Bear, Invernizzi, Templeton, & Johnston, 2000, pg. 278). To help students engage in the above inquiry a Reading Apprenticeship classroom will help students identify the particular language that is used in particular texts, help use contextual clues to define words, and identify roots, prefixes, and suffixes of often encountered words (Schoenbach, et.al. 2012). As students progress in a Reading Apprenticeship classroom, their ability to recognize contextual clues will increase, making them more effective and efficient readers.

**CHAPTER 3**

**METHODOLOGY**

Research Design

This study was conducted to determine the effect of Reading Apprenticeship on ninth grade students' college readiness reading score as determined by the Explore test.  The research design that was used was an equivalent pre- and posttest comparison group design.

Subjects

Three freshman grade level classes at a northwest high school were selected for this case study.  This high school is made up of 1642 students in grades ninth through twelfth.  Twenty-four percent of this student body receive free lunches while seven percent receive reduced lunches. The three grades that will be looked at are the freshman class of 2012/2013 with a class size of 421.  The freshman class from 2011/2012 with 415 students and the freshman class from 2010/2011 with a class size of 413.

Because all information and data used is in public records this study did not require an application with the Human Science and Research Council.  No students were identified throughout the research process.

Rationale

The rationale for the implementation of this study is to determine the impact the newly introduced Reading Apprenticeship program on ninth grade reading scores on the Explore test. The scores will then be measured against their eighth grade Explore test score to measure growth. This data will then be compared to two other classes to see if the Reading Apprenticeship strategies made an impact on student growth.

Measures/Instrumentation

To measure student reading growth in this study the Explore test will be used. The Explore test is a pre ACT test and determines student college readiness. Specifically this study looked at the reading section of the Explore test. The reading portion of the Explore test consists of thirty questions which must be answered in the thirty minutes allotted for the test.

> "The EXPLORE Reading Test measures your ability to understand written material from different school subjects. The skills measured include referring to details in the passage, drawing conclusions, and making comparisons and generalizations. The test does not cover information outside the passages, vocabulary taken out of context, or formal logic"  "The Reading Test", 2013

The test measures materials that are typically used in school. These include prose fiction, humanities, and social sciences.  This information will be used to answer the research question "Will the implementation of Reading Apprenticeship improve student reading scores as determined by the Explore test?

**CHAPTER 4**

**RESULTS/DATA ANALYSIS**

Research Summary

This case study was conducted to determine the effects of Reading Apprenticeship on ninth grade students' college readiness reading score as determined by the Explore test. Three graduating classes at a public, rural, northwest high school were selected for evaluation. The subjects studied were 413 students from the graduating class of 2014, 415 students from the graduating class of 2015, and 421 students from the graduating class of 2016. The graduating classes of 2014 and 2015 are being used as the comparison group as they were not exposed to Reading Apprenticeship strategies. The graduating class of 2016 is being used as the experimental group as they were exposed to Reading Apprenticeship strategies during the 2012/2013 school year, their ninth grade year.

The experimental group began receiving Reading Apprenticeship strategies at the beginning of the 2012/2013 school year. All science, language arts, and social studies ninth grade teachers received training for Reading Apprenticeship in August of 2012. The Reading Apprenticeship strategies were used in the above

three core classes throughout the year.  This created the experimental and comparison groups for analysis.

This study was conducted using the Explore test data that was collected in March 2013 for the class of 2016, March of 2012 for the class of 2015, and March of 2011 for the class of 2014.  The research question was "Will the implementation of Reading Apprenticeship improve student reading scores as determined by the Explore test?"  The Explore test is a thirty question test in which students have thirty minutes to complete.  The test is then scored on a scale from zero to twenty-five.  When normed, 16 is the benchmark for reading on the Explore test for ninth grade students.

Explore Results For Class of 2014

Four hundred and fourteen students from the graduating class of 2014 took the ninth grade Explore test in March of 2011.  The average reading score was 16.8.  The average score during March of 2010 which was their eighth grade year, was 16.52.  This was an increase of .28 from the average reading score when the class of 2014 took the Explore test in March 2010.  The percentage of students at benchmark rose from 47% in 2010 to 59% in 2011.

Explore Results For Class of 2015

Four hundred and sixteen students from the class of 2015 participated in the ninth grade Explore test in March of 2012.  The average reading score was 16.4.  This was an increase of 0.9 from the average reading score when the class of 2015 took the Explore test in the spring of 2011.  Conversely however, the percentage of

students at benchmark dropped from 53% in the spring of 2011, to 50% in the spring of 2012.

Explore Results For Class of 2016

Four hundred twenty students from the class of 2016 participated in the Explore test in March of 2013.  The average reading score was 17.1 which represented a growth of 1.71 from the Explore test taken in the spring of 2012 when the average score was 15.39 as seen in Table .  The percentage of students at Benchmark also increased from 54% in the spring of 2012, to 60% in the spring of 2013.  When comparing the class of 2016 (experimental group) to the classes of 2014 and 2015 (control group) it becomes clear that there was an increase in the average reading score for the class of 2016.

Table 1: Experimental and Comparison Group Scores

|  | Class of 2014 | Class of 2015 | Class of 2016 |
|---|---|---|---|
| 8th grade Explore Reading Average/ % at Benchmark | 16.52/47% | 15.5/ 53% | 15.39/ 54% |
| 9th grade Explore Reading Average/ % at Benchmark | 16.8/59% | 16.4/ 50% | 17.1/ 60% |
| Average Growth from 8th grade to 9th grade | .28 | .9 | 1.71 |
| Standard Deviation for 9th grade Explore Reading Scores | 3.92 | 4.19 | 4.16 |

The class of 2016 showed the largest average reading score of the three graduating classes with an average of 17.1.  This is an increase of .7 over the class of 2015 and an increase of .3 when compared to the class of 2014.  The increase from eighth grade to ninth grade is also notable.  The class of 2016 started with a lower class average when compared to the class of 2015 and 2014, during their eighth grade year 15.39.  Students at benchmark also increased for the class of 2016 going from 54% to 60%, which represents 254 students at benchmark out of 420.   The class of 2015 dropped from 53% to 50%, which represents 208 students at benchmark.  The class of 2016 had 46 more students at benchmark when compared to the class of 2015.  This represents more than 10% of the graduating class.  The class of 2014 did not show much growth in average score from their eighth grade year to their ninth grade year.  However, they did there was growth in students at benchmark.  In 2010, 194 students were at benchmark.  That number rose to 246 students in the spring of 2011.  The later number is comparable, but still slightly less than the number of students who were at benchmark for the class of 2016.  This data is summarized in Table1.  Figure 1 shows average scores by class eighth to ninth grade.

The standard deviation for the classes of 2016 and 2015 are very similar with a 4.16 and 4.19 respectively.  The class of 2014 had a slightly smaller deviation but not enough to make a drastic difference in results at 3.92. This suggests that student's scores were consistent.  It also reiterates that the class of 2016 as a whole scored better than the class of 2014 and 2015.

Figure 2: Average Explore Test Reading Score Eighth and Ninth Grade
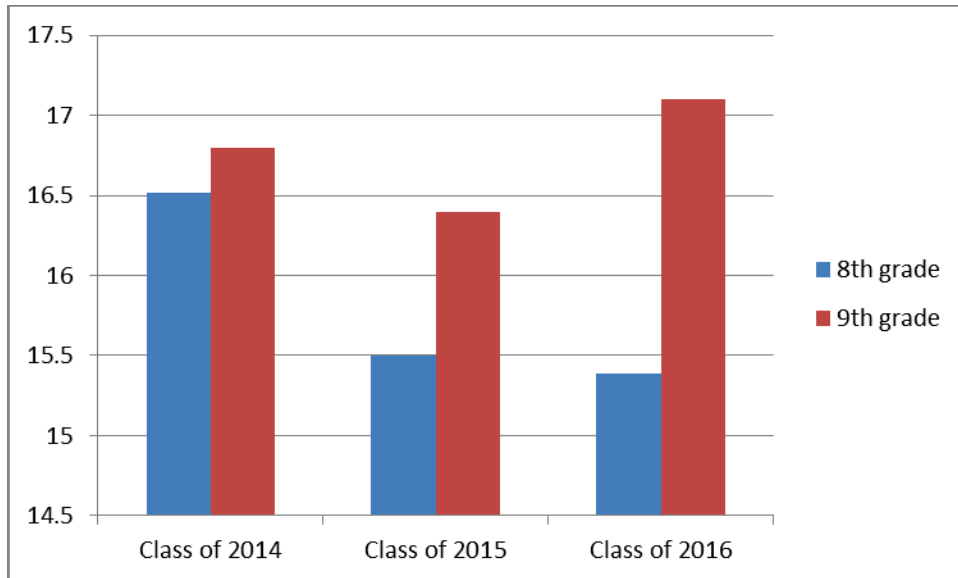
Results Summary

These results suggest that Reading Apprenticeship may have been partially responsible for this growth. Reading Apprenticeship might have an impact on student reading scores as determined by the Explore test.  The 2016 graduating class did have the highest average score and the most students at benchmark.  The class of 2016 also showed the largest growth from eighth grade to ninth grade.

**CHAPTER 5**

**DISCUSSION**

The purpose of this research was to determine if Reading Apprenticeship would impact student reading scores as determined by the Explore test.  The question this study addressed was "Will the implementation of Reading Apprenticeship improve student reading scores as determined by the Explore test? Results Analysis

The Explore test reading scores did indicate a growth for the class of 2016 when compared to the control groups, the class 2015 and 2014.  This was determined by comparing class averages and average growth from eighth grade Explore test results and ninth grade Explore test results.  What may be most telling is the fact that the class of 2016 started with the lowest average reading score after their eighth grade year and finished with highest reading score average after their ninth grade year. The benchmark score also rose from 54% to 60%.  However, the benchmark raises from 15 at the eighth grade level to 16 at the ninth grade level.  It cannot be determined if Reading Apprenticeship was the sole reason for the gains but it appears that it may have  impacted  student Reading scores as determined by the Explore Test.

This study was designed to measure the impact of Reading Apprenticeship on the Explore Test on a select group of students in a rural high school. As a result of implementing Reading Apprenticeship students became more engaged with texts. Although this was not measured in the study students interacted with texts and were exposed to an increasing amount of reading over the year. Reading Apprenticeship also allowed teachers to track student growth and monitor student needs.

Overall, implications of this research suggest that using Reading Apprenticeship strategies in the classroom did result in increased reading scores amongst ninth grade students on the Explore Test. Reading Apprenticeship also had a positive impact on student interaction and involvement with text in the classroom. Further research is needed to determine the exact impact of Reading Apprenticeship's impact on reading scores.

Limitations

One limitation was the sample size studied. Although this high school is a large school it only provided research for one school and one grade level. This lead to results that cannot be conclusive and is less valid because of the limited number of students and schools studied.

A second limitation was the first year implementation of Reading Apprenticeship. Ninth grade staff received the first five days of training in August of 2012. The strategies were then implemented in the 2012/2013 school year. Ninth grade staff then received two more days of training in January of 2013 and the last three days of training in June of 2013. This meant that staff were only introduced to

the strategies as they were being implemented.  Creating a Reading Apprenticeship classroom takes time to perfect.  Therefore students did not receive ideal Reading Apprenticeship classroom routines at all times.  This coupled with the trimester schedule meant that students did not receive the same amount of exposure to Reading Apprenticeship strategies based on individual student schedules.

A third limitation to the study is the decision of ACT to replace the Explore Test with the Inspire in the spring of 2015.  This will take away the baseline data that was used for the study.  It will take several years to gather the baseline data under the new Inspire test.  Although they will compare the same college readiness standards it is yet to be determined if scores will be able to be compared from the Inspire to the Explore Test.

Conclusion

It appears from the data gathered that Reading Apprenticeship, when implemented correctly does have an impact on reading comprehension scores when compared to students who did not receive Reading Apprenticeship strategies. The results of this study however are not conclusive.  It is unclear the amount to which Reading Apprenticeship can be credited for the gains seen by ninth grade students from the class of 2016.  Further research is necessary to determine the impact of Reading Apprenticeship on student reading comprehension scores

Recommendations for further research

This study suggests that teachers using reading Apprenticeship strategies will see an increase in student reading scores.  This study also suggests several areas for future research.  Research should continue at this high school for the

class of 2017, the last class that will take the Explore Test. Their results should then be compared to the control group used in this study. This will offer validation if the class of 2017 results are similar to the class of 2016 findings. Results from this study should also be validated with other classes from schools who are implementing Reading Apprenticeship.

This study also raises other questions that could be researched in the future. The most interesting of these questions is whether or not Reading Apprenticeship can be credited for the growth seen on the Explore reading test or if any program implemented that focused on reading would show similar growth. Another area that could be explored is student engagement and interaction with texts.

This research provides some insight into the effectiveness of the Reading Apprenticeship program. Further research is required before the impact of the Reading Apprenticeship program on reading scores can be determined.

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