PRIMARY ELEMENTARY INTERVENTIONS FOR STUDENTS

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Abstract

The Capstone Project completed is designed to aide the Bellefonte Area School District in students attaining grade level reading expectations by the third grade. The researcher studied the reading data for the district's current second grade students. The data that was analyzed was Fountas and Pinnell BAS data and AimswebPlus assessment data. The primary grade level teachers of the district were also surveyed to in order to determine the different reading intervention strategies being used in classrooms, data that teachers are analyzing, and their impressions of Fountas and Pinnell Classroom. The BAS and AimswebPlus data were cross referenced with the teacher survey data to identify effective reading instructional strategies that are being utilized in classrooms and share these strategies with the other teachers across the district. The researcher found that teachers are using a wide array of data points and a variety of instructional strategies in their classrooms. The research that was completed has shown a need for a multi-tiered system of support (MTSS) for its students. The Capstone Project will support the efforts to establish a MTSS program in all elementary schools for the district.

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Chapter I

Introduction

The Bellefonte Area School District is very similar to many other districts across the state. The district is located in the rural center of the state. Over the past several years, the district has experienced a decline in English Language Arts (ELA) scores in the state mandated assessments in grades three, four, and five. Many students are also showing little to no growth in ELA scores on the district assessments in all grade levels. The district has been working to identify possible reasons for these trends. Several theories for these struggles could be linked to possible issues with inconsistencies in student data use, implementation of ELA curriculum, and how teachers implement instructional strategies and interventions.

When becoming a teacher over twenty years ago, I had a strong desire to teach students to not only learn science, but to also be lifelong learners. I quickly realized I was going to have to teach students how to read and comprehend text in order to increase their learning opportunities. This was found to be true whether teaching sixth grade science or high school chemistry. Many students struggled to extract important information from text they were reading. For these reasons I took a special interest in reading in the content area.

When I moved into administration, it became apparent that students continued to struggle with reading in content areas. After four years as a high school vice principal, I moved to be a vice principal at the elementary level. Over the next four years, I was able to study the process of how elementary students learn how to read. These observations showed that reading fluency and reading comprehension are crucial components of learning to read. Students need to be able to recognize the words that are used frequently in text and need to be able read them fluently. Once students are able to utilize skills to read text, they are then able to make the transition to

comprehending the text. The teaching of reading fluency and reading comprehension skills is essential in elementary classrooms.

I have had the opportunity to observe teachers provide instruction on reading strategies and it has strengthened my resolve to provide students with skills to be lifelong learners. Guided Reading is a general instructional strategy that is used in the elementary classroom. Guided Reading also allows teachers to provide students with small group instruction at their instructional level. While this small group instruction is occurring, the rest of the class can be found working in reading centers. These centers provide student with opportunities to practice reading and writing strategies. Most of the centers that students are participating in are used universally no matter what individual reading levels students have attained.

Several years ago, the school district evaluated and revised the language arts curriculum. The committee that completed this process also evaluated and selected a new language arts program to assist them in the delivery of the curriculum. Fountas and Pinnell Classroom (FPC) was selected as that program. FPC's program utilized a blend of direct instruction and responsive teaching strategies. Teachers work to provide instruction that meets the learning needs of their students and FPC was seen as the program to enhance instruction. Guide Reading is at the heart of FPC, but there are other instructional contexts used. Interactive read-alouds, shared reading, book clubs, and independent reading are the other key components of FPC. The students are immersed in reading and are exposed to a large variety of text.

FPC and responsive teaching in practice is much more difficult than originally thought. Many teachers are finding it difficult to regularly assess students to have current data. Teachers are also finding it difficult to teach all of the components of FPC in a two-hour language arts block. The district is continuing to struggle with how to effectively provide instruction to

students at their individual reading levels. After several years of FPC implementation teachers are still looking for ways to effectively meet the students' needs.

Multi-tier system of supports (MTSS) is a framework that many school districts are utilizing in order to provide targeted instruction to students who are struggling. MTSS is based on student data to make informed instructional decisions. Students are provided interventions and progress monitored to determine the effectiveness of the interventions. The district has been working to bring MTSS to the schools in order to provide students with targeted instruction that is supported by data. In order to effectively meet the needs of students, schools need to understand where the students are in their learning and how they are progressing. MTSS provides schools with a proven framework for making data-based decisions.

The research conducted for this capstone project is based on four research questions. The research questions are as follows:

1. What are the factors that are leading to the district's struggle with low growth in ELA for our students?

2. What instructional strategies are teachers using across the district to strengthen student reading fluency and comprehension?

3. What external factors are present that can aid the students in their ELA growth or hinder their progress?

4. What professional learning opportunities do teachers need to ensure more consistent use of data protocols and appropriate intervention strategies?

The Capstone Project is designed to help identify effective reading instructional strategies that are being utilized in schools and share these strategies with the other teachers across the district.

The Capstone Project will be conducted by utilizing a mixed methods action research process. There will be quantitative and qualitative data collected and analyzed. The quantitative data will be used to identify classrooms that are demonstrating success. Qualitative data will be collected from teachers in order to determine the different reading intervention strategies being used in classrooms. The research is being completed to identify reading strategies that are proven to have a positive effect on student learning. Professional learning will be provided to teachers that focus on effective data use and strategies designed for improved student achievement. The goal of the capstone project is to provide teachers with instructional strategies and interventions that have shown positive student growth. The more strategies and interventions teachers have at their disposal, the more likely they will deliver responsive teaching instruction.

The research being conducted may have a variety of financial implications to the district. Delivering responsive instruction and intervention to the students will require instructional materials and personnel. The implementation of MTSS will require professional learning time for teachers and administrators to be trained in the processes. In order to provide effecting interventions, building schedules may need to be revised. New resources may need to be purchased for the interventions. There is also the potential to hire more reading specialists and math interventionalists as well as building aides.

Many school districts across the state are looking to provide instruction that will improve student achievement. Each school district is also looking at budget restrictions that make purchasing new programs difficult each year. A way to help districts is to examine the instructional strategies going on within the classrooms of the schools. By sharing resources and knowledge, instruction across a district can improve and student achievement can increase. This

capstone action research project aims to provide the teachers of Bellefonte with tools that will

benefit the district's students as a whole.

Chapter II

Literature Review

The literature review for this capstone project will review the research focused upon language arts instruction in the elementary classroom. It is important to understand the background of language arts instruction in order to learn how it can be organized to improve student growth. The background knowledge provided throughout the review of literature will provide a foundation for the organization of language arts instruction by increasing teacher knowledge in the use of data and specific reading interventions.

The literature review is organized into seven different parts. The first part will focus on the importance of reading fluency and reading comprehension in the language arts instructional process. The next section will review the different forms of assessment that are collected locally and how the information informs instruction. Third, I will focus on differentiation and its importance in the elementary classroom, which will lead to the fourth section will review the Guided Reading instructional process. The fifth section of the literature will be a synthesis of Fountas and Pinnell approach to reading instruction and how it is utilized in the classroom. The sixth section will focus on the Multi-Tiered Systems of Support utilized by schools today to support student learning. Finally, I will review and discuss the professional learning model that the Bellefonte Area School District employs and the importance of it in teacher growth.

Reading Fluency:

Research suggests that reading fluency and reading comprehension have emerged as two key components in increasing student growth in language arts. Students who are able to read fluently are able to break down text and then comprehend what they have read. Struggling

readers historically have demonstrated that they neither recognize the words from the text nor are they able to decode words that they do not recognize. For decades, teachers have seen the importance of reading comprehension, but they are now beginning to recognize the importance of reading fluency (Hudson, Lane, Pullen, 2005).

Reading fluency appears to have many definitions, Raskinski (2004) highlights the importance of reading fluency.

"Reading fluency refers to the reader's ability to develop control over surface-level text processing so that he or she can focus on understanding the deeper levels of meaning embedded in the text."

If students are not able to read the text that is in front of them, then they will not be able to understand the meanings found in the text.

The goal of all teachers should be to have students reading in a fluent manner in the elementary classroom (Rasinski, 2004). Teachers want their students to be able to take the skill of reading and then apply it across different subject areas. There are three main components that a student must master in order to be considered a fluent reader. Students need to learn and maintain the ability to read with accuracy, speed, and expression (International Literacy Association, 2018). "Teachers of struggling readers need to realize that a common core problem for them is the ability to read sight words, decode words, and read phrases and sentences automatically and rapidly" (Ming & Dukes, 2008, p. 3).

Poor readers tend to be labored in their reading and are focused on decoding of words (Hudson et al., 2005). Once students have "mastered the letter sounds, decoding rules, and a good base of sight words, many pupils begin to feel the flow of good reading, and eventually, the process becomes second nature" (Heitin, 2015).

"Accuracy is the essential foundation of reading fluency" (International Literacy Association, 2018). If students are to understand what they are reading, then they need to be able to accurately read the text. The decoding of words is essential if students are to read accurately. Research has shown that students need to have a large bank of high-frequency words and have the ability to blend sounds together to decode words correctly. Students who can look at a word and know automatically what the word is will increase their accuracy in reading text, will be able to sustain reading for longer periods of time, and will be able to read across a variety of texts (Hudson et al., 2005).

Many teachers will develop a word wall throughout the year, but there needs to be more work in high-frequency words to ensure students are learning their sight words. Most literacy experts do agree that reading fluency should be taught in the classroom and the most effective strategy is repeated readings (Heitin, 2015). Research is also starting to show that strategies such as popcorn reading and sustained silent reading have no real effect on improving reading fluency (Heitin, 2015).

The second component of reading fluency is the speed at which reading is completed. First and foremost, reading fluently is not reading quickly. Another important point is reading rates are different for all students, and teachers need to be able to recognize what is acceptable for each student. Oral Reading Fluency (ORF) scores have become a recognized data point for assessing a student's reading rate. Teachers should remember that students who are reading in the average rate range for ORF are on the correct path to become effective and fluent readers (International Literacy Association, 2018). "Like blood pressure, body temperature, and cholesterol, ORF scores can serve as 'indicators' of health and wellness, and scores at the 'average' level are, in fact, optimal" (International Literacy Association, 2018).

Finally, reading with expression will enable students to get the full context of the author's meaning in a text. "Struggling readers are often characterized as reading in a monotone without expression or with inappropriate phrasing" (Hudson et al., 2005). The literature appears to show that if students can read a text with expression, then students are showing they understand the text they are reading. If students are able to read a passage and attend to the punctuation that the author has provided, then they are showing they are able to interpret the text. Like speed, reading with expression does not have an accepted minimum level for students to meet. Most feel that if a student is able to read and it sounds as effortless as when speaking, then the student is reading with acceptable expression (International Literacy Association, 2018).

Assessing a student's reading fluency can be done by teachers just having students read out loud. "By having students read one or two grade-level passages for one minute each, teachers can get a quick sense of their students' level of decoding accuracy, automaticity, and prosodic reading" (Rasinski, 2004). Many times, teachers are completing reading assessments at the beginning, middle, and end of the year. Teachers will also assess a student's reading fluency at the end of the marking period. Teachers do not need to complete formal running records or aimsweb assessments to get an understanding of where their students are in their reading fluency.

In reviewing the research done with regard to increasing student reading fluency, there are several common practices that teachers can employ in their classrooms (Hudson, et al., 2005). One of the main practices a teacher can implement with effective results is to model fluent reading (Dukes, Ming, 2008). Struggling readers need to hear fluent readers reading fluently. Teachers can implement read-alouds in the daily instruction. Also, repeated reading has proven to show effective growth in reading fluency (Hudson, et al., 2005). Repeated reading can be done in a variety of ways in the classroom. Teachers can use interventions like assisted reading, paired

readings, and computer programs as part of their guided reading centers. Students who have

reading fluency modeled and coached will show growth in accuracy, speed, and expression

(International Literacy Association, 2018).

Reading Comprehension:

Reading comprehension is defined as making meaning from texts that are read (Pardo,

2004). Reading comprehension is the process in which students utilize their prior knowledge and

experiences to interpret the meaning of what they are reading. The more background knowledge

students have the better they will be able to connect to the text and this will allow them to make

sense of what they are reading (Pardo, 2004). Students come to the classroom with a different

knowledge base and different skills.

"A major goal of reading comprehension instruction, therefore, is to help students

develop the knowledge, skills, and experiences they must have if they are to become competent

and enthusiastic readers" (Ramirez & Edward, 2013). This is where the teachers come to support

the students in reading comprehension and help develop good readers.

Students should be taught strategies to build upon and activate their prior knowledge

prior to reading. This will allow students to connect with concepts in the text during the reading.

There are several ways in which teachers can help students build upon their prior knowledge. If

the teacher knows that students do not have the prior knowledge, they can "support students'

acquisition of world knowledge by establishing and maintaining a rich, literate environment, full

of texts that provide students with numerous opportunities to learn content in a wide variety of

topics" (Pardo, 2004). Teachers can also utilize reading strategies, such as graphic organizers, to

help students connect prior knowledge to the text and show relationships between known words and new words to build on new vocabulary (Pardo, 2004).

Teachers are constantly working to help their students improve their reading fluency and comprehension. The Texas Education Agency (2002) stated that there are several characteristics that can be found in all good readers. One component of being a good reader involves setting goals before completing the reading. Good readers will also have good reading fluency in order to connect sentences together to make meaning out of the text. In addition, good readers will also summarize the content of a text it is read. Finally, good readers do make inferences from the text by drawing on their background knowledge. Good readers will also look for clues in the text to supply information about characters or events. There are many instructional practices that teachers can use to help students become good readers.

"Effective comprehension instruction is instruction that helps students to become independent, strategic, and metacognitive readers who are able to develop, control, and use a variety of comprehension strategies to ensure that they understand what they read" (Ramirez & Edwards, 2013).

When presenting reading comprehension strategies to students, teachers should model the strategy (Pardo, 2004). When teachers model their thought process by using a think aloud about a given comprehension strategy, the students learn how to implement the strategy and engage with their text. After the strategy is modeled, the students should apply the comprehension strategy with the teacher providing support (Pardo, 2004).

Reading comprehension strategies should be taught to students based upon the text they are going to be reading. Students are typically going to read one of two types of text: narrative or expository. Narrative text is text that tells a story to the reader. Examples of narrative texts

would be short stories, folktales, myths, fables, fantasies, and science fiction. In order to increase a student's reading comprehension for narrative text, teachers should work to implement several instructional strategies.

Locklear (2018) outlines a variety of instructional strategies for teachers. These include strategies like having students focus discussions on story elements and encouraging them to relate story events to their own experiences. Students also want to be able to compare the structure of one story to that of other stories. Finally, teachers can prepare visual guides, such as story maps, to help students recall different story elements.

Expository text is text that is written to explain, inform, or even persuade. Examples of expository texts are textbooks, biographies, journals, and brochures. Teachers who are teaching reading comprehension strategies for expository texts will utilize a different set of instructional strategies (Locklear, 2018). In order to learn how to draw information for expository text, students should be chunking and summarizing information by related items and concepts. Students should also interpret and analyze charts and tables found in the reading. This will help them apply the information from the text to real world situations (Locklear, 2018).

Successful comprehension instruction will include large amounts of time for reading, teacher-directed instruction in comprehension strategies, opportunities for collaborative learning, and students talking to the teacher and one another about their responses to reading (Fielding, Pearson, 1994). Students learn how to determine appropriate choices for text selections and ensure that students spend time reading books that are appropriate in difficulty for the student. Students want to be reading passages that help them increase their reading fluency. Finally, student conversation about what they are reading provides them with opportunities to practice the comprehension skills they have learned (Fielding, Pearson, 1994).

With the change in reading instruction, teachers look for a variety of texts for their students to read. "With the rise of literacy approaches such as guided reading, many hail leveled readers as a critical component of effective reading instruction" (Hewes, 2016). Level readers provide students texts that they are able to read at their skill level. "In theory, then, if students are reading a text that is not 'just right,' they are not as effectively able to practice applying the desired skills because the text is either too challenging to allow them to focus on the skill at hand or too simplistic for them to need to use the desired skill" (Hewes, 2016).

Level readers are typically used in guided reading instruction or as part of reading literacy activities. There appear to be two ways in which leveled readers are established for students. The first way is to level the pre-existing texts in the classroom library in order to provide students with high-quality texts (Hewes, 2016). The second method employed is to utilize books written and leveled by publishers, where the books tend to be simpler and less engaging to students (Hewes, 2016). Leveled readers provide students with opportunities to read texts that are at their independent and instructional levels.

The importance of reading fluency and reading comprehension cannot be overstated for an elementary classroom. Lessons should be designed in order to increase student proficiency in reading fluency and comprehension. However, students come to the classroom with different experiences and background knowledge. In order to properly identify what deficiencies students may have, we need to assess students' knowledge, understanding, and ability to read. There is a wide array of assessments that can be used with elementary students. The two assessments utilized in our school district is AimswebPlus and running records.

Forms of Assessment Utilized for Data Collection:

The AimswebPlus assessment is a nationally normed assessment, data management, and reporting system that is utilized for screening and progress monitoring of students (NCS Pearson, 2017). AimswebPlus collects two different types of assessment data: curriculum-based measures (CBMs) and standards-based assessments (SBAs). This database system provides information that helps teachers differentiate instruction as well as determine which students will benefit from intensive intervention (NCS Pearson, 2017). AimswebPlus is often administered to all students three times a year and can also be used as a progress monitoring tool for students receiving tiered interventions.

"Curriculum-Based Measurement (CBM), a set of simple, time efficient, and scientifically sound assessment tools, has increased rapidly for frequent basic skills progress monitoring and screening students for risk" (Shinn, 2012). Schools today are searching for ways to evaluate student growth and the effectiveness of their curriculum. Schools also began to use CBM progress monitoring tools for universal screening to support early interventions (Shinn, 2012).

This has led to schools determining students' Rate of Improvement (ROI). ROI is used to determine how rapidly students are showing growth in their CBM data. "The distribution of ROIs for a group of students—such as a class or grade that participates in universal screening three times a year—serves as a measure of the effectiveness of the general educational program" (NCS Pearson, 2012).

ROI can also be utilized in showing growth of individual students. "The ROI of a student whose progress is being monitored is the primary indicator of the effectiveness of the intervention" (NCS Pearson, 2012). Schools across the country are utilizing AimswebPlus CBMs in order to determine student intervention. Students' ROI can be compared to expected growth

data to determine if adequate progress is being made toward end-of-year goals (NCS Pearson, 2017).

AimswebPlus data can also be collected for progress monitoring data and is used in a school's Response to Instruction and Intervention (RtII) program. RtII is perfectly suited for schools to evaluate the effects of evidence-based instruction in order to comply with the Individuals with Disabilities Education Act (IDEA, 2004) and Every Student Succeeds Act (ESSA, 2015) (NCS Pearson, 2017).

Progress monitoring is an important tool in guiding instruction for students with learning disabilities and low achievement. "The AimswebPlus system supports accurate and frequent data collection, automatically displays results and trends via graphs, projects growth trends alongside growth expectations, and provides explicit rules for deciding whether a student is on or off track to meet his or her end-of-year goals" (NCS Pearson, 2017).

Bellefonte is utilizing AimswebPlus assessment three times a year for universal screening and benchmarking of all students. "CBM was seen as valid for purposes of frequent formative evaluation to judge progress and facilitate any necessary modifications of intervention programs and to enable very frequent (e.g., weekly) formative evaluation for at-risk students, with the added capacity for beginning of the year universal screening" (Shinn, 2012).

Progress monitoring utilizes several processes that schools and teachers should follow. First, deciding which students to progress monitor and which CBMs to use needs to be addressed. Second, teachers should select the appropriate grade level of the CBMs to assess. Third, teachers need to set a goal and create a schedule for data collection. During the data collection, the CBM data is used to evaluate student progress while deciding whether student

progress is adequate and whether the instruction should be modified. Finally, determinations should be made if the goal has been reached (NCS Pearson, 2017).

The use of AimswebPlus allow for schools to organize students into three tiers. "Students in Tier 3 typically need intensive intervention to build skills and deepen their understanding of learning standards taught in the core instructional program. Students in Tier 2 may need only small-group instruction and additional practice on core content to get on track. Students in Tier 1 are expected to stay on track with high quality, research-based core instruction" (NCS Pearson, 2017). Students who are in Tier 3 are considered to be at risk and require frequent progress monitoring, often on a weekly basis. "Progress monitoring is an important part of a dynamic approach to guiding instruction and interventions for both groups and individuals" (NCS Pearson, 2017).

The AimswebPlus program uses five color-coded performance level indicators, which are based on national norms (NCS Pearson, 2017). The performance levels are as follows:

- Well Below Average, which is the 1st–10th percentiles, scores are displayed in orange

- Below Average, the 11th–25th percentiles, scores are displayed in yellow

- Average, 26th–74th percentiles, scores are displayed in green

- Above Average, the 75th–89th percentiles, scores are displayed in teal

- Well Above Average, the 90th–99th percentiles, scores are displayed in blue

Color-coding makes it easier to identify each student's performance level (NCS Pearson, 2017). "AIMSweb provides these field-tested, validated, and independently reviewed CBM test materials in the basic skills areas and organizes and reports the data for educators and parents" (Shinn, 2012).

A running record is an assessment that has been used with students for many decades. "Running records are a formative assessment and are one way to document teacher observations of reading behaviors" (Stegman, 2015). A passage is orally read by a student and the teacher records information on the student's reading of the passage. The "running record — an easy-to-use, standard coding system for capturing what young readers say and do while reading texts. Running records are often taken to assess the text difficulty for the child and may be taken at different time intervals to capture the child's progress" (Fried, 2013). Running records are another piece of data for a teacher to make instructional decisions.

"Running record data reveals the independent reading level, the instructional level, and the frustration levels of a reader, along with information about how he or she is processing text" (Herbert, 2004). Generally, students' running records are found to fall in one of the three reading level categories:

- Independent reading levels are found when a student is able to read with little to know support and has an accuracy level of 95% to 100%.
- Instructional levels are found when students are reading with instructional support and accuracy level of 90% to 94%.
- Frustration levels are found when students require extensive support in reading the passage and have accuracy level less than 90% (Gunning, 2002).

Running records are known to be powerful in the early elementary grades. Running records help teachers learn when text gets hard for an individual student and what the student does when that happens (Gillett and Ellingson, 2017).

Combined with AimswebPlus data, running records can provide teachers with information to guide planning and instruction. Teachers should not go back examine every error

made by the students. Teachers should be selective and focus on a few teaching points that will have the biggest payoff for the child's learning (Fried, 2013). Teachers can use the data from running records to evaluate their teaching as well.

"Analyzing a set of running records for one teacher across multiple students reading around the same level may also reveal teaching patterns, teaching decisions, and in some cases patterns of tolds" (Fried, 2013). By evaluating running records of students, teachers can find general reading error patterns that students are making. "Running record data provide direction for making ongoing instructional decisions for students right in their zone of proximal development" (Vygotsky, 1978).

While running records can provide teachers valuable student data, they are not to be used for long term planning. "One misconception about running records is that data gained about a reader is valid for a semester or longer. In fact, children's skills change so quickly that record data is really only valid for approximately one month" (Herbert, 2004).

For many years, teachers would complete running records only four or five times a year. Classroom routines can be established where running records can be given frequently. Herbert (2004) stated that teachers "have a better chance of 'hitting the instructional target' for each and every child if you conduct ongoing assessments throughout the year instead of just a few times per year."

Running records are assessments that have protocols teachers should follow when they are administered. "The process of conducting a running record includes the teacher taking notes on the student's errors and corrections when he or she is orally reading a leveled text" (Stegman, 2015). Running records need to be completed on a regular basis but do require instructional time to complete. "A schedule will allow consistent data collection for all students. In the younger

elementary grades, students can move through guided reading levels very quickly, so it is important to have timely data" (Stegman, 2015).

Running records provide instructional time for students and teachers to conference. Teachers are provided an opportunity to praise students for their use of learned strategies and help students understand how to better correct errors. "Structure the feedback so they have the space to hypothesize, reflect on their learning, and evaluate their own approaches as well as those of their peers" (Fisher, Frey, Hattie, 2017).

Data notebooks are proven to be beneficial when teachers and students utilize them during instruction. "The goal of the data notebook should be to show student growth. All students should have their own section that includes their running records. Over time, the data notebook should show evidence that a student's accuracy is improving" (Stegman, 2015). Students will have more investment in their learning if they are part of the data tracking process. "Setting goals is one way to help students take ownership of their learning. They can set end-of-the-year reading goals, as well as benchmark goals with the teacher" (Stegman, 2015). If students are part of the goal-setting process, they will better understand what books they should read to increase their learning.

Running records can also help teachers provide students with instructional materials that will meet their learning needs. "Betts (1946) hypothesized that when students are presented with tasks that are sufficiently familiar, yet still provide some degree of challenge, optimal learning occurs. Optimally challenging tasks were referred to as tasks at the student's instructional level" (Treptow, Bums, and McComas, 2007).

Teachers know that the more time on task students exhibit, the more learning they are doing. Research suggests that "matching curricular materials and student skill could improve

short-term student outcomes (time on task and reading comprehension), which is also important given the close link between classroom behavior problems and academic difficulties" (Treptow, et al., 2007).

Importance of Differentiation:

Differentiation is an important aspect of a well-rounded classroom. Once teachers have data, they should design lessons that meet the needs of their students. "In classrooms where one lesson is designed for all learners, limits are placed on students' achievement. Students who are advanced academically are left behind because they are under-challenged, and students who may be struggling are left frustrated and confused" (Koeze, 2007). Classrooms today should account for the needs of all students and then provide instruction to meet those needs.

"Classrooms in which differentiation is taking place may help to close the achievement gap that has been prevalent for years in American schools" (Koeze, 2007). In differentiated classrooms, teachers are regularly collecting data, analyzing the data, and then designing instruction to aid students in their growth and learning. "By developing lessons appropriate to students' readiness levels, interest, and learning profiles, teachers will be able to draw upon prior knowledge and student experiences outside of the school environment which will empower students to ask questions and share their opinions because they already have knowledge or interest in the topic" (Koeze, 2007).

Carol Ann Tomlinson is one of the leading experts on differentiation in the classroom. In her book, *HOW TO Differentiate Instruction IN Mixed-Ability Classrooms* (2001), Tomlinson outlines what differentiated instruction is and what it is not. She stated that differentiation is *not*

the "Individualized Instruction" of the 1970s, *not* chaotic, *not* just another way to provide homogeneous grouping, and *not* just "tailoring the same suit of clothes."

Tomlinson did set guidelines as to what differentiation should look like. Differentiated instruction is proactive, more qualitative than quantitative, and rooted in assessment. It is student-centered and evolutionary, where students and teachers are learning together. Finally, differentiated instruction is a blend of whole-class, group, and individual instruction while providing multiple approaches to content, process, and product.

Tomlinson advocates for student learning by promoting that teachers know "students' individual learning styles and levels of readiness first before designing a lesson plan" (Weselby, 2014). Knowing their students, teachers are able to design lessons that meet students' learning styles, assess student learning, and manage classroom procedures to create a safe and supportive classroom environment (Weselby, 2014). According to Tomlinson, teachers can differentiate lessons for students in four ways: content, process, product, and learning environment.

Cathy Weselby (2014) outlined ways in which teachers can differentiate according to Tomlinson's areas:

- Content can be differentiated by "designing activities for groups of students that cover various levels of Bloom's Taxonomy."
- Successful differentiation includes the process of delivering the material to each of the learning styles the students may possess: visual, auditory and kinesthetic, and through words.
- The product that students produce can also be differentiated by utilizing various forms of assessment: tests, projects, reports, etc.

- The learning environment conditions for optimal learning include both physical and psychological elements: layout of classroom, positive classroom management skills, etc.

Differentiation of classroom instruction is more involved than just providing more or less work for students to complete. Differentiated lessons provide students with opportunities to practice their use of the reading fluency and reading comprehension skills. If the classroom lessons and routines are established, students will have a learning environment that will promote growth in language arts.

In 2008 Laura Robb, a master teacher, language arts coach, and author, utilized the work of Tomlinson and several others to develop a "list of some key principles that form the foundation of differentiating instruction." The first is ongoing, formative assessment, where teachers need to continually assess to identify students' strengths and areas of need. Second, teachers need to recognize the diverse learners and their diverse levels of expertise and experience with reading, writing, thinking, problem solving, and speaking. Third is group work, where students should collaborate in pairs and small groups that enable students to engage in meaningful discussions and learn from one another. Fourth, teachers want to focus on problem solving which focuses on issues and concepts and encourages all students to explore big ideas and expand their understanding of key concepts. The final principle, is student choice. Student choice in their reading and writing experiences and in the tasks and projects will engage students in their learning.

Robb (2008) also developed nine practices for teachers to use to differentiate reading instruction in their classrooms: make read aloud a common teaching text, teach students with diverse materials, organize instruction for all reading levels, value independent practice reading,

model for students how to construct meaning while reading, encourage discussion on readings, write to explore, think, learn, and improve comprehension, use ongoing assessments to support students, and plan units carefully. These components are also evident in Fountas and Pinnell Classroom instructional practices.

"Differentiation is a way of teaching; it's not a program or package of worksheets" (Robb, 2008). Differentiation is designed to maximize student growth by providing different ways for students to show their learning. Differentiation can be a valuable asset when implementing a Response to Instruction and Intervention (RtII) program within a school.

"Differentiated instruction applies to all students, including those who struggle and need academic and behavior supports. Response to Intervention is a way of focusing on students who may need increasing levels of support to experience success" (Allan, 2010). Both programs have goals of modifying instruction to meet the needs of the students in the classroom and promote their growth.

"The major component that makes it not just a differentiated classroom but also an RtI classroom is that, in addition to typical classroom assessment (both formative and summative), the teacher keeps detailed records to monitor the progress of students who are struggling and who may need more intensive Tier 2 support" (Allan, 2010). It is important in differentiation and RtII that teachers keep detailed data on their students' progress.

Guided Reading:

Guided reading has become an integral part of the elementary school classroom. "Guided reading is a small-group instructional context in which a teacher supports each reader's development of systems of strategic actions for processing new texts at increasingly challenging

levels of difficulty" (Fountas & Pinnell, 2017). While teachers are increasingly implementing guided reading, it is one part of the overall reading instruction in an effective language arts lesson.

Fountas and Pinnell (2017) have outlined a variety of opportunities to engage with high quality texts. The following list are some of the reading strategies they recommend:

- Interactive Read-Aloud promotes the joy of reading by using grade appropriate texts that will expand vocabulary and the ability to think, talk, and write about the text.

- Reading Minilessons provide explicit instruction that help students become independent readers.

- Shared reading of texts allows students to learn how to construct meaning so they can learn critical concepts of how texts work.

- Book Clubs provide an opportunity for students to discuss the self-selected books they are reading.

- Independent Reading is an opportunity for students to read a large number of books on their own with support of teacher conferences.

- Group Share brings the entire classroom together to discuss books they are reading so they can share their reading experiences.

These strategies allow for students to be engaged in reading in a variety of manners in order to reach each student. "Readers are actively engaged in the lesson as they learn how to take words apart, flexibly and efficiently, while attending to the meaning of a text" (Fountas and Pinnell, 2014).

Over time guided reading has shifted the teaching of reading to focus on an understanding of how readers build effective processing systems and examine of the role of texts and expert teaching in the process (Fountas and Pinnell, 2014). Guided reading lessons have a common structure to them. Student guided reading groups are set up by combining students of similar development in their reading skills based on the current data teachers have collected.

Fountas and Pinnell (2014) have developed a suggested structure to a guided reading lesson:

- Appropriate text is selected for the students to support new learning for the group.
- Students are introduced to the text to scaffold the reading.
- Students then whisper read the entire text with the teacher providing instructional support.
- Once the students have completed the text, the group discusses the text in order to determine students' comprehension.
- Students will engage in word work in order to increase their flexibility and word analysis skills
- Finally, students will often engage in a writing activity in order to share and extend their understanding.

"The ultimate goal of instruction is the enable readers to work their way through a text independently, so all teaching is directed toward helping the individuals within the group build systems of strategic actions that they initiate and control for themselves" (Fountas and Pinnell, 2017).

There is varied debate on instructional practices that have been employed throughout time, but accelerated "reading instruction requires that the individual reader be able to process a

text with proficiency and, within a short time, take on the necessary understandings and behaviors to process texts of similar difficulty independently" (Fountas and Pinnell, 2017). Conferencing with students is a proven method of support for student independent reading. However, individual instruction during conferencing is difficult due to time requirements for instruction. "Guided reading is now considered by many to be a best practice and an effective model of reading instruction" (Hansen, 2016).

Differentiation of classroom instruction becomes important when looking at the structure of guided reading. Differentiation is vital for the modern-day classroom due to an increasingly diverse student population and teachers who need to reach every learner but have a limited amount of time to do so (Hansen, 2016). "The theory behind guided reading is anchored in the importance of differentiation, the use of the student's previous knowledge, the importance of social interaction while learning, and the teaching of strategies within the context of actual reading" (Hansen, 2016).

Guided reading lessons are to be structured with the teacher's understanding of the students, the texts, and teaching strategies to promote student growth in reading. "The better you know the students in your class, the more effective and the more responsive you will be as a teacher of reading" (Fountas and Pinnell, 2017). Through observation and discussion, teachers can get evidence of student understanding of texts.

Another successful part of reading instruction is knowledge of texts. "The first step in preparing for a guided reading lesson is to read the text yourself and think about the characteristics" (Fountas and Pinnell, 2017). Pre-reading of texts allows teachers to determine the sentence complexity, the words, and their meanings. Teaching strategies should be varied throughout the lesson to meet student needs. "The real key to helping the readers take control of

the problem solving is the language that you use to support the reader's learning across the lessons" (Fountas and Pinnell, 2017).

With guided reading teachers take on a facilitator role. "Guided reading is set up so that the teacher knows what the student knows, what they need to continue to work on, and what they will be learning in the near future" (Hansen, 2016). Teachers act as guides who assist students in constructing their own mastery of skills. "The lesson is highly structured and organized to support learning; however, your teaching interactions with students depends on their responses and the goals you see as important for them" (Fountas and Pinnell, 2017).

Students should be taught the guided reading lesson procedures so that routines are automatic and lesson management is at a minimum and there is instructional time for learning conversations (Fountas and Pinnell, 2017). Throughout the lessons, teachers vary their interactions to engage students in inquiry, problem solving, and the like. "The better you know your students and the more thoroughly you analyze the text, the easier it will be to plan your guided reading lessons" (Fountas and Pinnell, 2017).

There are two different types of assessments utilized by teachers for guided reading instruction. Fountas and Pinnell (2017) have labeled these assessments as interval and continuous. Interval assessments use standardized assessment to help determine beginning reading levels to form a profile of each student. These can be formative and summative assessments that are part of the formal reporting system that is required in schools to document change in achievement. Continuous assessments gather data to provide individual progress over weeks of time throughout the year. These formative assessments also help assess the impact of teaching on a day to day basis.

Fountas and Pinnell Classroom:

The Fountas and Pinnell Classroom (FPC), created by Irene Fountas and Gay Su Pinnell, is a comprehensive program that focuses on the importance of leveled text and guided reading instruction. "Fountas & Pinnell Classroom™ (FPC) is designed to support whole-group, small-group, and independent learning opportunities including: interactive read-aloud, reading minilessons, shared reading, phonics, spelling, and word study, guided reading, book clubs, and independent reading" (Fountas & Pinnell, 2018).

FPC is designed to engage students in many different types, and levels, of text in order to increase their reading fluency and comprehension. Fountas and Pinnell have spent more than twenty-five years researching literacy instruction. "All of Fountas and Pinnell's curriculum systems were developed from this research and are intricately connected to and complement one another for true instructional coherence" (Fountas & Pinnell, 2018).

Throughout their research, Fountas and Pinnell have worked to develop a comprehensive classroom instructional tool. "Fountas and Pinnell have identified six underpinning principles for effective classroom literacy instruction for all students in grades PreK-6" (Fountas & Pinnell, 2018). The following is a brief summary of each principle from *A Summary of the Research Base for FOUNTAS & PINNELL CLASSROOM™* (2018):

1. Instructional Coherence: Each instructional strategy of PFC is designed to be part of a coherent system to improve student performance. "When everyone in the school uses the same literacy tools language as they move from observation to instruction, a common conversation occurs."

2. Responsive Teaching: FPC provides teachers with the opportunity to collect data and observations to make relevant instructional decisions for students. "Regular

assessment is integrated into each context so teachers can meet students where they are and move them forward."

3. Multi-Text Approach: "Books, lots of authentic books, are at the heart of Fountas & Pinnell Classroom™: exciting books to stir imagination; challenging books to lift every reader; and diverse books to expand readers' knowledge of the world." As FPC has been developed, books were carefully written and selected by Fountas and Pinnell to promote student reading, expand vocabulary, and provide students with the skills to think about, talk about, and write about different texts.

4. Student Inquiry: Since elementary students are naturally curious, FPC allow students to participate in authentic learning. "As children think across texts, they pursue lines of inquiry that interest and engage them as learners and build knowledge of different topics and themes across a range of disciplines."

5. Language-Based: Many of the instructional strategies that are found in FPC provides students with an opportunity to discuss the texts they are exposed to in a variety of ways. "This kind of talk structure allows students to share their thinking, to learn the thinking of others, and to refine and sharpen their ideas, which in turn enriches whole-class discussion."

6. Teacher Expertise: "The FPC system is designed to create a sense of community among teachers who are concerned not only about what students learn but also about how and why they learn." Teachers collaborate using FPC and its instructional strategies in order to create a climate of community in the school.

FPC requires teachers to make a dramatic shift in their instructional practices. Teachers are always collecting data and adjusting their instruction not only from marking period to marking period, but day to day.

At the core of FPC is the use of small group instruction in the form of guided reading based on data collected from the Benchmark Assessment Survey (BAS). "The Fountas and Pinnell Benchmark Assessment System, created by Irene Fountas and Gay Su Pinnell, is designed to place students appropriately into a guided reading program, show the gains in student achievement, progress monitoring and identify students in need of intervention" (U.K. Essays, 2018). The BAS system is a three-part assessment that should be completed at the end of every marking period should be given to all students in kindergarten through fifth grade.

The first component of the BAS is a reading prompt that the teacher records data from. "The test consists primarily of running records, in which the teacher records oral fluency, reading errors and self-correction ratios" (U.K. Essays, 2018). The running record is followed by a student-teachers conversation about the text the student has just read. This conversation provides data on the student's comprehension of the text. Finally, there is a writing prompt that can be given to the student to complete.

The BAS assessment allows a teacher "to determine your students' independent and instructional reading levels, group students for reading instruction, select texts that will be productive for a student's instruction, assess the outcomes of teaching, assess a new student's reading level for independent reading and instruction, identify students who need intervention and extra help, document student progress across a school year and across grade levels, create class profiles and inform parents" (U.K. Essays, 2018)

FPC is a responsive teaching model that relies on a multitude of text that is leveled according to reading and grade levels. "Leveled Literacy Intervention (LLI) is a short-term, supplementary, small-group literacy intervention designed to help struggling readers achieve grade-level competency" (US Department of Education, 2017). The best way to help students in their growth is through small group instruction. "Small groups allow educators to meet all students where they are academically whether it be to enrich what they have already learned, reteach comprehension and decoding strategies, or pull them back a few grade levels to help close the gap between the low students and their peers" (Odell, 2012).

This is where LLI is added as an instructional tool for teachers. "Teachers can use LLI to match students to books that they can read without difficulty (referred to as "student's independent level" by the developer) and to books that provide more challenging text (referred to as "student's instructional level")" (US Department of Education, 2017).

"Research suggests that children with poor early reading skills continue to struggle with reading and writing in the later grades, and are more likely to drop out of school" (Waldera, 2017). It is critical that schools provide interventions for students who are identified as struggling readers in primary elementary grade levels. Research has shown that students who are not reading at grade level by third grade will "often falter in the later grades and drop out before earning a high school diploma" (Waldera, 2017).

Many times, the students who struggle the most come from homes experiencing poverty. It is crucial that reading intervention occur in primary grades when students are acquiring literacy skills. FPC has research that suggests Fountas and Pinnell's LLI is effective at supporting students so that they can reach grade level appropriate reading expectations before they develop long term reading deficiencies and academic issues (Waldera, 2017).

"The objective of LLI is to accelerate struggling readers so that they may quickly close the gap between their personal reading achievement and their expected reading level" (Odell, 2012). LLI lessons are fast paced and structured with routines that students learn and follow. "The structure and predictability of the lessons help students to feel comfortable in their learning" (Odell, 2012). Each lesson has a similar structure to them. "Lessons include rereading books from the previous day, assessing reading comprehension, instructing on phonics and letters, assigning a writing task about the book that was read, and reading a new book" (US Department of Education, 2017).

One advantage to the LLI lessons is the school to home connection. "LLI has a strong home-school connection providing students with take home books to read with their families as well as word work and response activities to do during independent work time in class or as homework" (Odell, 2012).

LLI has had mixed reviews from teachers utilizing the program. LLI lessons are designed for three to four students for thirty minutes a day. "It is hard to find effective and highly educational literacy activities for the other students to do in the classroom while the teacher is meeting with the LLI group" (Odell, 2012). This is one of the biggest drawbacks to LLI. Scheduling the classroom instructional time is difficult with LLI. If a teacher is to meet with four or five groups each day, then there will be two or more hours for guided reading instruction alone. However, teachers have identified positives to the LLI system. "LLI has also been praised for creating a solid home-school literacy connection, being highly motivating, and for incorporating the familiar read with the lessons every day in addition to the instructional text levels" (Odell, 2012).

FPC is a literacy teaching structure that has been researched and proven to be effective with all levels of students. Students who are exposed to multiple types of text and express their reading and understanding of text in multiple ways have proven to show growth and success in their literacy skills. Fountas and Pinnell have provided educators with instructional strategies that allow for differentiated lessons and guided reading practices to be built into the structure of the day.

Multi-Tiered System of Supports:

Multi-Tiered System of Support (MTSS) is an intervention system that identifies students who are struggling with academics and/or behaviors. "MTSS can be defined as ''an evidence-based model of education that employs data-based problem-solving techniques to integrate academic and behavioral instruction and intervention'' (Eagle, Eagle, Snyder, Holtzman, 2015). In many cases academic and behavior issues are often found to go hand in hand. MTSS is the combination of Response to Intervention (RtI) and Positive Behavioral Intervention and Supports (PBIS). "MTSS targets improvement in academic and behavioral outcomes for all students and stresses the importance of implementation fidelity and leadership capacity" (Freeman, Sugai, Simonsen, Everett, 2017)

There are several features of the MTSS framework that are important in its implementation and sustainability. Jennifer Freeman, George Sugai, Brandi Simonsen, and Susannah Everett authored *MTSS Coaching: Bridging Knowing and Doing* (2017) where they provided three core features of MTSS. The first core feature is that decisions are based on data that comes from universal screening, continued progress monitoring, and implementation fidelity. The second feature is that evidence-based practices are supported, aligned to student

needs, and are contextually relevant. The third feature is that support systems used in MTSS are implemented with fidelity.

"Decisions relative to data, practices, and systems are strategically focused on maximizing the academic and behavioral success of all students, and the opportunity for more intensive and individualized supports is formalized within the continuum of support and based on student performance" (Freeman, et al., 2017).

MTSS framework is viewed as a three-tiered system. Tier 1 is the level of MTSS that all students are exposed to, otherwise known as the core program and is generally thought of as general education, where students receive instruction from a classroom teacher (L. Fuchs, personal communication, 2015). Tier 2 is the intervention level. Interventions typically occurs in small groups with a research validated program (L. Fuchs, personal communication, 2015). Finally, there is Tier 3 which is the most intensive level of intervention. In most cases the instruction at Tier 3 is delivered using special education services. "Whether what's special education versus general education, the key distinction should be the level of intensity, or individualization that occurs at the three different levels of instruction. That said, sometimes schools have more than 3 tiers" (L. Fuchs, personal communication, 2015).

The MTSS framework has several challenges in its implementation. MTSS requires that schools not only collect benchmark data, but they must also collect progress monitoring data regularly. In an interview in 2015, Joe Jenkins discussed the struggles that most schools face in using the data they collect. "I think schools have a harder time using, [or] maximizing the use of the progress monitoring data. [Using the data], it requires analysis, it requires making changes off them that are problematic for teachers, because they, if they, try to make an adjustment that is appropriate for some members of their group that actually needs a change, some kind of change,

some members of the group may not need the change" (J. Jenkins, personal communication, 2015).

Not only do teachers struggle with making the necessary changes for students, they struggle with the time constraints of the school day. "Constraints in the schools with time, resources, and often it's really a mistake to underestimate the burden that teachers face individualizing instruction" (J. Jenkins, personal communication, 2015). There is a lot of planning required with MTSS, which is why MTSS requires a team to aid teachers in their instructional decisions.

Individualized Professional Learning:

Professional development (PD) has been a part of education for many decades. It is important that educators continue their learning in the profession. In general, there has been "the strange atmospheric mix of bored resignation, eagerness for something new and fresh, and cynical amusement that pervades these gatherings" (Jones, 2018).

Typical professional development has one of two effects on most teachers. On the positive side, "PD sessions can renew our level of energy, stock a toolset of strategies, and motivate us to be better teachers than we were yesterday" (Jones, 2018). However, a lot of PD opportunities for professional staff just turn into a negative experience that make staff feel they have wasted the past few hours.

Professional development has been making a transition to what is known as professional learning (PL). PL has brought a new wave of ways in which teachers can access the learning. "Not only will offering a variety of formats allow more teachers to attend, it could impact how meaningful the session is for teachers" (Jones, 2018). PL also has to be planned in a different

manner. PL sessions are often structured like a lesson plan. "The biggest difference in planning for adult learning versus planning classroom lessons is that adults have somewhat different needs that affect their engagement" (Jones, 2018)

Teachers already know the level of support they need for new strategies and also need opportunities to develop ways to immediately apply the strategies. Armed with this information, the Bellefonte Area School District (BASD) looked to make professional learning a priority in the district. The BASD has changed and re-energized the professional learning process for the staff of the district.

For many years the district followed the same professional development format that many districts use, one presentation for all. The staff would be divided for the day based upon the level at which they taught. The professional development that was then presented would have a focus directed at the classroom teachers. The interventionists and specials teachers would participate, but not be engaged. Professional development within the district had lost its effectiveness and many felt that the system that was being utilized just did not meet the teachers' needs. This began the shift to what is now referred to as Professional Learning.

The name change to professional learning was the first in many changes to the system. The next change came in empowering the staff with great input into what learning was going to be offered. This began by establishing a professional learning committee made up of teachers and administrators from all levels across the district. This group began by organizing the format of the professional learning day.

Professional learning in the district now offers staff as many as four learning sessions a day that are between sixty and seventy-five minutes long. Each of the learning sessions have between ten and fifteen different learning options for the participants to sign up and attend. This

allows the staff to attend sessions that they feel will best meet their needs. Another key change to the professional learning in the district is that the sessions are designed and delivered by not only administrators, but also the professional teaching staff. Teachers provide their fellow staff members with the teaching strategies they are using in the classrooms. They will also provide sessions on the learning they bring back to the district from conferences that are attended.

The changes to the district's professional learning program has greatly increased the staff's participation in these days. The staff is encouraged to develop a focus for their professional learning for the year. This is where the findings of this capstone project will be presented to the teachers of the district. Sessions will be offered to the primary teachers of the district on the strategies that have been identified to show growth in student learning. There will also be an increase in professional learning sessions on data analysis strategies and protocols to be used in the district. The more consistency utilized for data analysis, the better the schools will be able to differentiate for students.

Data analysis is something that is often spoken of in elementary schools, but it is something that is not done with consistent protocols. Teachers are currently using student AimswebPlus and running record data, but they tend to provide interventions that are good for the majority of students. A researched based data analysis program that is often utilized at the elementary level is the Multi-Tiered System of Supports (MTSS) which was discussed in the literature review. MTSS is the next intervention system that is needed in Bellefonte to support teachers and aid students in their learning.

Chapter III

Methodology

The goal of the action research Capstone Project is to identify teaching strategies that are improving student reading fluency and reading comprehension. The Capstone Project focuses on determining classrooms that are demonstrating student growth in reading fluency and comprehension. Once classrooms are identified, the research will cross-reference the quantitative data results with the qualitative data that is collected from the teachers. The goal is to identify instructional strategies being employed in the school district that can be utilized across all schools to improve reading skills. This methodology discusses the purpose for the study, as well as the setting and participants. It also reviews the research plan, methods of data collection, and validity of the action research project.

<u>Purpose:</u>

The purpose of this Capstone Project is to identify learning activities that are being utilized in the school district that are benefiting students. As previously stated, the Bellefonte Area School District has shown little to no growth in the language arts scores on state mandated assessments. Although these assessments do not communicate the complete picture of our students, they are used to develop the yearly Future Ready Index report card for each school in Pennsylvania. Students in school districts across the state must acquire reading fluency and reading comprehension skills prior to entering third grade, which is when Pennsylvania state assessments begin. The acquisition of reading skills represents a critical stepping stone in the primary grades of elementary school.

The Capstone Project research is based on four research questions. The research questions are as follows:

1. What are the factors that are leading to the district's struggle with low growth in ELA for our students?

2. What instructional strategies are teachers using across the district to strengthen student reading fluency and comprehension?

3. What external factors are present that can aid the students in their ELA growth or hinder their progress?

4. What professional learning opportunities do teachers need to ensure more consistent use of data protocols and appropriate intervention strategies?

The Capstone Project research data analysis will identify reading instructional strategies that are being utilized in the elementary schools across the district. By cross referencing the student quantitative data and the teachers' qualitative survey responses, the data may reveal instructional strategies that demonstrate student growth in reading fluency and comprehension skills.

Across the district the teachers of language arts are utilizing the Fountas and Pinnell Classroom (FPC) program. FPC is a program that emphasizes a responsive teaching model for classroom instruction. In a responsive teaching model, daily instruction is formulated based on the learning needs of the students. Instruction is provided using both whole and small group instruction. Teachers are able to utilize whole group instruction, but the majority of the language arts block is taught using small group instruction. Teachers using FPC are to regularly examine student data to identify learning goals for each student. The teachers are to then design lessons to provide instruction to students to meet the set learning goals.

The research methods that will be used in the Capstone Project include both quantitative and qualitative data analysis. Quantitative data will be collected from second-grade students in the elementary schools across the district. The data being analyzed is AimswebPlus and running records from the students' kindergarten, first, and second grade years. The analysis of this data may identify groups of students who are showing average to above average growth in their reading fluency and reading comprehension skills. The data analysis may also allow the identification of teachers who are teaching these groups of students. Qualitative data will be collected via a survey of the primary teachers across the district. The quantitative and qualitative data will be cross-referenced to identify classrooms showing growth. Once the classrooms are identified, the instructional strategies utilized can be identified. Professional learning will be offered to all professional staff on how these strategies are implemented as part of classroom instruction.

Setting and Participants:

The Bellefonte Area School District is located in Centre County, Pennsylvania and is considered a rural school district. The school district has one high school (grades 9 – 12), one middle school (grades 6 – 8), and four elementary schools (grades K – 5). The district also is a partner school with the Central PA Institute of Science and Technology (CPI). Bellefonte has the highest student enrollment of member districts, which accounts for 48% of the enrollment of CPI.

Bellefonte educates students from approximately 117 square miles and has an enrollment of approximately 2600 students. Bellefonte does not have a diverse ethnic population as about

94% of the students are white. Approximately 30% of the students are economically disadvantaged and 17% of the student population qualifies for special education services.

There are four elementary schools in the Bellefonte School District. The demographics of the schools are as follows:

1. Bellefonte Elementary has an approximate enrollment of 340 students. The economically disadvantaged rate is forty-eight percent and the special education enrollment of twenty-one percent. The school's ethnicity is broken down as follows: eighty-eight percent white, six percent hispanic, and two and a half percent black. Bellefonte Elementary qualifies as a Title 1 School.

2. Benner Elementary School's enrollment is approximately 230 students. Benner differs from Bellefonte with an economically disadvantaged rate of twenty-one percent and a special education enrollment of eleven percent. The school's ethnicity breakdown is ninety-six percent white, one- and one-half percent Asian, and one percent black.

3. The student enrollment at Marion Walker Elementary School is approximately 360. This school has the lowest economically disadvantaged student population at fifteen percent and fourteen percent of the students qualify for special education services. Marion Walker's ethnic breakdown is ninety-six percent white and two percent Hispanic.

4. Pleasant Gap Elementary School is the smallest school in the district with an enrollment of about 210 students. Forty percent of the students come from economically disadvantaged homes and twenty percent of the students qualify for special education services. Pleasant Gap also has the highest English Language Learner enrollment, with over five percent of the students qualifying. The ethnic make-up of the school is ninety-

five percent white, three percent of two of more races, and two percent Hispanic. Pleasant Gap Elementary also qualifies as a Title 1 school in the district.

The district has two elementary schools that receive Title 1 Federal funds, Bellefonte and Pleasant Gap. Title 1 schools are identified by having a high population of low-income families. These funds are utilized by the district to support programs that aid students in meeting content and performance standards. The funds can be used to support students in language arts or mathematics. The district uses a targeted assisted program in providing Title 1 services to students that are the most at-risk academically in reading. Targeted assistance is a system that begins by identifying students eligible for services. The primary targeted students are in first grade with kindergarten and second grade students added as schedules allow. In some cases, third grade students receive Title 1 services at Bellefonte. Once students are identified for Title 1 services, learning groups are formed in order to provide instruction to students with similar areas of need. Instruction is provided in a pull-out program. The district utilizes a researched based instructional program that helps to strengthen the established language arts curriculum and the Fountas and Pinnell program utilized in the classrooms.

The teaching demographics of the district are varied as well. Each school has a varied population, but there are typically two to three regular education teachers per grade level. Bellefonte Elementary employs three reading specialist teachers while each of the other elementary schools employs one reading specialist. Bellefonte utilizes the instructional expertise of three special education teachers and is the site that hosts the elementary autistic support classroom, while Marion Walker and Pleasant Gap each have two special education teachers. Pleasant Gap also hosts the district's elementary life skills classroom. Benner Elementary has one special education teacher. Bellefonte and Marion Walker also share a math intervention

teacher to aid students in grade 3, 4, and 5 with math instruction. Benner and Pleasant Gap do not have access to math intervention services for students.

The instructional setting for each elementary school is similar. Teachers in kindergarten, first, second, and third grades are responsible for instruction in the areas of language arts, writing, math, and science/social studies. Four years ago, the teachers in grades four and five departmentalized. The departmentalized grade levels have one teacher responsible for language arts, one responsible for math instruction, and one responsible for science/social studies and writing. In the small buildings, a language arts teacher may also provide instruction for writing and the math teacher provides instruction for science/social studies.

While the racial and ethnic diversity is limited in the district, the socio-economic diversity is very large. Bellefonte and Pleasant Gap Elementary schools have historically had high rates of economic disadvantaged students. Both elementary schools have several sections of low-income housing in their school regions. Unfortunately, the trend appears to be that the families of our economically disadvantaged students rarely provide the necessary support for students leading up to, and while, attending school.

The economically disadvantaged students often enter school with little or no pre-school experiences. Many of these students are not only learning letters and numbers for the first time, but they are also learning how to socially interact with many other same aged peers. The schools find that the teachers in the primary grades spend as much time teaching appropriate behaviors as they do letter sounds. Those students who begin school not having preschool experience are at a disadvantage when compared to their peers. The district strives to implement reading services; however, a variety of challenges exist. Many students lack the necessary parental support to encourage their learning. These students often also come from low socioeconomic families, who

are often struggling in many areas so education is often a lower priority. The parents' perception of school can also be a hindrance to a student's growth. If a parent did not have a good school experience he, or she, are less likely to support the education process at home. The more effectively the district can identify and remedy student weaknesses, the more readily students can develop into fluent readers.

Interventions/Research Plan:

The research plan for this Capstone Project involves the collection of quantitative and qualitative data. The researcher started by contacting the superintendent of the Bellefonte Area School District to receive permission to conduct research. The superintendent approved the collection of AimswebPlus, running record, and survey data from the teachers. The researcher utilized the services of the district language arts coach to assemble data from the 2017-2018, 2018-2019, and 2019-2020 school years.

The Capstone Project is focused upon the growth in reading fluency, reading comprehension, reading levels for the district's second grade students. The data collected will come from the students' kindergarten, first, and second grade years. The school district collects data from reading fluency and comprehension assessments three times a year. The first round of data is collected in early September, right after the start of the school year. Data is collected from all elementary students, kindergarten through fifth grade. This provides teachers with baseline data that will allow the staff to begin to plan and organize lessons. Students are divided into reading groups based on their data points. The second round of data collection comes in January at the middle of the school year. Again, data is collected from each student at the elementary level. Teachers are able to utilize data to determine growth in their students. The final time data

is collected on each student occurs in May, at the end of the school year. This is data that is used to determine student growth throughout the year. Teachers will utilize this data as part of their student learning objective plans required in Pennsylvania. The end of year data is also used to determine student regression over the summer after the students are assessed the next school year.

The researcher will utilize the data collected from all four elementary schools within the district. Analyzing the AimswebPlus and Fountas and Pinnell Classroom Benchmark Assessment data will begin by compiling the data for each school year into one spreadsheet. This will be done by looking at the growth reading levels of each student from the beginning of year assessments, through the mid-year, and then the end of year assessments. The data points that will be used are from the students' kindergarten, first, and second grade year. The second-grade data will only include beginning and mid-year assessment data due to the school closure for the COVID-19 virus pandemic.

The researcher will start by randomly assigning a student number to each student in the second grade for the 2019-2020 school year. The numbering system includes a building identifier, which is the first two numbers. Each student will be identified using the third and fourth numbers. The classroom identifier will be the last number. This will be comprised of three numbers to represent the kindergarten, first grade, and second grade teachers. The following are examples of the numbering system to be used: Bellefonte Elementary: 2101123; Benner Elementary: 2201121; Marion Walker Elementary: 2301132; Pleasant Gap Elementary: 2601111. This number system will allow for the cross-referencing of students and elementary classrooms they participated in.

The next step for the researcher will be to organize the data according to reading data from the district. The reading fluency data will be organized using the Fountas and Pinnell BAS data and the AimswebPlus data. Spreadsheets are being established that will include the following data points:

1. Student Number - This will be organized based on the previously explained numbering process.

2. Beginning, Middle, and End of Year BAS Reading Data:

    a. Highest Instructional Level – This is the level at which students are able to read at their own independent level.

    b. Accuracy – The accuracy score represents the number of words read correctly in the story. This is calculated by the number of words read correctly divided by the total number of words.

    c. Comprehension Score – The score is based off of a rubric established by Fountas and Pinnell.

    d. Fluency Rubric Score – Fluency scores are also based on a rubric developed by Fountas and Pinnell.

    e. Growth – The growth of a student is determined by counting the number of levels the student has improved in their instructional levels.

    f. Annual Growth – This is the growth of a student throughout the entire school year.

3. AimswebPlus Composite Score – The composite score from AimswebPlus is developed by using several probes. The probes are given and scores compiled to produce a

composite score for each student. The probes required to have AimswebPlus calculate a composite score is as follows:

    a.   Kindergarten – Letter Naming Fluency, Letter Word Sounds Fluency, and Vocabulary.

    b.   First Grade – Word Reading Fluency, Nonsense Word Fluency, and Oral Reading Fluency.

    c.   Second Grade – Oral Reading Fluency, Reading Comprehension, and Vocabulary.

4. AimswebPlus Risk – This identifies the level of at risk the student is in comparison to other students at their grade level. The risk level is based on a percentile ranging from 1 to 99. The following levels are used in the AimswebPlus scale:

    a.   Well-Below Average: 1st – 10th Percentile, color coded in orange; will be coded as a "0".

    b.   Below Average: 11th – 25th Percentile; color coded in yellow; will be coded as a "1".

    c.   Average: 26th – 74th Percentile; color coded in green; will be coded as a "2".

    d.   Above Average: 75th – 89th Percentile; color coded in aqua; will be coded as a "3".

    e.   Well-Above Average: 90th-99th Percentile; color coded in blue; will be coded as a "4".

5. Grade Level – Grade level data points are utilized to determine if the student is reading on grade level by the end of the school year. A "0" is assigned if the student is not on grade level; a "1" is assigned if the student is on grade level; a "2" is assigned if a student is above grade level.

6. Gender – If the student is a female, she will be assigned a "1". If the student is a male, he will be assigned a "2".

7. Socio-economic Status – The socio-economic status of a student will be determined by whether or not the student qualifies for the free and/or reduced lunch program. The student will be assigned a "0" if they do not qualify or a "1" if they do qualify.

Each of these data points provides the researcher with multiple ways to analyze the data in order to determine trends from the data on which schools and which classrooms are helping students grow in their reading skills and abilities.

Once the students are identified as demonstrating significant growth in reading fluency, reading comprehension, and reading levels the researcher will cross-reference the data against the classroom data collected qualitatively from teachers. By cross-referencing the data, the researcher will identify the instructional strategies the teachers are utilizing to achieve student growth. The reading fluency and reading comprehension instructional strategies will be listed and categorized for future reference and professional learning.

Once the data analysis is concluded, the researcher should be able to provide answers to the following research questions:

- What instructional strategies are teachers using across the district to strengthen student reading fluency and comprehension?

- What professional learning opportunities do teachers need to ensure more consistent use of data protocols and appropriate intervention strategies?

The end result of the research plan is to create a catalog of instructional strategies that are research based and effectively utilized across the district.

Methods of Data Collection:

The methodology used for the Capstone Research Project involves a mixed methods action research process. Quantitative and qualitative data were collected and analyzed. The quantitative data included AimswebPlus student data and Fountas and Pinnell Classroom (FPC) Benchmark Assessment Systems (BAS) data. BAS assessments were administered to students to determine their independent and instructional reading levels. The BAS and AimswebPlus data have been collected three times a year for elementary students. Qualitative data was collected using a survey that was given to all primary teachers (kindergarten, first, and second grades).

Data collected using the AimswebPlus software program helps the district identify students who could be eligible for reading support services. AimswebPlus assessments are nationally normed assessments that identify students' reading fluency and reading comprehension levels. AimswebPlus is also a data management and reporting system that can be a valuable resource for districts. AimswebPlus collects two different types of assessment data: curriculum-based measures (CBMs) and standards-based assessments (SBAs). AimswebPlus is also be used as a progress monitoring tool for students receiving tiered interventions.

In Bellefonte Area School District, this set of assessments is given to all students from kindergarten through fifth grades in all elementary schools. AimswebPlus assessments are also used as a progress monitoring tool for students who receive special education services. Using AimswebPlus in this manner allows for an abundance of data to be collected. AimswebPlus data will serve as one component of the quantitative data that will be analyzed for the Capstone Project.

The second set of quantitative data that will be utilized includes the running record data collected by the teacher. This data is routinely collected at least three times a year and is used in

the eligibility criteria for reading support services. The reading support services can include

classroom targeted interventions, Title 1, and possible learning support. In the FPC program,

running record data is collected using the Benchmark Assessment System (BAS). In the BAS

process, students are given a passage to read and the teacher records data based on the student's

reading of the passage. The passage is followed by student-teacher conversation about the text.

This conversation provides the teachers with data regarding the student's ability to comprehend

different types of literature. Teachers use the BAS assessments to identify students' independent

and instructional reading levels. A student independent reading level can be defined by the

reader identifying a majority of the words and can comprehending what he or she have read. An

instructional reading level is one that is challenging for the student to both read and comprehend.

The analysis of the quantitative data will provide information regarding student growth.

The research will include analysis of the kindergarten data and identification of students with the

average to above average reading growth. The second stage of analysis will be completed on the

students' first grade year data. Finally, the research will analyze the second-grade data of each

student. The data will then be cross-referenced to identify groups of students who are showing

average to above average reading growth. The goal is to identify the classrooms these students

were enrolled. Once the classrooms are identified, the researcher utilized qualitative data.

The Capstone Project will also include qualitative data. Qualitative data is being collected

using a survey that district teachers completed. Appendix E illustrates the survey that was

created and completed by the teachers. The survey was intended to collect data on the

instructional strategies being utilized in the classrooms across the district. Information was also

collected regarding the frequency in which teachers collect and analyze student data. The survey

also collected the use of FPC instructional strategies being used in the classrooms, as well as the intervention strategies teachers are employing.

The qualitative data collected was cross-referenced with the quantitative data in order to identify instructional strategies and interventions that support student growth in reading fluency and comprehension. The researcher is also analyzing how many classrooms in which those instructional strategies and interventions were being used. Throughout the district there are many researched based instructional strategies being utilized, but many of them are not shared. Instructional strategies that have been researched in the Capstone Project will then be applied across all elementary schools through professional learning.

The research that was conducted for this Capstone Research Project will have some fiscal impact on the school district. Professional learning can be provided to the primary teachers through peer presentations. Additional funds will be spent on the preparation of the professional learning. There will also need to be professional learning provided in the use of data for informing instruction, which may be available through the local intermediate unit. If training is not readily available, there may be a cost of $5,000.00 to $10,000.00 for a presenter to come to the district.

The biggest cost to the district will come from the implementation of a Multi-Tier System of Supports (MTSS). Implementation will require professional learning for staff. A MTSS coach will need to be trained on the process and data analysis. The professional learning is also going to require trainers to come into the district to provide that professional learning. This professional learning will require substitutes, presenters' fees, and resource materials. The district will also need to hire staff to implement the interventions. This will cause an increase in

salaries and benefits for the district. There will need to be adjustments made to the school day and schedules. This could result in financial implications for future staff contracts.

Implementing a MTSS program at Bellefonte will also require some changes to how the district provides interventions. Pleasant Gap Elementary has started researching the MTSS process. Several staff members have received professional learning on MTSS and will be the building leaders of the program. The goal of MTSS will be to have all students enter the middle school at the same point in their learning. While this may not be one-hundred percent achievable, MTSS will provide the students with instruction that is data driven and tailored to their specific needs.

Validity:

The validity of the Capstone project is going to focus on increasing the rigor of the research. "In general, rigor refers to the quality, validity, accuracy, and credibility of action research and its findings" (Mertler, 2019). Since the Capstone Project is utilizing both quantitative and qualitative data, the validity of the research needs to be multifaceted. This Capstone Project is aiming to solidify the instructional practices across the district. In order to do this, there needs to be a high level of rigor to help ensure the results are not biased. The rigor also needs to be seen as not reflective of the researcher's point of view.

Since the Capstone Project is utilizing a mixed method action research process, validity is going to be mixed as well. For the qualitative data, the researcher will use evaluative validity during the analysis. The researcher needs to report the findings and summary of the research in an unbiased manner. The researcher will also need to not make judgments on the data that was collected in the survey. The research will also use transferability as a validity check. The

researcher will need to ensure that the action research is not too generalized and that readers can identify with the setting of the research. While many schools face the same struggles as Bellefonte, the researcher needs to keep this setting in the forefront of the research.

It is important for the researcher to remember that "validity refers to the degree to which evidence supports the inferences a researcher makes based on the data he or she has collected using a particular instrument" (Mertler, 2019). The researcher wants to ensure that conclusions drawn from the results of the analysis are validated, not the instruments used to collect the data. The validity of the quantitative data collected from the FPC BAS and AimswebPlus assessments can be determined using the five sources of validity.

Mertler identifies five sources of validity evidence. These sources of evidence are outlined below (Mertler, 2019):

1. Evidence of Validity Based on Test Content: This type of evidence usually is a logical analysis of the content covered on the assessments. Content evidence requires the researcher to have item validity and sampling validity.

2. Evident of Validity Base on Response Processes: The researcher needs to look at patterns of responses to reveal underlying characteristics of the participants. This could be gender, race, socio-economic, or the like.

3. Evidence of Validity Based on Internal Structure: This evidence of validity focuses on how assessment items relate to one another. The researcher looks at the items as a group, not individually.

4. Evidence of Validity Based on Relation to Other Variables: By analyzing the relationships between assessment scores and other assessments of similar constructs, the researcher is able to validate the evidence. One type of coefficients used to validate this

evidence is called concurrent validity coefficients. The coefficient measures the

relationship between the scores on the assessment instruments administered at the same

time.

5. Evidence of Validity Based on Consequences of Testing: Testing should not have a

negative effect on the participants. Testing is usually completed with the understanding

that some benefit will come from the use of its data. Educators want positive change to

come from testing, not negative consequences.

The researcher will be using the evidence of validity based on relation to other variables to help

ensure the Capstone Project's rigor. The use of AimswebPlus and Fountas and Pinnell BAS data

will help to ensure that the teacher scored BAS assessment data aligns with the nationally

normed AimswebPlus composite scores.

Rigor is going to be increased for the quantitative data through the triangulation.

Triangulation of data will allow the researcher to verify the data's accuracy. The researcher is

utilizing multiple data points from the Fountas and Pinnell BAS and AimswebPlus programs. By

showing the same trends in the data analysis, triangulation is going to confirm the conclusions of

the researcher. Triangulation may also clarify misconceptions of the researcher.

A researcher's ability to validate data and conclusions is key in any action research

project. This Capstone Project may provide the school district with an in-depth view of student

performance, student growth, and instructional practices being utilized. It is imperative that the

data collection, analysis, and summary be validated as they will be used to assist the district in

providing better reading instruction to the students. It is important to ensure validity in the action

research Capstone Project. Staff members cannot review the data and the analysis and feel there

is bias. In order to gain buy-in from staff, the research project must recognize and disclose any

limitations of the project. The goal is to develop conclusions that may be generalizable to different situations across the district or even across the region.

Chapter IV

Results of Research

The primary goal of the Capstone Project is to focus on determining which primary grade level classrooms that are demonstrating student growth in reading. Reading fluency and reading comprehension are the two main areas of focus in determining a student's reading level. After the classrooms are identified, the researcher will cross-reference the data results with the qualitative data that is collected from the teachers. The goal is to identify instructional strategies being employed in the school district that can be utilized across all elementary schools to improve reading skills of all students. The results section will identify the instructional strategies the researcher determined to aide students in their reading growth by analyzing reading grade level data and AimswebPlus reading assessment data.

Purpose:

The goal of the Capstone Project is to identify learning activities that are being utilized in the school district that benefit students academically. As previously stated, the students of the Bellefonte Area School District have shown little growth with language arts scores on state mandated assessments. The third grade student scores on the state English/Language Arts assessments make up a large part of the school's overall performance score, the Future Ready Index. It is important for students to be on grade level for reading expectations, and as such, students need to have acquired reading fluency and reading comprehension skills prior to entering third grade. The acquisition of these reading skills is critical during the primary grades of elementary school.

The Capstone Project research is based on four research questions. The research questions are as follows:

1. What are the factors that are leading to the district's struggle with low growth in ELA for our students?

2. What instructional strategies are teachers using across the district to strengthen student reading fluency and comprehension?

3. What external factors are present that can aid the students in their ELA growth or hinder their progress?

4. What professional learning opportunities do teachers need to ensure more consistent use of data protocols and appropriate intervention strategies?

Research data results will identify classrooms that are getting students to grade level reading performance by utilizing instructional practices that benefit student learning. The grade level reading performance and AimswebPlus composite scores are used in the district to determine a student's reading growth. Both assessments utilize reading fluency and reading comprehension data to determine a student's reading level and risk factor for not reaching grade level reading performance.

Data Utilized for Analysis:

The data being utilized in the Capstone Research project is student grade level reading performance data and AimswebPlus risk factor data. The Bellefonte Area School District (BASD) uses the Fountas and Pinnell Classroom (FPC) BAS data to track student growth. This data is running record data that has been collected on students for many years. BASD sets grade

level performance marks based upon the BAS data. Table 1 shows the instructional level expectations for each grade level using the BAS from FPC.

Table 1:

Instructional Level Expectations for FPC

	BOY- BAS BASELINE	Q1	Q2	Q3	Q4
Grade		B and above	C and above	D and above	E and above
		A	B	C	D
K			A	B	C
				A	B and below
Grade	E and above	F and above	H and above	J and above	K and above
	D	E	G	H/I	J
1	C	D	E/F	G	H/I
	B and below	C and below	D and below	F and below	G and below
Grade	K and above	L and above	M and above	M and above	N and above
	J	K	L	L	M
2	H/I	I/J	K	K	L
	G and below	H and below	J and below	J and below	K and below

Key	
Exceeding Expectations	Approaching Expectations
Meeting Expectation	Not Meeting Expectations

The researcher used this information to determine the growth of each student for the Capstone Project. Each student was assigned a number based on the grade level expectation: 4 – exceeding expectations; 3 – meeting expectations; 2 – approaching expectations; 1 – not meeting expectations. Since each student's grade level reading score utilizes reading fluency and reading comprehension data, the researcher is able to identify students who have achieved or are

exceeding grade level expectations. The researcher is then able to identify the classrooms in which these students participated. This will help to identify the reading instructional strategies being used by those teachers.

The second set of data that is being utilized is the AimswebPlus reading data. As previously stated, AimswebPlus is a nationally normed assessment that informs teachers which students are at the high risk for not acquiring the necessary reading skills to meet grade level expectations. Table 2 is an example of a report that is produced from the AimswebPlus assessment software, the Benchmark Comparison Report.

Table 2:

AimswebPlus Benchmark Comparison Report Example

Report Benchmark Comparison			Grade 2nd			Battery Reading			Period Fall 2019			
Student (42)	**Composite**		**VOC** *(VS)*			**RC** *(VS)*			**ORF**			
	Score	**Risk**	**%ile**	**Score**	**Acc**	**%ile**	**Score**	**Acc**	**%ile**	**Score**	**Acc**	**Lexile**
Student #1	240	High	5	110	25%	11	111	21%	19	37	80%	95L
Student #2	259	High	27	143	50%	11	111	21%	3	10	67%	BR
Student #3	278	Mod	49	159	63%	11	111	21%	7	16	84%	5L
Student #4	298	Mod	13	127	38%	31	131	38%	62	81	89%	315L
Student #5	331	Low	37	151	56%	41	139	46%	63	82	95%	320L
Student #6	399	Low	96	198	88%	68	158	67%	66	86	100%	345L

The AimswebPlus composite score and risk level are determined utilizing oral reading fluency and reading comprehension assessment data. Students were assigned a number based on their risk level from the composite score: 3 – high risk level; 2 – moderate risk level; 1 – low risk level. Students who have low risk levels on their AimswebPlus assessments are on track to meet grade level reading expectations. Students who are considered to be in the high-risk level

category are in danger of not meeting grade level expectations. The AimswebPlus composite score and risk level can also be linked to a classroom in which the student participated. This will allow the researcher to identify classrooms meeting with success and the instructional strategies being employed with students.

Data Analysis Test:

The data analysis test chosen for the Capstone Project is the chi-square test of independence. "The chi-square test of independence – also used appropriately with nominal, or categorical, data – is used to test the significance of a relationship between two categorical variables" (Mertler, 2019). The primary goal of using this test is to see if the variables being analyzed are independent of one another or not. In this Capstone Project the researcher is trying to determine if there is an association between a teacher and student achievement in reading levels. In order to do this, the researcher set up a hypothesis and an alternate hypothesis, often referred to as the null hypothesis. The following hypotheses are being used by the researcher with the chi-square test of independence:

H_O: A student's reading performance and classroom assignment are independent in the primary grade levels.

H_A: A student's reading performance and classroom assignment are not independent in the primary grade levels.

In utilizing the chi-square test, the researcher is determining a p-value which represents the probability of obtaining statistical results as extreme as the observed results. The accepted p-value in statistics is a $p = .05$, or 5%. If the statistical results are lower than a p-value of 5%, the stronger the evidence supports the null hypothesis. The researcher will perform the chi-square

test of independence for each primary grade level: kindergarten, first, and second grades. Chi-square tests will be conducted for grade level reading performance and AimswebPlus risk level.

The researcher will also calculate standardized residuals for each primary grade level for grade level reading performance and AimswebPlus risk level. Standardized residuals are the difference between the observed values and the expected values. When using standardized residuals, researchers commonly use a standard deviation range of -2 to +2. Any residual that falls between these two numbers is considered to be normal and accepted. Any residual value below -2 is considered extremely weak in performance since the observed values are less than the expected values. Conversely, any value above +2 is considered extremely positive performance since the observed values are greater than the expected values. The researcher will utilize the data from the chi-square tests to determine if the hypothesis, or null hypothesis, is found to be true.

Data Analysis Results:

The researcher began by selecting the research group of students; the second grade for the 2019-2020 school year. Student data was collected for each student's kindergarten, first grade, and second grade years. The researcher began by evaluating the kindergarten grade level data for each student from the 2017-2018 school year. The data was compiled and then broken down by the 12 teachers who were employed to teach kindergarten during that school year. All assessment data utilized was the end of year data for each classroom assignment. Table 3 shows the grade level reading expectations data for each teacher.

The data is organized into the observed number of students meeting grade level expectations and the expected number of students. The data acquired for approaching and not-

meeting grade level expectations was combined due to the need for meeting the required number of 5 in the sample. The chi-square test provided the researcher with the expected number of students who should be meeting each grade level performance level.

Table 3:

2017-2018 Kindergarten Teacher Grade Level Reading Expectations

Teacher	Exceeding - Observed	Exceeding - Expected	Meeting - Observed	Meeting - Expected	Approaching / Not Meeting Observed	Approaching / Not Meeting Expected
1	5	6.25	5	4.5	4	3.2
2	10	8.04	7	5.8	1	4.11
3	14	8.04	4	5.8	0	4.11
4	11	7.14	2	5.19	3	3.65
5	7	8.04	6	5.84	5	4.11
6	4	8.04	7	5.84	7	4.11
7	6	6.7	6	4.87	3	3.42
8	5	6.7	5	4.87	5	3.42
9	3	6.7	8	4.87	4	3.42
10	10	6.7	3	4.87	2	3.42
11	9	8.04	4	5.84	5	4.11
12	4	7.59	7	5.52	6	3.88

The calculated p-value for this data set is 4.67%. The p-value is less than 5% which indicates a discrepancy in the data. The researcher has accepted the null hypothesis and determined that the grade level reading level data is not independent of the classroom assignment.

The researcher then calculated the standardized residuals for the grade level reading data. The standardized residuals are listed in Table 4. This data table shows that there are teachers who are performing above average and students are meeting or exceeding grade level reading expectations. There are also teachers who are struggling to have students reach grade level expectations. One particular teacher to note is Teacher #3. This teacher has exceeding scores and approaching/not meeting scores over +2. This teacher was able to have students reach and exceed grade level reading expectations.

Table 4 also identifies teachers who are struggling to have students meet the grade level reading expectations. Teachers #6 and #12 both have negative residuals over -1.0. The data is showing that these teachers are struggling to have students exceed expectations and have too many students approaching or not meeting expectations.

Table 4:

2017-2018 Kindergarten Teacher Grade Level Standardized Residuals

Teacher	Exceeding	Meeting	Approaching / Not Meeting
1	-0.500	0.236	-0.447
2	0.691	0.498	1.534
3	2.102	-0.747	2.027
4	1.445	-1.400	0.340
5	-0.367	0.066	-0.439
6	-1.425	0.480	-1.426
7	-0.270	0.512	0.227
8	-0.657	0.059	-0.854
9	-1.429	1.418	-0.314
10	1.275	-0.847	0.768
11	0.339	-0.761	-0.439
12	-1.303	0.630	-1.076

The next data table, Table 5, shows the AimswebPlus risk level data for each teacher who taught kindergarten in 2017-2018. All assessment data utilized was the end of year data for each classroom assignment. The researcher calculated the p-value to be 5.5%. The p-value is close enough to 5% that they are going to accept the null hypothesis as the AimswebPlus data shows the student scores and classroom assignment does not show independence. The data table also shows there are more teachers showing positive results in AimswebPlus student performance. Six teachers demonstrated better observed results than the calculated expected. These teachers are having students present a lower risk of not meeting grade level reading expectations. There are also two teachers who are not meeting their expected AimswebPlus scores.

Table 5:

2017-2018 Kindergarten Teacher AimswebPlus Risk Levels

Teacher	High/Mod Risk-Observed	High/Mod Risk - Expected	Low Risk - Observed	Low Risk - Expected
1	3	2.55	11	11.45
2	4	3.27	14	14.73
3	1	3.27	17	14.73
4	1	2.91	15	13.09
5	7	3.27	11	14.73
6	3	3.27	15	14.73
7	5	2.91	11	13.09
8	1	2.73	14	12.27
9	1	2.73	14	12.27
10	0	2.73	15	12.27
11	5	3.27	13	14.73
12	5	3.09	12	13.91

Table 6:

2017-2018 Kindergarten Teacher AimswebPlus Standardized Residuals

Teacher	High/Mod Risk Level	Low Risk Level
1	-0.282	-0.133
2	-0.404	-0.190
3	1.255	0.591
4	1.120	0.528
5	-2.063	-0.972
6	0.149	0.070
7	-1.225	-0.578
8	1.047	0.494
9	1.047	0.494
10	1.652	0.779
11	-0.957	-0.451
12	-1.087	-0.512

The Kindergarten AimswebPlus standardized residuals support the data analysis for each teacher. The same teachers identified from Table 5 are showing positive results and the same two teachers are not meeting their expected number for each risk category.

In evaluating the grade level reading expectations data and the AimswebPlus risk level data, there are three teachers who are identified as excelling in getting students to grade level and above. Three teachers show that their students are exceeded grade level reading expectations and having the lowest AimswebPlus risk level for students. These teachers are utilizing reading instructional strategies that are proving to have positive results for students. Their instructional strategies need to be evaluated for district wide use.

In the next step in the data analysis process, the researcher performed the same chi-square test of independence for the students from first grade during the 2018-2019 school year. The students being analyzed are the same, but the teachers have changed. This is a school year that also had 12 teachers for first grade across the district. At BASD first grade is the primary grade in providing students with reading interventions through the district's Title I services. As stated before, Bellefonte Elementary and Pleasant Gap Elementary are identified as Title I schools at BASD. The other two elementary schools do offer Title I services, but Bellefonte and Pleasant Gap have priority in services.

The evaluation of the grade level expectation data for first grade has a calculated p-value of 13.8%. In looking at the hypotheses that have been established, the chi-square test of independence shows that the hypothesis is accepted: A student's reading performance and classroom assignment are independent in the first grade. In reviewing Table 7 and Table 8, there are six teachers showing positive results and are getting students to meet and/or exceed grade level reading expectations.

Table 7:

2018-2019 First Grade Teacher Grade Level Reading Expectations

Teacher	Exceeding - Observed	Exceeding - Expected	Meeting - Observed	Meeting - Expected	Approaching / Not Meeting Observed	Approaching / Not Meeting Expected
1	5	6.51	1	3.62	12	7.87
2	6	5.43	2	3.02	7	6.56
3	3	6.15	5	3.42	9	7.43
4	7	5.79	5	3.22	4	6.99
5	7	5.79	4	3.22	5	6.99
6	8	6.87	0	3.82	11	8.31
7	7	5.79	3	3.22	6	6.99
8	8	5.79	1	3.22	7	6.99
9	8	5.07	2	2.81	4	6.12
10	5	6.15	5	3.42	7	7.43
11	4	5.79	4	3.2	8	6.99
12	4	6.87	8	3.8	7	8.306

Table 8:

2018-2019 First Grade Teacher Grade Level Standardized Residuals

Teacher	Exceeding	Meeting	Approaching / Not Meeting
1	-0.592	-1.377	-1.472
2	0.245	-0.587	-0.172
3	-1.270	0.854	-0.576
4	0.503	0.992	1.131
5	0.503	0.435	0.753
6	0.431	-1.954	-0.933
7	0.503	-0.123	0.374
8	0.918	-1.237	-0.004
9	1.301	-0.483	0.857
10	-0.464	0.854	0.158
11	-0.744	0.447	-0.382
12	-1.095	2.155	0.453

The data analysis for the first grade AimswebPlus risk levels are shown in Table 9 and Table 10. The same chi-square test of independence was completed and produced a p-value of 46.7%. This p-value indicates there is strong support for the hypothesis which states that student AimswebPlus risk level and teacher are independent of each other.

These tables also show there are several teachers identified as showing students obtaining low risk level for meeting grade level reading skills. Seven teachers are providing instruction to students that is increasing the students' reading fluency and reading comprehension scores on AimswebPlus assessments.

Table 9:

2018-2019 First Grade Teacher AimswebPlus Risk Levels

Teacher	High/Mod Risk- Observed	High/Mod Risk - Expected	Low Risk - Observed	Low Risk - Expected
1	3	4.55	15	13.45
2	2	3.79	13	11.21
3	6	4.29	11	12.71
4	3	4.04	13	11.96
5	2	4.04	14	11.96
6	5	4.8	14	14.2
7	3	3.79	12	11.21
8	6	4.04	10	11.96
9	3	3.54	11	10.46
10	3	4.29	14	12.71
11	6	4.04	10	11.96
12	8	4.8	11	14.2

Table 10:

2018-2019 First Grade Teacher AimswebPlus Standard Residuals

Teacher	High/Mod Risk Level	Low Risk Level
1	0.727	0.423
2	0.919	0.535
3	-0.826	-0.480
4	0.517	0.301
5	1.015	0.590
6	-0.091	-0.053
7	0.406	0.236
8	-0.975	-0.567
9	0.287	0.167
10	0.623	0.362
11	-0.975	-0.567
12	-1.461	-0.849

In comparing the grade level expectation data and the AimswebPlus risk levels, there are five teachers who have been identified as providing positive results in developing grade level readers. The instructional strategies these teachers are using must be evaluated for use across the first-grade classrooms throughout the district. There are also several teachers who are struggling with students meeting grade level expectations. Implementation of professional learning for these teachers regarding evaluation of student data and instructional strategies would support improved student achievement.

The researcher concluded the student data analysis by completing the chi-square test of independence for the students during their second-grade year, 2019-2020. The data set utilized in this process is from the middle of the school year. During the 2019-2020 school year all schools in Pennsylvania were closed on March 13, 2020 due to the COVID-19 pandemic. This means that students were not able to complete a traditional school year and receive the same instruction as if they were attending school daily. All districts were forced to turn to virtual teaching and learning, which is going to have students return to school struggling academically, socially, and emotionally as never experienced.

Table 11 displays the data for each of the 12 teachers for second grade. The calculated p-value for the grade level reading expectation is 11.3%. This once again supports the original hypothesis, which states student performance is independent of the teacher assignment. There are five teachers who the researcher identified as successfully getting students to grade level or exceeding grade level expectations. These teachers use strong instructional strategies with their students and increasing their reading skills.

Table 11:

2019-2020 Second Grade Teacher Grade Level Reading Expectations

Teacher	Exceeding - Observed	Exceeding - Expected	Meeting - Observed	Meeting - Expected	Approaching / Not Meeting Observed	Approaching / Not Meeting Expected
1	7	5.2	7	3.33	2	7.47
2	5	5.52	2	3.54	10	7.94
3	4	5.2	4	3.33	8	7.47
4	10	5.85	3	3.75	5	8.41
5	6	5.85	1	3.75	11	8.41
6	4	5.85	4	3.75	10	8.41
7	3	4.55	3	2.91	8	6.54
8	4	4.87	2	3.12	9	7.01
9	7	4.87	2	3.12	6	7.01
10	6	5.2	4	3.33	6	7.47
11	6	6.17	7	3.95	6	8.87
12	2	4.87	2	3.12	11	7.01

Table 12:

2019-2020 Second Grade - Grade Level Standardized Residuals

Teacher	Exceeding	Meeting	Approaching / Not Meeting
1	0.789	2.011	2.001
2	-0.221	-0.819	-0.731
3	-0.526	0.367	-0.194
4	1.716	-0.387	1.176
5	0.062	-1.420	-0.893
6	-0.765	0.129	-0.548
7	-0.727	0.053	-0.571
8	-0.394	-0.634	-0.752
9	0.965	-0.634	0.381
10	0.351	0.367	0.538
11	-0.068	1.535	0.964
12	-1.301	-0.634	-1.507

The standardized residual calculations for second grade are displayed in Table 12. This data supports the findings from Table 11. In comparing these two tables, there are two teachers who are exhibiting positive results in having their students meet or exceed grade level expectations. Teachers #1 and #4 are able to have students learn reading fluency and reading

comprehension skills that will increase their grade level reading performance and lower their AimswebPlus risk level.

The analysis of the AimswebPlus assessment data is displayed in Table 13 and Table 14. The calculated p-value for the AimswebPlus risk level was 20.5%. Once again, the researcher accepted the hypothesis. It is confirmed that there is no association between the teacher and the risk level the student possesses in second grade. In evaluating the data, the researcher identified five teachers who are able to have their students perform at a level of low risk on the AimswebPlus assessment. These teachers are able to have fewer students in the high-risk level category and more students in the low risk category. Administrators must provide professional learning, curricular support, and coaching support to ensure all teachers are working to achieve this goal.

Table 13:

2019-2020 Second Grade AimswebPlus Risk Levels

Teacher	High/Mod Risk- Observed	High/Mod Risk - Expected	Low Risk - Observed	Low Risk - Expected
1	2	3.76	14	12.24
2	5	3.99	12	13.01
3	1	3.76	15	12.24
4	1	4.22	17	13.78
5	6	3.76	10	12.24
6	3	4.22	15	13.78
7	6	3.52	9	11.48
8	6	3.52	9	11.48
9	4	3.52	11	11.48
10	4	3.76	12	12.24
11	5	4.22	13	13.78
12	3	3.76	13	12.24

Table 14:

2019-2020 Second Grade Teacher AimswebPlus Standardized Residuals

Teacher	High/Mod Risk Level	Low Risk Level
1	0.908	0.503
2	-0.506	-0.280
3	1.423	0.789
4	1.567	0.867
5	-1.155	-0.640
6	0.594	0.329
7	-1.322	-0.732
8	-1.322	-0.732
9	-0.256	-0.142
10	-0.124	-0.069
11	-0.380	-0.210
12	0.392	0.217

The researcher is concerned with the grade level data that teachers are evaluating. As previously stated, all schools were closed for the academic year on March 13, 2020 due to the COVID-19 pandemic. The data that was utilized in the chi-square tests is from the middle of the year assessment window for BASD. This data was collected at during December, 2019 or January, 2020. This is an especially difficult time for students, and they struggle to meet their true grade level performance. These areas of concern need to be considered in determining how students are performing.

Teacher Survey Data Analysis:

The researcher distributed a survey for the classroom teachers to complete. The survey asked teachers to respond to a variety of questions in order to identify common factors leading to student's growth in reading skills and grade level expectations. The survey, found in Appendix A, contained 19 questions. The goal of the researcher was to have the survey completed in approximately 15 minutes. The survey was sent to 32 teachers who are still teaching at BASD.

There were 17 responses to the survey by current BASD teachers. Three teachers have retired and were unable to be reached. There was also one teacher who left the school district and could not be reached.

The breakdown of responses for teachers is found in Figure 1 and Figure 2. The researcher was able to get responses from each elementary school and from all primary grade levels. The research feels this is important and will allow for connections to be made between grade level teachers and strategies they employ.

Figure 1:
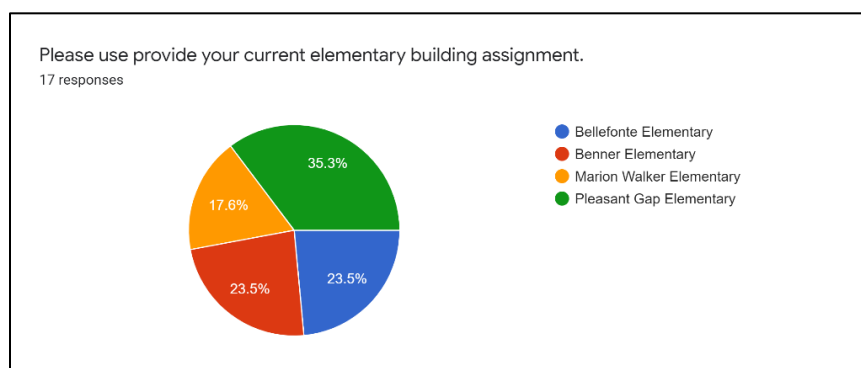
Elementary Building Breakdown of Teacher Responses

Please use provide your current elementary building assignment.
17 responses

- Bellefonte Elementary
- Benner Elementary
- Marion Walker Elementary
- Pleasant Gap Elementary

35.3%
17.6%
23.5%
23.5%

Figure 2:

Grade Level Breakdown of Teacher Responses

Please provide the grade level you currently are teaching.
17 responses

- Kindergarten
- First Grade
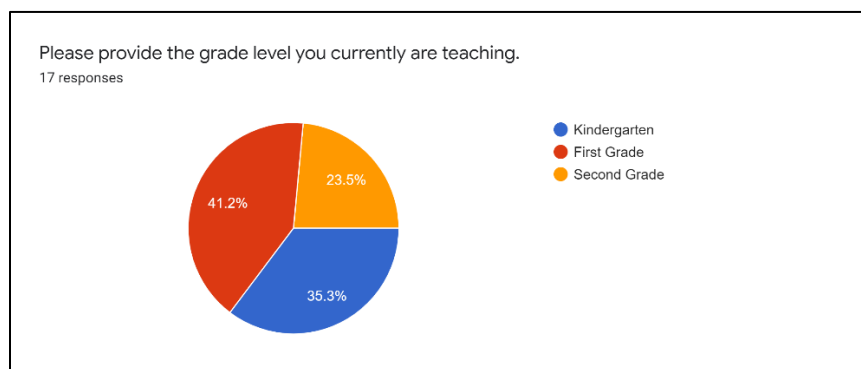- Second Grade

41.2%
23.5%
35.3%

Figure 3 displays the breakdown of the number of minutes each responding teacher spent providing ELA instruction in a school day. This may not accurately represent the true minutes being allocated to ELA. It cannot be determined if teachers included only language arts instruction or if they added writing instruction time.

Figure 3:

Breakdown of Instructional Time Spent on ELA
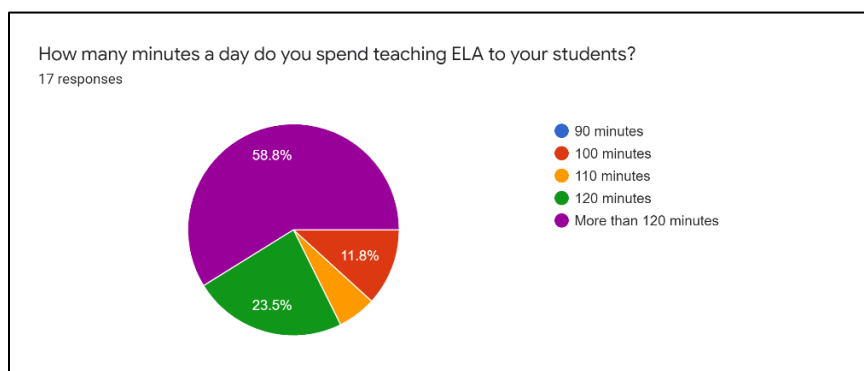
The next section of the survey focused on each teacher's use of data to inform instruction. The teachers were first asked to identify what data they are using to inform their instruction. The survey results are found in Table 15.

Table 15:

Student Data Points Utilized to Inform Instruction

Data Point	Number of Teachers Utilizing
BAS / Running Records	15
AimswebPlus	9
Guided Reading / Anecdotal Notes	7
Informal Assessments / Observations	7
Writing Samples	4
Word Work Activities	2
Letter Identification	2
PASI Scores	2
Build up Program	1
Comprehension Quizzes	1
Letter Sound Assessments	1
Phonics Intakes	1

In reviewing this data, the researcher found that there was a wide array of data points being collected by teachers. It appears that teachers are using data within their level of comfort and/or familiarity. Figure 4 shows the frequency the teachers are reviewing their students' data to inform their instruction.

Figure 4:

Data Analysis Frequency Breakdown
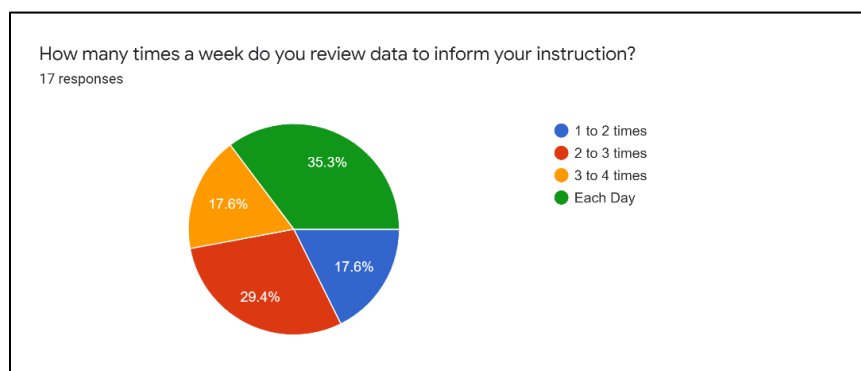
The data found on teacher data analysis appears to be inconsistent. The teachers are not following common data points to analyze to help inform their instruction. There also appears to be inconsistency in the frequency teachers analyze data to inform instruction. The fifth figure displays how effective each responding teacher feels their data analysis is in informing instruction. There are several concerns, and questions, that the researcher has focused upon data used by teachers at BASD. These inconsistencies are one potential answer to the first research question posed by the researcher.

Figure 5:

Teacher Determined Effectiveness of Data Analysis
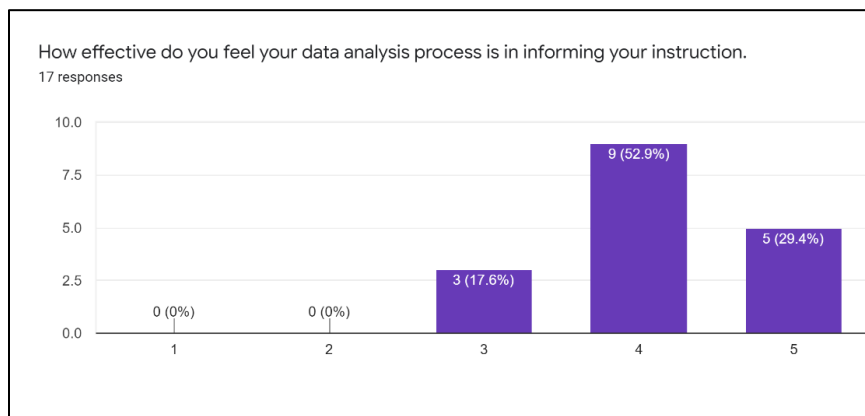
The next section of the survey collected data from teachers reveal impressions of the FPC responsive teaching program BASD utilized in the elementary schools. All responding teachers affirmed that the most effective FPC components are Guided Reading and the Interactive Read Aloud strategies. Teachers at BASD have been utilizing guided reading techniques for many years. FPC utilizes leveled books that are researched based and proven to increase student reading levels.

The Interactive Read Aloud is a new component to BASD teachers. This component has the teachers provide a whole group reading prompt and then ask specific, targeted questions that increase student vocabulary. Interactive read alouds also increase the student's ability to engage with the text being read. In evaluating teacher responses to the Fountas and Pinnell Classroom Components, the researcher has determined that the teachers are implementing the components regularly in their classrooms. One component that has not been well received by teachers is Book Clubs. Challenges exist with primary students due to the use of chapter books and that books clubs are designed to extend at least a month or more.

Teachers were also asked how they are differentiating in their classrooms for their students when not receiving Direct Instruction. Teachers utilized a wide array of differentiation strategies in their classrooms. This inconsistent use of strategies is displayed on Table 16. Diverse instructional strategies utilized by teachers are also an area of concern. There appears to be inconsistencies in the strategies used by teachers to differentiate for students which provides concern for the district's overall student growth.

Table 16:

Ways Teachers Differentiate for Students

Differentiation Strategy	Number of Teachers Utilizing
Center Work	7
Independent Reading Books	5
Online Programs	4
Writing	4
Small Groups	2
Reading Response Work	2
Guided Reading	1
Independent Work	1
Book Clubs	1
Questioning Variety	1
High Frequency Words	1
Individual Homework Packets	1

Triangulation of Data:

The Capstone Project on primary interventions for students has utilized several different types of data. During the analysis process data from Fountas and Pinnell Classroom BAS data was used to determine student's grade level reading expectation level. AimswebPlus risk level data was also utilized to determine if the student is meeting grade level expectations. The research used Evidence of Validity Based on Relation to Other Variables to validate the data. By analyzing the relationships between the FPC BAS assessment data and the AimswebPlus data, the researcher was able to validate the results. These assessment tools are administered to all elementary students three times a year during the same assessment window.

In analyzing the chi-square tests completed on the grade level reading expectations and the AimswebPlus risk level data validates the data. By determining the p-values for each group of data, the researcher was able to show that the null hypothesis was accepted for kindergarten and the original hypothesis was accepted for first and second grades. The data also provides evidence that students are demonstrating growth in literacy skills each year during their time at school. The teacher survey data triangulated the data as the researcher was able to find common instructional strategies being utilized in the district in classrooms showing student reading growth.

Summary:

The Capstone Project undertaken by the research sought to identify primary grade level classrooms across the Bellefonte Area School District elementary schools that are showing positive growth in student grade level reading expectations and AimswebPlus scores. By analyzing student data specific to reading fluency and comprehension, the researcher identified several teachers who are showing that their students are exceeding or meeting grade level expectations.

The researcher also analyzed AimswebPlus composite scores and risk level, which include assessment of oral reading fluency and reading comprehension. This analysis also identified teachers who are able to have the majority of students with a low risk level. In several cases, the data showed the same teachers were found to be providing positive results on both assessments. These teachers will be utilized to assist the district in developing a professional development plan moving forward.

The researcher has determined that the Fountas and Pinnell Classroom program is beginning to demonstrate encouraging results for BASD. Teachers are utilizing the components of the program and are conducting more regular assessments of the students to collect more relevant data.

However, the research has now uncovered several areas of concern and is developing more questions to be answered. There are several teachers who are struggling to advance their students in their reading skills and grade level expectations. Teachers are also been identified as showing positive AimswebPlus scores, but students are not reaching the proficiency threshold on the BAS assessments. As the district works to improve student growth on grade level reading expectations and state mandated assessments, the conclusion drawn from this Capstone Project will enable the researcher to begin to move toward a multi-tiered system of supports (MTSS) program across all elementary schools.

Chapter V

Conclusions of Research

The purpose of Chapter V is to discuss the findings and conclusions of the Capstone Research Project. The conclusions are based on the literature review and data analysis. The key findings of this research will help the Bellefonte Area School District guide professional learning for primary elementary teachers. The findings will also reinforce the need for the district to pursue implementation of a multi-tiered systems of supports (MTSS) at the elementary level.

The review of literature around the subject of students obtaining the necessary reading skills by third grade solidified the importance of acquiring these skills early in their schooling. It is crucial that the district provide students with an opportunity to learn reading fluency and reading comprehension skills that will increase their ability to exceed or meet the grade level reading expectations.

Summary of Results:

This Capstone Project was conducted to identify classrooms across the district's elementary schools that are having students grow in grade level reading expectations and AimswebPlus scores. In analyzing the student data on reading fluency and comprehension, through the Fountas and Pinnell BAS assessments, the researcher identified teachers that are proving their students are meeting or exceeding grade level expectations. AimswebPlus composite scores and risk levels, which include assessment on oral reading fluency and reading comprehension, were also analyzed. This analysis identified teachers have the majority of their students with a low risk level. The data showed that many of the same teachers were found to be providing positive results on both assessments. These teachers will be utilized to assist the

district in developing a professional development plan moving forward. The FPC program, started by the district several years ago, is also demonstrating encouraging results for BASD. The components of the program have been established in the classrooms. Teachers are conducting more regular assessments of the students to collect more relevant data in order to help inform their instruction.

The researcher also found several areas of concern that require further review and analysis. This has led to the development of more questions to be answered. There are teachers who are struggling to advance their students in their reading skills. Several teachers have students who are achieving positive AimswebPlus scores; however, the students are not meeting grade level on the BAS assessments. The concerns raised by the researcher will spark new conversations in the district and will assist with the implementation of MTSS programs.

Review of Research Questions:

This section of the conclusion will provide a brief review of the research questions the researcher established for the Capstone Project. The research questions are as follows:

1. What are the factors that are leading to the district's struggle with low growth in ELA for our students?

2. What instructional strategies are teachers using across the district to strengthen student reading fluency and comprehension?

3. What external factors are present that can aid the students in their ELA growth or hinder their progress?

4. What professional learning opportunities do teachers need to ensure more consistent use of data protocols and appropriate intervention strategies?
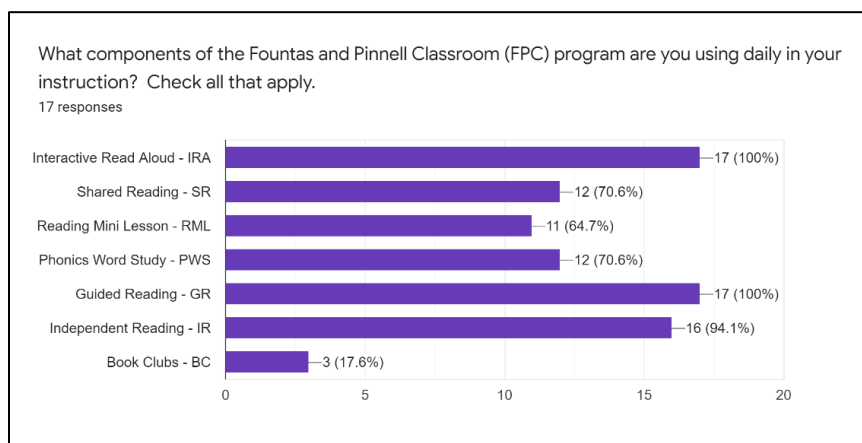
The research results have identified classrooms that are showing students meeting or exceeding grade level reading performance. Utilizing this information, the researcher will identify instructional practices which are benefiting student growth in the acquisition of reading skills. Grade level reading performance data and AimswebPlus risk factors are used in the district to determine a student's achievement in reading. Each of these assessments utilize reading fluency and reading comprehension data in determining each student's reading level and risk factor in grade level reading performance.

Research Question #1:

The first research question for this Capstone Research Project is focused upon the factors that lead to the Bellefonte Area School District's (BASD) struggles in English/Language Arts (ELA) growth. BASD has been struggling to show growth in ELA on Pennsylvania state mandated assessments for many years. These assessments begin in third grade so it is important that student acquire the skills in reading fluency and reading comprehension prior to the mandated assessments. While no school will "teach to the test", it is critical that students are able to read fluently and understand what they are reading before leaving elementary school.

In reviewing the data, the researcher identified several teachers who are providing students with instruction that allows students to reach higher than expected performance levels. One common thread for the teachers is the implementation of the FPC instructional strategies in their classrooms. The students who were tracked for the research project entered kindergarten the year the district first implemented FPC. Now that these students have completed second grade, their performance in grade level reading expectations is better than expected. Figure 6 shows the FPC components that teachers are utilizing daily in their instruction.

Figure 6:

Fountas and Pinnell Classroom Components Utilized by Teachers

What components of the Fountas and Pinnell Classroom (FPC) program are you using daily in your instruction? Check all that apply.

17 responses

Component	Responses
Interactive Read Aloud - IRA	17 (100%)
Shared Reading - SR	12 (70.6%)
Reading Mini Lesson - RML	11 (64.7%)
Phonics Word Study - PWS	12 (70.6%)
Guided Reading - GR	17 (100%)
Independent Reading - IR	16 (94.1%)
Book Clubs - BC	3 (17.6%)

While FPC is beginning to show promise in the first several years of implementation, the researcher also uncovered several concerns that may be leading to the district's struggles. The first area of concern is the teachers' use in data to inform their instruction. In Table 15, the teachers identified twelve different data sources they are evaluating the help guide their instruction. If FPC provided teachers with common components to utilize in their instruction, could the district identify data points that could be collected from those instructional practices?

Many of the teachers indicated in their survey responses that they feel they are effective in their data analysis processes. When comparing teacher data, several of these same teachers are not able to have students achieve grade level reading expectations. The data analysis has proven that the district should identify common data points that all teachers must collect, and then receive professional learning focused upon data analysis and its use to inform instruction. The inconsistencies in data collection and analysis could be a strong factor in why the district is struggling in ELA growth.

A second area of concern that the researcher has identified as a factor in the district struggles is the wide variety of supplemental resources teachers are utilizing outside of the FPC

program. In responses from teachers, there were 20 different instructional strategies listed.

Several of the strategies involved the use of online programs such as RAZ Kids, Starfall,

readworks.org, and teachyourmonstertoread.com. Other strategies involved the use of phonics

activities, writing activities, and high frequency word activities. It appears that the teachers are

utilizing programs and strategies that they know and are comfortable with, not instructional

strategies that are research based and proven.

A reevaluation of the data analysis processes and instructional practices being utilized by

primary teachers in elementary schools must occur. While only 17 teachers responded to the

survey, the research can predict that there would have been an even greater number of

instructional practices listed on the survey. For growth to occur in ELA over time, there should

be an integration of a MTSS program into the elementary schools. MTSS is designed to have

teachers, administrators, school counselors, and school psychologists work collectively on

regularly collecting and evaluating data. MTSS integration in stages and by starting with primary

grade levels would be beneficial. Teacher involvement in the planning of the program will be

crucial to the success of the implementation of MTSS.

Research Question #2:

The second research question addresses, "What instructional strategies are teachers using

across the district to strengthen student reading fluency and comprehension?" During the

literature review, the researcher was able to identify the importance of reading fluency and

reading comprehension in a student's grade level performance. Students must be able to read text

fluently, and with inflection, in order to aid them in the comprehension of the text. Many

kindergarten teachers focus on letter recognition and sounds in order to prepare students for the

decoding of words. This is an important step in a student's acquisition of reading skills. A student's ability to learn to decode words in texts they do not know allows them to obtain the proper context of the text passage. This all goes back to the reading instruction utilized by teacher to strengthen a student's reading fluency and comprehension.

As previously stated, FPC provides teachers with a research proven set of instructional practices on increasing reading fluency and reading comprehension. For example, the Interactive Read Aloud strategy promotes reading by using grade level appropriate texts that expand a student's vocabulary and their ability to think, talk, and write about the text. Interactive Read Aloud is being utilized by all teachers who responded to the survey. Another FPC strategy employed across the classrooms is Independent Reading. Students are provided a wide array of texts at their reading level. Teachers support student independent reading by holding conferences with students to discuss the books they are reading.

Teachers who responded to the survey also indicated they are using many different strategies to promote reading fluency and reading comprehension with students. Strategies such as re-reading, reading mini-lessons, small group reading, and Sound Partners are being utilized to strengthen student reading skills. Teachers appear to be integrating writing into the strategies utilized as well. Many classrooms are having students share their writing with fellow students and book buddies. These strategies allow students to hear what they are writing and identify ways in which to improve their writing.

One of the most utilized strategies is the FPC Guiding Reading. Guided Reading provides teachers with an opportunity to work with students in a small group setting. "Guided reading is a small-group instructional context in which students move from high teacher support to full

control of the reading process" (Fountas & Pinnell, 2017). As stated in the literature review, Fountas and Pinnell established a routine for Guided Reading sessions.

Guided Reading begins with teachers selecting appropriate text for the students. Students are then introduced to the text and then they whisper read the entire text with the teacher providing support. Once the text is completed, the group discusses the text in order to determine students' comprehension while engaging in word work in order to increase their flexibility and word analysis skills. Finally, students engage in writing activities in order to share and extend their understanding. BASD teachers have been employing guided reading practices for many years. FPC has provided teachers with proper books and text passages that students benefit from.

Several years ago, Bellefonte Elementary established a parallel block schedule for kindergarten that provides small group instruction for all students in ELA. Students rotate through a series of centers that are designed to provide each student with appropriate instruction. There are three or four classrooms used in scheduling kindergarten and students are grouped with other of like abilities. Each student follows a schedule that provides them with several small group direct instruction opportunities in reading and writing. There is also a shared reading room established where the students participate in center work. An enrichment room is also established where the students work with a classroom aide on a reading activity and have a center for structured play.

The teachers have identified the schedule implemented at Bellefonte Elementary as benefitting their students in the acquisition of reading skills. They have indicated that the schedule has provided students with an opportunity to receive instruction with fewer distractions and has improved student behaviors and social skills. Teachers also report that they are able to

frequently regroup students across the grade level in order to provide students with individualized and differentiated instruction.

In completing the data analysis of the grade level reading expectations and AimswebPlus composite scores, the researcher has found several inconsistencies in the data. Even though Bellefonte Elementary utilizes a special schedule for their students, the data demonstrates that several teachers are struggling with students meeting grade level expectations. Two of the teachers were identified as having standardized residuals in AimswebPlus risk level of -2.06 and -1.23. This implies that teachers have more students in the high and moderate risk level as any other teacher in who taught kindergarten in 2017-2018. Further evaluation of kindergarten data should occur since the implementation of FPC. This data analysis will identify the true effectiveness of the parallel schedule.

The research has also identified a concern with the wide array of instructional strategies utilized in the classrooms. As previously stated, it is recommended that the district develop a group of research proven strategies that will help students improve their grade level reading performance. Too many teachers appear to rely on online software programs for center work for students. The district should evaluate each program and determine its effectiveness before full implementation occurs in the classroom. This will narrow down the options of programs used by teachers and provide students with the most effective instructional programs.

BASD is working to properly implement the Fountas and Pinnell Classroom instructional practices in all elementary classroom. The FPC instructional strategies are researched based and provide students with opportunities to show growth in grade level reading performance. The researcher recommends that a data analysis be completed of subsequent years be completed in order to provide an effective evaluation of the FPC and parallel block scheduling programs.

Research Question #3:

The third research question established by the researcher is to identify external factors that aid and/or hinder student growth in grade level reading performance. The researcher was able to collect and analyze data on grade level reading expectations and AimswebPlus composite scores for all students. The data was disaggregated to evaluate the students who are identified as qualifying for free/reduced lunch. This is the primary way in which schools identify students as being economically disadvantaged. The district does not collect data on family dynamics: ie. divorced parents, time spent with each parent, and employment status of parents. The district relies on parent to apply for the free/reduced lunch program, but many have reported that is an underserved student group. The research has identified this as an area of concern. Table 17 shows the break down of student performance and qualification for free/reduced lunch services.

Table 17:

Student Grade Level Performance and Socioeconomic Level

Kindergarten					First Grade					Second Grade				
MW Teachers	Exc	Mtg	Appr	Not Mtg	MW Teachers	Exc	Mtg	Appr	Not Mtg	MW Teachers	Exc	Mtg	Appr	Not Mtg
F/R - Total	2	4	1	1	F/R - Total	1	2	2	3	F/R - Total	2	0	1	6
Non - Total	38	14	2	4	Non - Total	20	13	18	7	Non - Total	24	16	6	12
BES Teachers	Exc	Mtg	Appr	Not Mtg	BES Teachers	Exc	Mtg	Appr	Not Mtg	BES Teachers	Exc	Mtg	Appr	Not Mtg
F/R - Total	8	11	0	10	F/R - Total	13	2	5	10	F/R - Total	6	3	8	11
Non - Total	14	13	2	8	Non - Total	17	6	9	5	Non - Total	11	7	7	13
Benner Teachers	Exc	Mtg	Appr	Not Mtg	Benner Teachers	Exc	Mtg	Appr	Not Mtg	Benner Teachers	Exc	Mtg	Appr	Not Mtg
F/R - Total	2	1	2	2	F/R - Total	1	1	2	4	F/R - Total	1	0	3	4
Non - Total	11	10	3	0	Non - Total	12	6	5	0	Non - Total	12	6	4	1
PG Teachers	Exc	Mtg	Appr	Not Mtg	PG Teachers	Exc	Mtg	Appr	Not Mtg	PG Teachers	Exc	Mtg	Appr	Not Mtg
F/R - Total	1	2	5	2	F/R - Total	1	4	2	4	F/R - Total	1	2	2	6
Non - Total	12	9	2	2	Non - Total	7	8	6	3	Non - Total	6	8	1	8

The data analysis implies that students Bellefonte and Pleasant Gap elementary who are identified as low socioeconomics exhibit performance of that is lower than those of their fellow students. In most elementary schools at BASD, 50% of the students who qualify for free/reduced lunch are showing low growth in grade level reading performance. Frequently, students from low socioeconomic standing come from split families, are often shared between households throughout the week, and frequently struggle with completing homework and required readings. Further analysis of the students' backgrounds to determine the family factors that are hindering student growth would be beneficial.

BASD does provide Title I services to students who qualify. Qualification is based on a student's poor grade level reading performance and a high-risk level based on AimswebPlus composite scores. By providing students with Title I services, many students are able to receive the additional reading instruction while at school. After the district evaluates data for eligibility for Title I services, students are broken down by grade level and tiers. Tier 3 is the most at risk, tier 2 is moderate, and tier 1 is low risk. The teachers begin by placing students who are identified as Tier 3 and in first grade in services. The next group is Tier 3 students in second grade and then Tier 2 in first grade. Kindergarten students are identified and offered services in the spring of each year.

The researcher has identified Title I services as a factor that aids student growth in grade level reading performance. The second-grade students whose data was analyzed have shown that receiving the extra reading instruction from the district's reading specialists has improved student performance.

Another factor that could be considered an aid to students is their being identified for learning support services. Student performance data is evaluated and students can be assessed for

learning support. Over the previous three years Bellefonte has had six second grade students qualify for learning support services. Staff at Benner have identified one student, Marion Walker seven students, and Pleasant Gap have five students identified. At BASD learning support services are considered to be Tier 3 interventions.

In the evaluation of the student data the researcher found that most identified learning support students are ending second grade at least one grade level behind in reading performance. According to the data there are 17 students moving to third grade one grade level behind. There are also three students moving on that are two grade levels behind. The researcher does question the instruction they are receiving. Should these students receive more pull-out instruction from their learning support teachers? Are there additional programs to be evaluated and utilized with students? The concern is that students are receiving whole group instruction with fellow classmates, guided reading instruction from the classroom teacher, and reading support from learning support teachers but is still not making adequate progress. More data analysis and further questions asked on the instructional practices for learning support students would benefit the school district.

Research Question #3 has been the most difficult question to determine answers to. There are so many external factors that influence student grade level reading performance. Many of these factors are outside of the control of the school district. It is widely understood that schools need the support of families in order to promote students in their education. Schools need to begin to search for ways in which they can engage the parents in the learning process. The difficulty comes is that many times the parents the school tries to engage the most, are also the most resistant. This will require more research and the development of family engagement practices for the district to promote.

Research Question #4:

The fourth, and final, research question is focused on the professional learning opportunities that ensure consistent use of data protocols and appropriate instructional strategies for the teachers at BASD. The analysis of the student data and the teacher survey has shown that teachers are utilizing a wide array of instructional strategies to promote students reading performance. The analysis has also demonstrated the importance of professional learning in the area of data analysis to inform instruction. The researcher has determined that the teachers would benefit from established data protocols to follow when they are evaluating student data.

The results of the analysis demonstrate a lack of general guidelines for teachers when collecting and evaluating data. Teacher have reported that they are using a wide array of data sources to evaluate student performance. In reviewing Table 15, from Chapter IV, one finds that there are a dozen assessments being used by teachers. Some of the assessments are formative and some are summative. Teachers are utilizing formal assessment such as FPC BAS and AimswebPlus. They are also using their own anecdotal notes and guided reading notes. It appears that the teachers are using the data that they are most confident in collecting and analyzing.

Questions with the data teachers are collecting and analyzing have been identified by the researcher. What protocols are the teachers using to collect and analyze reading data? How often are the students being progress monitored on their reading fluency and reading comprehension levels? What research based instructional practices are teacher using during their instruction?

The use of FPC in classrooms is also an area of concern. Teachers report that they are utilizing the majority of the strategies recommended by FPC, but they expressed the need for

further training on FPC components. One of the most requested professional learning trainings by teachers was the FPC Phonics, Spelling, and Word Study component. Teachers reported utilizing different phonics interventions with their students. However, these are interventions outside of the FPC program. The researcher believes that teachers are requesting professional learning on the phonics component due to their previous work with FPC.

The researcher has also found a concern with how the district is using their professional learning days for teachers. In recent years the district has moved to promoting teacher growth by offering conference like sessions on professional learning days. The district offers four sessions throughout the day where teachers sign up for any sessions they have an interest in. This promotes teacher learning and provide teachers with specific options to choose from. One teacher gave the following response to the professional learning request question on the survey:

> "I often think we don't need more new learning as teachers as much as we need time to get better at what we've already learned. When we do have new learning opportunities it is usually theoretical, which is always good, but then we struggle to find time to put that knowledge to practical use."

Teachers are asking for time to collaborate and work to implement the new learning they have acquired. The professional learning model should integrate more time to allow for teacher collaboration.

A recommendation by the researcher, that has been made in prior sections, is that BASD begin to research and implement a MTSS program the elementary school level. The recommended process for the implementation of MTSS would be to research, set protocols, and begin data analysis with one grade level. The district should select one school and one grade level to create a pilot for the MTSS implementation. It is recommended that the school spend the first semester on establishing data protocols for the teachers to follow. The administration of the school should also utilize the ELA elementary coach to help with types of data to collect and

instructional practices to focus on. The team needs to work collectively and meet regularly to discuss protocols, processes, and instruction in the classroom.

Financial Implications:

The financial implications for BASD will involve a variety of expenses. The researcher has recommended that the district begin with the implementation of MTSS in one school with one grade level. This implementation will serve as a pilot for the rest of the district. There will be initial costs for trainings and substitutes for the administration, ELA coach, and several teachers of the school. Paying teachers for afterschool meetings to develop the data protocols and processes will add to the training costs.

There will be more costs associated with MTSS implementation than teacher training. The ELA coach and teachers will need to review and evaluate instructional strategies and interventions that can be utilized with students in their classrooms. Once instructional and intervention materials are chosen, they will need to be purchased for the teachers. This could come in the form of web-based software programs and/or updated paper products. Another cost associated with implementing new programming will be the paying potential trainers for in-person or webinar trainings. The school district does have several intervention programs that are at the teacher's disposal. Program kits such as Spiral Up, Build Up, and Boost/Blast can be found in all elementary schools. Teachers and para-educators will be trained in order to properly integrate these interventions with students.

Part of MTSS is the support students in their behavior performance as well. Many times, student academic performance and behaviors are linked. Many students who misbehave in the classroom do not do well academically. MTSS can be tied to the existing Positive Behavior

Interventions and Support (PBIS) program already established at BASD. This will take some planning and collaborating, but these two programs can work in conjunction with one another.

Unfortunately, the conclusion of the Capstone Research Project comes at a time where school budgets are being cut and revenues are decreasing due to the school closures from the COVID-19 pandemic. The state budget does not allow for more funds being allocated to school districts. The school administration is going to have to be creative in the planning and prep work to begin implementing MTSS.

Limitations:

Throughout the Capstone Project the researcher has been able to identify several limitations to the research projects. One limitation involves the use of data from only one grade level. The researcher selected the 2019-2020 second grade students due to the district's implementation of Fountas and Pinnell Classroom and now recommends completing the same statistical analysis on students in first grade. Another limiting factor is that the data for only Bellefonte Area School District was used in the Capstone Project. There would have been great benefit by expanding the research project and collecting data from a neighboring district. The data could be compared since the districts are mostly likely utilized different programs to support their ELA curriculum.

Another limitation to the Capstone Project comes from the responses to the teacher survey. Over thirty teachers were sent the survey to complete, but only 17 teachers provided answers and feedback. While this provided insight into how teachers feel about FPC, their use of data, and the instructional strategies they employ, this represents only 57% of the primary teachers across the district. Another concern involving the survey is that several of the highest

performing teachers identified through the data analysis did not complete the survey. Had the researcher been able to make direct contact with these teachers, they may have completed the survey.

The truthfulness of the teachers in completing the survey for the project is a related limitation. The teachers provided feedback on their instructional practices, but needed to be more specific. The vague staff member responses have created challenges. An example of this is that several teachers provided a response on collecting anecdotal notes, but did not specify the types of notes they took. The research had to combine many responses into groups to have similar responses. The teachers' reluctancy to provide pertinent feedback may stem from the researcher being a principal at an elementary school with BASD.

The largest limitation in the completion of the Capstone Research Project was the school closures that occurred in March of 2020 due to the COVID-19 pandemic that spread across the world. The school closures had an impact in the project by not allow for students to complete the full year of grade level instruction. The school closure created an extreme break in student learning which is going to result in deficits that will be larger than usual. The researcher did not have a full year of data to analyze for the second-grade students which required teachers to utilize mid-year data. This data is always difficult to rely on as it is collected at a time of the school year that has several breaks and many interruptions.

Since the school closure prevented that last quarter of school to occur, the researcher can only speculate as to how the end of the year data would have concluded. The researcher does feel that many students would have had higher grade level reading performance and increased AimswebPlus composite scores, which would have lowered their risk level. This would have potentially shown that more teachers are having students meet or exceed grade level reading

expectations. Again, due to the speculative nature of this assertion, it may be difficult to confirm in the future. At this time the reopening of schools is going to look different across Pennsylvania, and there will be options provided to families for students to receive their schooling.

<u>Recommendations for Further Research:</u>

It is recommended that further research be conducted on the Fountas and Pinnell Classroom program being utilized to support the district's curriculum. Student data on grade level reading expectations and AimswebPlus composite scores should be analyzed in the same manner as it was in this Capstone Project. The data from kindergarten from the past two years as well as data from this year's first grade should be analyzed. Unfortunately, many of the same limitations associated with the school closure will apply. A complete picture might not be available for several years.

If data is continually collected and analyzed over the next several years, the district will be able to get a picture of teacher performance. Since the primary grade level teachers do not receive a teacher specific score from the state, the analysis of student data on a regular basis can provide the district with important results as the effectiveness of the teacher's instructional practices in the classroom.

It is also recommended that the district begin to research the MTSS program model. The research should focus around data collection and analysis. The MTSS research should also include instructional strategies and interventions that are research based and proven to increase student performance in reading and writing. The results have shown that the teachers of the district are utilizing a wide array of interventions with their students, but a priority placed on developing a common set of instructional strategies for teachers to use is essential.

Lastly, the district would benefit from research and conducting the proper professional learning to staff on the MTSS process. The trainings involved for this will need to occur on the district's predetermined professional learning days. These professional learnings will come in a variety of forms: trainer in-person, webinar, or teacher directed. The pilot school will work through the struggle of limited funds as many trainings can be completed by using low/no cost options.

Conclusions:

Throughout the Capstone Research Project, the researcher was focused on the identification of instructional strategies and interventions that assist with improved student achievement and growth in grade level reading performance. The researcher was to identify classrooms that have proven to aid students in meeting and/or exceeding grade level reading expectations. Administrators can now identify instructional strategies being utilized to aid in this growth. More consistency in interventions being utilized across the elementary schools would greatly benefit the students in their reading development.

In determining the conclusions of each research question posed at the onset of the Capstone Project, the research has determined there are several themes that have emerged. The first theme involves the implementation and use of FPC instructional strategies in the classroom. Teachers have been implementing FPC components over the past several years, and staff members appear to be utilizing those components on a daily basis. The teachers at the primary grades have received training on these components, but have asked for more collaborative time to work on refining the components used in the classroom. While all teachers appear to be utilizing interactive read alouds and guided reading components, there are questions as to how

effective these components are at this time. Professional learning time spent having teachers collaborate on FPC components being utilized can strengthen the component's effectiveness in the classroom.

Professional learning conducted on data collection and analysis processes will also be essential to the district increasing student achievement on achieving grade level reading expectations. While teachers are reporting that they are effectively analyzing data, the results of the project have determined they are not using the data and informing their instruction using unified protocols.

A second theme that has emerged from the conclusions is that teachers are not effectively utilizing data to inform their instruction. Students are completing the FPC BAS assessments as well as AimswebPlus assessments three times a year. Should teachers be regularly progress monitoring students in their grade level reading performance? The teachers of the district would benefit from training on what each data point measures and how it can be used to provide students with the appropriate interventions. Rather than constantly searching for the next intervention, teachers would then have a set of resources that they can use with students in direct instruction or by self-paced instruction.

The final theme that has emerged is that the district is ready to move to a more structured model of data analysis and intervention determination. The MTSS program will provide the district with that structure and processes to use to increase student reading skill acquisition and subsequently student grade level reading performance. The recommendations for implementation and the financial implications have previously been discussed in this chapter. There will be a slow and progressive implementation. There will also be financial implications to the school district for trainings and resources to support MTSS. It is also likely that the implementation of

MTSS will not be an easy process. However, having a MTSS program in place will greatly assist the school district in achieving their goal of having students reach second grade reading expectations before entering the third grade.

The completion of this Capstone Research Project is only a first step in having the district move forward in implementing processes to have student reach grade level expectations by the end of second grade. There is also more research and data analysis to be completed in order to see how FPC, and subsequently MTSS, is helping students grow in their reading skills for fluency and comprehension. Teacher should continue to research more effective interventions for their students and create a data base of these interventions for all to use. While the work for the Capstone Research Project is complete, the work of implementing its findings and conclusions has only begun.

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APPENDIX A

California University of Pennsylvania Institutional Review Board Approval

Institutional Review Board
California University of Pennsylvania
Morgan Hall, 310
250 University Avenue
California, PA 15419
instreviewboard@calu.edu
Melissa Sovak, Ph.D.

Dear Daniel,

Please consider this email as official notification that your proposal titled "Primary Elementary Interventions for Students" (Proposal #18-093) has been approved by the California University of Pennsylvania Institutional Review Board as submitted.

The effective date of approval is 9/19/19 and the expiration date is 9/18/20. These dates must appear on the consent form.

Please note that Federal Policy requires that you notify the IRB promptly regarding any of the following:

(1) Any additions or changes in procedures you might wish for your study (additions or changes must be approved by the IRB before they are implemented)

(2) Any events that affect the safety or well-being of subjects

(3) Any modifications of your study or other responses that are necessitated by any events reported in (2).

(4) To continue your research beyond the approval expiration date of 9/18/20 you must file additional information to be considered for continuing review. Please contact instreviewboard@calu.edu

Please notify the Board when data collection is complete.

Regards,

Melissa Sovak, PhD.
Chair, Institutional Review Board

APPENDIX B

Bellefonte Area School District Data Request Letter

August 5, 2019

Dr. Michelle Saylor, Superintendent
Bellefonte Area School District
318 North Allegheny Street
Bellefonte, PA 16823

Dear Dr. Saylor,

As an administrator with Bellefonte, I have seen the school district experience little growth, or even a decline, in student English Language Arts (ELA) scores over time at the elementary level. The district has also identified a lack of consistency and/or low scores in our student growth indicators. These struggles can be traced back to possible issues with inconsistencies in student data use, implementation of ELA curriculum, and how teachers implement instructional strategies and interventions. For the past year I have been completing coursework as a doctoral student with the California University of Pennsylvania. I am working on completing my action research project to answer the following questions:

a.   What are the factors that are leading to the district's struggle with low growth in ELA for our students?
b.   What instructional strategies are teachers using across the district to strengthen student reading fluency and comprehension?
c.   What external factors are present that can aid the students in their ELA growth or hinder their progress?
d.   What professional learning opportunities do teachers need to insure more consistent use of data protocols and appropriate intervention strategies.

I am writing to request the collection and use of student date for an action research project I am working to complete. I would like to utilize the Aimsweb data as well as student running records for this year's second grade class. This data is collected at least three times a year for all elementary level students. I would like to get the data from the 2017-2018, 2018-2019, and 2019-2020 school years for the research project. Please know that students will not be interviewed or surveyed as part of my research project.

As part of the research project I would like to identify instructional practices and intervention strategies that the teachers are using across the district. I would also like to request permission to survey the elementary teaching staff for kindergarten, first, and second grades. The surveys will be completely optional and their responses will be kept confidential. My hope is to be able to identify which instructional practices aided the students in achieving significant gains in their reading fluency and comprehension. Once those instructional strategies are identified, I plan on working with the teachers and ELA coaches to provide professional learning for all elementary professional staff members.

Please let me know if you have any questions about my action research project and how I plan to utilize the data that I am requesting to collect. I am hopeful that we will be able to expand on the findings of the research project and offer all teachers of the school district strategies to engage

our students and enrich their learning. If you have any questions please contact me at 814-571-0702 or bes0123@calu.edu. Thank you for your time and consideration.

Sincerely,

Daniel Besch, Jr.
Doctoral Student, California University of PA

APPENDIX C

Bellefonte Area School District Data Request Approval

Besch, Daniel <dbesch@basd.net>

Research Data Request

Saylor, Michelle <msaylor@basd.net>   Wed, Aug 14, 2019 at 10:20 AM
To: "Besch, Daniel" <dbesch@basd.net>

Duffy, I have reviewed your research project proposal as well as all accompanying documents. I am in full support of your project and look forward to seeing the outcomes and how your research may help to advance the academic achievement and growth of our students. You have my permission to conduct your study and access data as proposed.   Dr. Saylor
[Quoted text hidden]
--

Michelle Saylor, Ed.D.

Superintendent

Bellefonte Area School District

318 North Allegheny Street

Bellefonte, PA 16823

(814) 355-4814 X3005

msaylor@basd.net

APPENDIX D

Bellefonte Area School District Survey Invitations to Teachers

March 20, 2020

To the Teachers of Kindergarten Students at BASD,

Over the past several years Bellefonte Area School District has experienced little growth, or even a decline, in student English Language Arts (ELA) scores over time at the elementary level. For the past year I have been completing coursework as a doctoral student with the California University of Pennsylvania. I am working on completing my action research project to answer the following questions:

a.   What are the factors that are leading to the district's struggle with low growth in ELA for our students?
b.   What instructional strategies are teachers using across the district to strengthen student reading fluency and comprehension?
c.   What external factors are present that can aid the students in their ELA growth or hinder their progress?
d.   What professional learning opportunities do teachers need to insure more consistent use of data protocols and appropriate intervention strategies.

As part of the research project I would like to identify instructional practices and intervention strategies that the teachers are using across the district. My hope is to be able to identify which instructional practices aided the students in achieving significant gains in their reading fluency and comprehension. Once those instructional strategies are identified, I plan on working with the teachers and ELA coaches to provide professional learning for all elementary professional staff members.

I am writing to invite you to participate in a survey that will help to identify your use of data and instructional practices in regards to reading fluency and reading comprehension. Please know that the survey is voluntary and you may withdraw from the survey at anytime. All answers to the survey will be kept confidential and only used as part of this research project. Names will not be collected as part of the surveys at this time. I would expect the survey to take approximately fifteen (15) minutes to complete. The research project has been approved by the California University of Pennsylvania Institutional Review Board. This approval is effective 09/01/19 and expires 09/01/20.

Please let me know if you have any questions about my action research project and how I plan to utilize the data that I am asking you to provide. I am hopeful that we will be able to expand on the findings of the research project and offer all teachers of the school district strategies to engage our students and enrich their learning. If you have any questions please contact me at 814-571-0702 or bes0123@calu.edu. Thank you in advance for your time and consideration.

Sincerely,
Daniel Besch, Jr.
Doctoral Student, California University of PA

March 20, 2020

To the Teachers of First Grade Students at BASD,

Over the past several years Bellefonte Area School District has experienced little growth, or even a decline, in student English Language Arts (ELA) scores over time at the elementary level. For the past year I have been completing coursework as a doctoral student with the California University of Pennsylvania. I am working on completing my action research project to answer the following questions:

What are the factors that are leading to the district's struggle with low growth in ELA for our students?
What instructional strategies are teachers using across the district to strengthen student reading fluency and comprehension?
What external factors are present that can aid the students in their ELA growth or hinder their progress?
What professional learning opportunities do teachers need to insure more consistent use of data protocols and appropriate intervention strategies.

As part of the research project I would like to identify instructional practices and intervention strategies that the teachers are using across the district. My hope is to be able to identify which instructional practices aided the students in achieving significant gains in their reading fluency and comprehension. Once those instructional strategies are identified, I plan on working with the teachers and ELA coaches to provide professional learning for all elementary professional staff members.

I am writing to invite you to participate in a survey that will help to identify your use of data and instructional practices in regards to reading fluency and reading comprehension. Please know that the survey is voluntary and you may withdraw from the survey at anytime. All answers to the survey will be kept confidential and only used as part of this research project. Names will not be collected as part of the surveys at this time. I would expect the survey to take approximately fifteen (15) minutes to complete. The research project has been approved by the California University of Pennsylvania Institutional Review Board. This approval is effective 09/01/19 and expires 09/01/20.

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Sincerely,
Daniel Besch, Jr.
Doctoral Student, California University of PA

March 20, 2020

To the Teachers of Second Grade Students at BASD,

Over the past several years Bellefonte Area School District has experienced little growth, or even a decline, in student English Language Arts (ELA) scores over time at the elementary level. For the past year I have been completing coursework as a doctoral student with the California University of Pennsylvania. I am working on completing my action research project to answer the following questions:

What are the factors that are leading to the district's struggle with low growth in ELA for our students?
What instructional strategies are teachers using across the district to strengthen student reading fluency and comprehension?
What external factors are present that can aid the students in their ELA growth or hinder their progress?
What professional learning opportunities do teachers need to insure more consistent use of data protocols and appropriate intervention strategies.

As part of the research project I would like to identify instructional practices and intervention strategies that the teachers are using across the district. My hope is to be able to identify which instructional practices aided the students in achieving significant gains in their reading fluency and comprehension. Once those instructional strategies are identified, I plan on working with the teachers and ELA coaches to provide professional learning for all elementary professional staff members.

I am writing to invite you to participate in a survey that will help to identify your use of data and instructional practices in regards to reading fluency and reading comprehension. Please know that the survey is voluntary and you may withdraw from the survey at anytime. All answers to the survey will be kept confidential and only used as part of this research project. Names will not be collected as part of the surveys at this time. I would expect the survey to take approximately fifteen (15) minutes to complete. The research project has been approved by the California University of Pennsylvania Institutional Review Board. This approval is effective 09/01/19 and expires 09/01/20.

Please let me know if you have any questions about my action research project and how I plan to utilize the data that I am asking you to provide. I am hopeful that we will be able to expand on the findings of the research project and offer all teachers of the school district strategies to engage our students and enrich their learning. If you have any questions please contact me at 814-571-0702 or bes0123@calu.edu. Thank you in advance for your time and consideration.

Sincerely,
Daniel Besch, Jr.
Doctoral Student, California University of PA

APPENDIX E

Bellefonte Area School District Primary Elementary Teacher Survey

Primary Elementary Interventions Survey

This survey is designed to collect your ideas and instructional practices that you are utilizing in the classroom with students. The survey is completely optional and all responses will be kept confidential. We hope to be able to utilize instructional practices that are proving to increase student growth in reading fluency and comprehension across all areas of the district. Your information will help to provide professional learning opportunities for your peers.

* Required

1. Email address *

2. Please use provide your current elementary building assignment. *
   Mark only one oval.

   Bellefonte Elementary
   Benner Elementary
   Marion Walker Elementary
   Pleasant Gap Elementary

3. Please provide the grade level you currently are teaching. *
   Mark only one oval.

   Kindergarten
   First Grade
   Second Grade

4. How many minutes a day do you spend teaching ELA to your students?
   Mark only one oval.

   90 minutes
   100 minutes
   110 minutes
   120 minutes
   More than 120 minutes

5. What data are you utilizing to inform your instruction? *

6. How many times a week do you review data to inform your instruction? *
   Mark only one oval.

   1 to 2 times
   2 to 3 times
   3 to 4 times Each Day

7. How effective do you feel your data analysis process is in informing your instruction.
   Mark only one oval.

	1	2	3	4	5	
Not Very Effective	⬭	⬭	⬭	⬭	⬭	Very Effective

8. How many times a cycle do you meet with each guided reading group for students that are Approaching or Not Yet Meeting grade level expectations? *Mark only one oval.*

   2 to 3 times
   3 to 4 times
   4 to 5 times
   5 or more times

9. How do you feel about the effectiveness of your differentiated instruction for guided reading?
   Mark only one oval.

	1	2	3	4	5	
Not Very Effective	⬭	⬭	⬭	⬭	⬭	Very Effective

10. What components of the Fountas and Pinnell Classroom (FPC) program are you using daily in your instruction? Check all that apply. *
   Check all that apply.

   Interactive Read Aloud - IRA
   Shared Reading - SR
   Reading Mini Lesson - RML
   Phonics Word Study - PWS
   Guided Reading - GR
   Independent Reading - IR
   Book Clubs - BC

11. In your opinion, which component of FPC has the strongest impact on student learning? *

12. Why? *

13. In your opinion, which component of FPC has the weakest impact on student learning? *

14. Why? *

15.   What are your impressions of the strengths and weaknesses of FPC? *

16. What supplemental resources are you using with students that are outside of the of the FPC program? Please indicate how often you utilize the strategy. *

17. How do you differentiate for your students when they are not receiving direct instruction?

18.   What reading comprehension interventions or strategies are you using with your students that you have found to be successful in promoting student growth? *

19. What reading fluency interventions or strategies are you using with your students that you have found to be successful in promoting student growth? *

20.   What professional learning opportunities do you feel would be beneficial to you and the other staff members of the Bellefonte School District?