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Secondary Teachers' Perceptions About Strategies to Teach Reading Comprehension

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
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Walden University
2024

Abstract

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by

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MA, Wilkes University, 2015

BS, De'Sales University 2012

Project Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

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December 2024

Abstract

This study examined the challenges teachers faced in teaching reading comprehension to secondary students within the study school. Reading comprehension is a key skill for academic success, yet many students struggle to understand complex texts in subjects such as history, science, and mathematics. The purpose of this research is to assess how teachers perceive the integration of reading strategies in core content areas and the impact of professional development on their teaching practices. The conceptual framework used to guide this study was the social cognitive theory of self-efficacy, which suggests that teachers' beliefs in their abilities to implement effective strategies influence their teaching practices and student outcomes. The study employed a qualitative descriptive project study approach, involving a sample of 10 middle and high school teachers to address the research questions related to teachers' perceptions of reading instruction, the challenges they face, and the support they need to improve. Data were collected through in-depth interviews with a focus on teachers' use of reading comprehension strategies and the effectiveness of professional development programs and were analyzed using thematic analysis to illuminate significant patterns, relationships, and themes that directly aligned with the research question. The results indicated that teachers felt more confident in their reading instruction after participating in targeted professional development, leading to improved student outcomes in core content areas. The study concludes with recommendations for refining professional development programs and integrating reading comprehension strategies across the curriculum. This research contributes to positive social change by identifying practices aimed at enhancing teachers' self-efficacy, improving student literacy, and promoting academic success across disciplines.

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Dedication

I dedicate this project study to my beloved husband Edward Judd. Throughout the arduous journey of researching, writing, and refining, this work, you have been my unwavering source of strength, encouragement, and love.

Your belief in my abilities, your patience during the long hours of solitude, and your constant support, have been the driving forces behind the completion of this academic endeavor. Your understanding and encouragement have sustained me through the challenges, and your unwavering faith in my capabilities has fueled my determination.

This study stands as a testament to the enduring partnership we share. I am profoundly grateful for your sacrifices, for your listening ear, and you enduring love. The accomplishment is as much yours as it is mine, and I dedicate it to you with a heartfelt appreciation.

Thank you for being my anchor, my confidant, and my greatest supporter. I am profoundly blessed to have you by my side.

With all my love

Carol Judd

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With sincere appreciation,

Carol Judd

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Section 1: The Problem

The Local Problem

The problem investigated in this study is that secondary students within the study school were struggling in reading comprehension. The study took place in a low-income community where, according to the curriculum advisor, literacy skills development was needed among readers and writers in secondary education. According to the study school, students at the study school were struggling in reading comprehension among core content classes. The curriculum advisor shared that the study school had a transient student population with a high percentage of struggling readers. Students experiencing reading difficulties is a pervasive concern within schools across the United States (Burns et al., 2021). Research has found that within the United States, more than 46% of all eighth through 12th graders read at less than a proficient level, with half of those students being so far behind that they end up dropping off the scale entirely (Pennsylvania Department of Education, 2019). These students score below what the U.S. Department of Education has defined as the most basic level (Pennsylvania Dept of Education, 2019).

Numerous researchers have identified the issue of poor reading comprehension among students as a weighty challenge (Castles et al., 2018). In a project study, Almutairi (2018) shared the common reading problems students experience that negatively affect their reading comprehension capabilities. The study also identified effective intervention strategies used by the third-grade teachers to improve reading comprehension among the students with learning disabilities. In a case study completed across seven middle schools in two distinct areas of the United States, the researcher found that an estimated range of

28% to 78% eighth grade students struggle with reading comprehension (Casey, n.d.). The case study implements an intervention strategy that divides the students struggling with reading comprehension into Levels 1, 2 and 3. This has allowed my case study to estimate the variance in reading proficiency among the students struggling with reading comprehension.

Reading comprehension is one of the most critical skills for the contemporary student. In secondary school, most of the text that the student will encounter is fairly complex. To engage the text and gain knowledge from it, the student will have to use reading comprehension strategies (Magnusson et al., 2019). Graham et al. (2018) underlined that reading comprehension in concert with writing is critical in the student's success beyond the school. Students who can read and comprehend well and those with high aptitudes in these areas have more opportunities outside of the school (Graham et al., 2018). Students with reading difficulties are a rising at-risk subgroup in American secondary schools. Their low reading abilities contribute to the high dropout rate in public high schools in America (Vaughn et al., 2015). In 2023, The National Center for Education Statistics highlighted that about 70% of eighth grade and 12th-grade students in the United States scored below the basic level of reading proficiency.

Currently, there exist several approaches through which reading comprehension among students may be augmented. Research has shown that reading comprehension can be augmented by teaching learners how to reason strategically when engaging complex text (Qasserras, 2023). Common approaches used to improve reading comprehension include cognitive strategies such as the predict, organize, search, summarize, and

evaluate (POSSE) strategy, reading comprehension strategies instruction (RCSI), direct and inferential mediation (DIME) model, Kentucky cognitive literacy model (KCLM), and metacognitive strategies among many other approaches. A substantial body of research has emphasized that reading comprehension instruction should include disparate strategies to be effective. The KCLM, for example, enables teachers to give students a learning environment that supports the student's interests and their literacy competence (Cantrell et al., 2016). The POSSE, on the other hand, is based on a number of several reading comprehension strategies, including comparing what the student knows and what they have just read, encouraging the student to organize their knowledge, activating previous knowledge, encouraging self-assessment, and improving the student's aptitude to organize information and text structure among other aspects (Darmayenti & Kustati, 2017).

An early and sustained focus on developing background knowledge, vocabulary, inference, and comprehension monitoring skills across development is necessary to improve comprehension. Developing background knowledge, vocabulary, and comprehension within core content classes is necessary to improving what is being read (Elleman & Oslund, 2019). Qasserras (2023) showed that generalizing information, appreciating the textual features of text, and monitoring one's comprehension were classical ways through which learners could improve their reading comprehension. McEwan (2020), detailed several steps through which teachers may help students improve their reading comprehension. The steps outlined in are based on decades of

experience dealing with students in public schools (McEwan, 2020). Student-centered approaches have been shown to improve the reading comprehension of the learner.

Phonics awareness is essentially a student-centered approach for improving reading comprehension. Current research has shown that it is one of the best ways to help students improve their reading comprehension (Walters, 2022). Gweman et al. (2018) described an own-voice multisensory and systematic method of teaching phonics. The approach helped students improve their phonemic and phonological awareness. Gweman et al. detailed how own voice intensive phonics strengthens students' phonemic awareness. While one of the most effective student-centered approaches for improving reading comprehension is group discussion, there are numerous effective student-centered approaches.

Overall, current research has shown that student-centered approaches improve the reading comprehension of students. Group discussion as a student-centered approach greatly improves reading comprehension (Heron-Hurby et al., 2018). This approach not only improved the reading comprehension of students but was also found to be an enjoyable endeavor for the student (McEwan, 2020). Other student-centered activities that help increase reading comprehension include setting goals, creating a culture that embraces reading intervention, and having students keep their own progress charts (Holloway-Costa, 2019).

The ability to read is more than being able to decode words or recognize letters; it includes the ability to comprehend rigorous text (Parker, 2021). As students’ progress into the secondary setting, they are required to read and analyze complex and rigorous

text. There is a need for reading support in core content classes. Test scores during the year of 2018-2019, 2019-2020, and 2020-2021 found that many students were struggling in their core classes. According to the data from the study school, overall, there was a 37% failure rate in math and a 39% failure rate in science. This indicates that the students are not comprehending the content within the core content classes because they are struggling with the overall failures above 30% (Study School).

Rationale

The rationale for selecting poor reading comprehension abilities among secondary school students as the research problem is motivated by a few aspects. Reading comprehension is an essential skill for secondary school students that determines their overall academic performance. Reading proficiency significantly influences students' academic performance and engagement across various subjects, serving as a critical foundation for success in education (Reed et al., 2022). It is therefore important for education stakeholders to understand the causes of low reading proficiency rates among secondary school students in order to improve academic performance. Research on low reading proficiency among secondary school students can help inform education stakeholders on effective intervention strategies and how to appropriately implement these frameworks. Despite extensive research on reading comprehension, suggested interventions have been rarely implemented (Dietrichson et al., 2021). This research project explored these intervention strategies to ensure educators understand how to improve reading proficiency among students

The percentage of students scoring *advanced* at the study school declined from 8.4% in 2014-2015 to 2.9% in 2018-2019 (see Table 1). Moreover, the percentage of students scoring *proficient* at the study school declined from 79.8% in 2014-15 to 65.2% in 2018-19. The percentage of students scoring *basic* at the study school increased from 10.1% in 2014-2015 to 25.4% in 2018-2019 (Pennsylvania Department of Education, 2019). The percentage of students scoring *below basic* at the study school also increased from 1.7% in 2014-2015 to 5.8% in 2018-2019. As shown in Table 1, *advanced* scores at the study school are not consistent between 2014-2015 and 2018-2019. While there was a slight increase in the percentage of students scoring *proficient* between 2014-2015 (79.8%) and 2015-2016 (80.1%), the most notable change was the steady decline from 2016-2017 to 2018-2019. There was a consistent increase in students scoring at *basic*. While there was a slight decline in 2017-2018 (17.2%), the percentage of students scoring *basic* increase to 25.4% by 2018-2019. The percentage of students scoring at *below basic* remained consistency for the first 3 years but increased slightly from 2017-2018 (5.5%) 2018-2019 (5.8%).

Table 1

Pennsylvania Keystone State Exam Percentages for Grade 9 for Study School

Score	2014-15	2015-16	2016-17	2017-18	2018-19
Advanced	8.4%	6.6%	2.8%	6.3%	2.9%
Proficient	79.8%	80.1%	76.8%	71.1%	65.2%
Basic	10.1%	11.8%	19.0%	17.2%	25.4%
Below basic	1.7%	1.5%	1.4%	5.5%	5.8%

Note. Data on the Pennsylvania Keystone State Exam percentages for Grade 9 at the study school were obtained from *The Pennsylvania Department of Education* (2019).

Within this study, I sought to identify the reading comprehension instruction in the study school within core content classrooms and to explore the teachers' belief and perceptions of teaching reading within core content classrooms at the secondary level. Teachers instructing students within core content classes regularly evaluate their students' learning to determine the failure rate. The higher the failure rate the higher the need for comprehensive strategies in the classroom. The students are either not completing work or acquiring low testing scores because they do not have an understanding or comprehension of the material being taught. In this research study, I investigated the secondary educational practices and perceptions of teachers teaching reading withing core content classes.

According to research, students who are struggling readers within Grades 3-7 are usually developing behind their peers in reading ability (Hempenstall, 2023). While students developing on track will continue to improve their reading ability, students

developing behind their peers will need reading intervention in word structure and comprehension at the secondary level. Secondary core program and intervention should strive to align instruction materials to ensure struggling students are delivered a robust and coherent tiered support plan within each core content class (Hempenstall, 2023). There is a significant number of students who struggle with comprehension because of the complex academic and literary tasks they encounter in their core content classes. Reading forms the basis of all learning; it is the major tool for learning in any subject (NAEYC, 2020).

The study school results are below the state average, and this may be part to a large transient population at the school. There is a significant gap in academic achievement between students who are born and raised within the school district and students who transferred into the district. The study school is a transient school where 80% of students are transferred into the district from New York or New Jersey. According to the Future Ready PA Index (2019), there is a gap between the study school's ELA proficiency percentage and the statewide average (65% and 75% respectively, see Table 2). Additionally, as seen in Table 2, the Science and Math growth level are lower at the study school than statewide. Science at the study school (71%) is slightly lower than statewide (72%), and Math growth at the study school is 72% compared to 75% statewide. Overall, there is a total growth of 54% at the study school compared to 75% statewide. These data indicate that many students struggle to understand the material being taught. An intervention is needed that includes teaching

reading within core content classes so students can have a better understanding of the content being taught.

Table 2

Annual Academic Growth for 2018-2019 for Grade 9

Academic growth	Science	English	Math	Total
Study school	71%	65.0%	72%	54%
Statewide growth	72%	75%	75%	75%

Note. Data on annual academic growth for Grade 9 during the 2018-2019 school year were obtained from *The Pennsylvania Department of Education* (2019).

For students to succeed strategies for comprehension must be implemented. When students struggle with reading skills, they are usually unsuccessful in their other core classes (Parrish, 2020). In order to properly communicate, students need the ability to write, read, and comprehend complex text (Cabell, 2022). Teachers should use effective strategies to help students avoid reading comprehension failure within core content classes. Teachers understanding and interpretation of reading instruction has a profound influence on their classroom practices.

Many students lack academic literacy skills and would benefit from explicit content area reading instruction (Vanderbilt University, 2020). Due to students' limited reading comprehension, they often struggle in core content classes. Indeed, the lack of student comprehension of math terminology is of concern to staff within the study school's math department, according to the math special education teacher at the study site. At the special education meeting in April 2019, math teachers reported that students often forget vocabulary words soon after they are introduced to the word and are

therefore unlikely to retain critical information or to understand related content. To achieve academic success, one must comprehend what is being read. Research has found that the main reason why students do not see success in the classroom is because they lack reading comprehension (Vaughn et al., 2015). An important component to success in reading is the use of the strategies needed to teach reading comprehension (Vaughn et al., 2015).

The purpose of this project study was to investigate secondary teachers' perceptions about the usefulness and ease of use of strategies to teach reading comprehension. I gathered the data used to inform this basic project study from in-depth interviews of secondary teachers within the study school. The interviews took place face-to-face, by telephone, or via Google Meet depending on the participants preference. The interviews were recorded with permission from study participants. The recorded data were transcribed verbatim and analyzed using content analysis. Within this study, I also provide background literature on reading comprehension. Details on several reading comprehension approaches are delineated. I review studies on reading comprehension from multiple researchers with the objective of identifying trends and gaps on this topic. Overall, within this project study, I sought to identify and understand the perceptions of secondary school teachers on the effectiveness and simplicity of using intervention strategies to teach reading comprehension

Definition of Terms

Reading comprehension: Reading with comprehension is the understanding and thinking about what is being read. It is intentionally making sense of the words on the

page and interacting with those ideas–remembering them, noting them, challenging them, questioning them, and connecting with them (Hilderbrand, 2020).

Reading proficiency: The performance of students in reading assessment test. Specifically, the performance of a student in the National Assessment of Educational Progress (NAEP) Reading Assessments (National Center for Education Statistics, 2023).

Self-efficacy: Self-efficacy refers to an individual's belief in their capacity to execute behaviors necessary to produce specific performance attainments (American Psychological Association, 2023).

Teachers' self-efficacy: A teacher's belief in their own capability to prompt student engagement and learning, even when students are difficult or unmotivated (Lazarides and Warner, 2020).

Significance of the Study

Limited research has been conducted that provides consistent results on teaching reading in core content classes and effectiveness of pedagogies when teachers teach reading within their core content classes. The study is significant as it provides an understanding of secondary teachers' perceptions about the strategies to teach reading comprehension. Reading is vital to ensure students successfully graduate from high school and as a result are able to add economically to society. It is beneficial if teachers incorporate reading within their core content class because it will allow teachers to use more than one strategy to instruct all students with understanding the reading concept of the core class.

While the results of this qualitative study are not generalizable to a larger population, the study's results have limited transferability and the potential to inform the practice of teaching reading comprehension in similar populations. The study provides a critical understanding of connections between teaching to read and learning to read. This study can be useful because it can inform educators on how to adapt strategies to better suit professional learning for teachers. For example, professional learning would not teach a math teacher to use a KWL chart or concept map (Adler, 2023). The content teachers would need to be taught to use precise vocabulary and explain, justify, describe, and analyze calculations. Professional learning for science teachers could include precise vocabulary, graphs, sketches, and other material. History could focus on creating timelines with narratives, synthesizing information and evidence from multiple sources, and grappling with multiple ideas and larger quantities of information.

A high level of reading competency at the secondary level is necessary (Keo, 2017). Text complexity, which includes domain-specific words, impede students' ability to learn from new reading experiences (Bridges, 2018). Thus, the overall findings can inform school and district administrators of teachers' perceptions about strategies to teach reading comprehension. This project is essential because it addresses the need for literacy development at the level of secondary education among a group of learners, focusing on a community of secondary school learners. The study took place in a high school with secondary school students. The results of the study show how teachers perceive literacy development plans before implementation and how they use the perception in students'

literacy development at the secondary school level. The overall findings can be used to improve the perception and contribution of teachers on students' literacy development.

Research Questions

The problem investigated in this study was that secondary students within the study school were struggling in reading comprehension. The purpose of this project study was to investigate secondary teachers' perceptions about the usefulness and ease of use of strategies to teach reading comprehension. The goal is to provide all students with the strategies needed to better understand text within core content classes. Secondary teachers need strategies to help students understand and comprehend complex text. Secondary teachers could receive professional learning on how to teach reading within their core class. To investigate strategies used to address secondary students within the study school who are struggling in reading comprehension I examined three research questions (RQs):

RQ1: What strategies are secondary educators using to implement reading instruction within their classroom practices?

RQ2: What are secondary teachers' perceptions about the usefulness and ease of use of strategies to teach comprehension?

RQ3: What support or resources do secondary teachers need to use to instruct reading-centered strategies in their classroom?

Review of the Literature

All students are expected to engage in complex text and have access to rich, engaging authentic literature. However, the problem is that some students have

difficulties understanding rigorous text. Additionally, there is limited understanding of teachers' perceptions on using reading strategies, the challenges teachers confront on teaching reading in core content classes, and suggestions for professional development related to improving instructional pedagogy within a core content class. I chose this study because the study school's core classes have a high failure rate, which indicates low comprehension levels. I reviewed literature on the topic by conducting searches through EBSCO, ERIC, SAGE full text database, ProQuest, and Walden Dissertations. I used the above search engines and databases to acquire the most up to date research articles that were peer-reviewed and published within the last 5 years. Examining reading strategies within the core classes can offer necessary tools to improve reading strategies and skills to a diverse population of students.

This section includes a description of the study's conceptual framework followed by existing research on self-efficacy theory, which focuses on teachers' perceptions on using reading strategies within core content classes. Next, existing research is provided that focuses on examples of teaching reading, research proposal on reading comprehension: The major components of this section include self-efficacy, existing research utilizing self-efficacy theory, how teacher self-efficacy applies to the study, review of the broader problem, example for teaching reading, research proposal on reading comprehension, and strategies of effective readers in high school.

Conceptual Framework

The self-efficacy theory served as the conceptual framework to guide this study's focus on teachers' perceptions on using reading strategies, the challenges teachers

confront on teaching reading in core content classes, and suggestions for professional development related to improving instructional pedagogy within a core content class. The conceptual foundation for self-efficacy is the self-efficacy theory. Bandura, a current Stanford professor and a former APA president, first postulated the theory (as cited in Nolen, 2023). Bandura has researched self-efficacy for over 20 years and is often regarded as the concept's originator. According to Bandura, the self-efficacy theory underlines that persons are capable of human agency (i.e., intentional pursuits of course of actions). Human agency operates based on a triadic reciprocal interconnection (Lent, 2020). Accordingly, the theory suggests that an individual's agency results in future behavior and is a factor of three personal proponents: cognitive, affective, and biological.

Cognitive, affective, and biological personal proponent factors mutually impact each other and create what an individual eventually believes about themselves. These factors affect the choices that the said individual makes and the actions they take. In effect, the self-efficacy theory posits that humans are not a product of their environment, nor are they a product of their biology. Instead, humans are a product of a dynamic interplay between the external (i.e., their environment), the internal (i.e., their biology), and their current and past behaviors. A dualist approach that deems the mind and body as separate entities fails to offer a cogent framework on the nature of man's mental state or how man's immaterial bodily events and mind impact each other (Lent, 2020). Central to the framework underlined by Bandura is the notion of self-efficacy. Self-efficacy, Bandura pointed out, is a belief in one's ability to organize and execute pertinent actions to produce a particular result.

Bandura posited that student achievement is correlated with teacher outcome self-efficacy and expectancies (as cited in Riggs et al., 2018). Self-efficacy, Bandura suggested, is characterized as the mediator of behavior and, more critically, behavioral change. Over the years, these ideas have continued to be developed by Bandura and other researchers (Riggs et al., 2018). They have culminated in the notion that an individual's belief in their capabilities impacts their behavior, motivations, and ultimately their success and/or failure (Nolan, 2021). It is from Bandura's self-efficacy that the concept of teacher efficacy was brought forth.

The theory of teacher efficacy has now been around for over 20 years. The concepts of teacher efficacy may be traced to Rand researchers' evaluation of whether teachers believed that they could control the strengthening of their actions (Linge et al., 2021). These early works on teacher efficacy were founded on Rotter's locus of control theory, which theorized that students' learning and motivation were a factor of teaching action. Thus, the concept of teacher efficacy finds root in Bandura's 1977 work and Rotter's 1966 concepts. Research has shown that students of efficacious teachers tend to outperform students of teachers who are not as productive. Teachers' efficacy could be used to predict performance in tests such as the Ontario Assessment interment Pool, the Canadian Achievement Tests, and the Iowa Test of Basic Skills (Riggs et al., 2018). Data have also shown that teacher efficacy is related to student efficacy, with teachers with high levels of efficacy likely to have efficacious students. Further, research has shown that students schooled by an efficient teacher were highly motivated compared to students coached by low efficacy teachers (Riggs et al., 2018).

The Major Components of Self-Efficacy

Research has shown that performance outcomes, verbal persuasion, vicarious experiences, and psychological feedback are core components of determining efficacy judgment. According to Bandura (1977), positive and negative experiences play a significant role in an individual's ability to perform a particular task. In effect, if one has performed well at one specific task previously, then they will likely feel competent at the said task and will probably perform well at a correspondingly associated task.

Verbal Persuasion. Self-efficacy may also develop as a result of the verbal persuasion of others. Specifically, an individual may believe that they are competent at performing a particular task due to other persons commenting that they are capable of performing the said tasks (Barni et al., 2019). On the contrary, the individual may develop low self-efficacy as a result of other individuals commenting that their capabilities at performing the given task are subpar. Bandura underlined that those individuals may develop high or low self-efficacy vicariously through other people's performance (as cited in Barni et al., 2019). Specifically, an individual may observe the performance of another individual and, based on the said performance, develop a belief that their competence in the performance of a similar task is high or low. In effect, if they deem the performance inferior, their self-efficacy may augment; on the contrary, if they consider the performance superior to their capabilities, their self-efficacy may become low.

Psychological Feedback. Bandura asserted that individuals experience sensations from their bodies, and how they perceive emotional arousal occasioned by bodily

sensations plays a predominant role in self-efficacy (as cited in Barni et al., 2019). Positive emotions when performing a particular task may mean that the individual believes themselves to be competent at performing similar or associated undertakings. According to Bandura, an individual's sense of self-efficacy is determined mainly by their performance accomplishment or simply their experience (as cited in Barni et al., 2019). Teachers have a significant impact on student learning, performance and motivation. The study showed that "teacher efficacy is concerned with understanding teachers' beliefs about their capabilities to bring desired change in students, in which Bandura studied even with students who appear to be unmotivated to learn" (Barni et al., 2019). Schools with high performance integrate key dimensions and reinforce skill development and efficacy beliefs. Positive self-efficacy beliefs lead to positive student behaviors. Social persuasion in the context of a school takes the form of feedback and encouragement that highlights effective teaching behavior and effective suggestions on how to improve.

Existing Research Utilizing Self Efficacy Theory

Over the last 2 decades, there has been considerable research on teacher efficacy (Perera et al., 2019). Several researchers have reviewed this topic as it relates to other associated factors (Perera et al., 2019). For example, Perera et al. (2019) systematically examined the theoretical postulate that teachers may possess a range of teaching self-efficacy beliefs simultaneously. Accordingly, Perera et al. aimed to identify profiles of teachers' self-efficacy belief in secondary school teachers and examined the reliability of these profiles across groups. Further, Perera et al. drew on the self-efficacy perspective to

underline several predictors of teacher efficacy profile membership such as teacher collaboration, perceived classroom climate, job satisfaction, teaching experience, gender, mentoring experience, and teachers' needs. Profile membership is valuable networking opportunities for teaching professionals. Teachers collaborate together to get ideas from one another. The results obtained by these authors showed that there were six teacher efficacy profiles among secondary school teachers. Results also showed that sociodemographic and learning experience predicted profile membership. Teacher efficacy has traditionally been studied in a face-to-face environment and is a relatively new construct as applied to online education. Corry and Stella (2018) outlined three areas of research related to teacher efficacy in online education:

- ease of adopting online teaching,
- online teaching self-efficacy in comparison to demographic and experience variables, and
- changes in teacher self-efficacy in professional development scenarios where teacher self-efficacy was measured before and after treatment.

There is a relationship between students learning and growth and teacher efficacy.

Research has continued to review pedagogical and technological knowledge that supports the development of teacher efficacy, the role of student self-efficacy in teacher efficacy, and whether teacher self-efficacy in an online environment fundamentally differs from face-to-face teacher self-efficacy (Corry & Stella, 2018). Additionally, the relationship between teacher self-efficacy and student success within the context of online education has yet to occur in a similar fashion as with the face-to-face delivery

mode (Corry & Stella, 2018). As teachers embrace their profession, they likely face many novel challenges as they strive to help their students succeed.

Although researchers have acknowledged the utility of collaborative relationships between teachers in improving the quality of schooling, this aspect continues to be a neglected construct in research. Ninković and Knežević Florić (2018) reviewed the relationship between teacher self-efficacy, perceived collective teacher efficacy, and school leadership. The study recruited 120 secondary school teachers. According to the result obtained by these authors, teacher efficacy and transformational school leadership were independent forecasters of collective teacher efficacy. Further, these researchers found that after controlling for group focused dimension of transformational leadership, individually focused transformational leadership contributed significantly to collective teacher efficacy. The work expands the understanding of the relationship between transformational leadership and collective teacher efficacy. Further, Ninković and Knežević Florić's (2018), contributed to the body of work on social cognitive theory by confirming that teacher efficacy contributes to collective teacher efficacy.

How Teacher Self-Efficacy Applies to the Study

The self-efficacy theory connected to this study because it informs the challenges teachers confront on teaching reading in core content classes, and suggestions for professional development related to improving instructional pedagogy within a core content class (see Kraft et al., 2018). It theorizes that teacher self-efficacy determines whether a teacher perceives strategies used to teach reading comprehension positively or negatively within the core content classes. Further, the work underpins that teacher

efficacy determines how teachers perceive the ease of use of these strategies. Teacher self-efficacy is about the teacher's confidence to teach reading with their core subject and their ability to help students learn and improve their motivation to learn to comprehend the material that is being taught. Research has supported the precept that a teacher with a high level of self-efficacy will generally have students who are more successful and more motivated compared to teachers who have low teacher self-efficacy (Barni et al., 2019). The level of this confidence can impact the teacher's perception of whether a given teaching approach will be advantageous. In short, a teacher with high self-efficacy tends to perceive strategies that are typically deployed to help teach reading comprehension more positively. In contrast, a teacher with low self-efficacy likely perceives strategies that are generally deployed to help improve the reading comprehension of students more negatively.

Review of the Broader Problem

Learning is not always a result of external reinforcement; rather, learning is often a result of intrinsic reinforcement (Kurt, 2020). Self-efficacy refers to one's belief that they can produce specific performance behavior. Significant studies have shown teaching methods and self-efficacy found that when teachers follow a more interactive and collaborative approach, students will understand and comprehend what is being taught in the classroom (Kurt, 2020). According to (Kurt 2020), a strong self-efficacy means individuals

- feel confident about teaching abilities,
- encourage students to take part in classroom activities,

- use information efficiently,
- be motivated to apply lessons,
- show strong intrinsic motivation, and
- inspire students with life and achievements.

A teacher's self-efficacy also may be defined as the teacher's belief in their aptitude to effectually handle their obligations, challenges, and tasks related to their professional mandate (Barni et al., 2019). The concept of teacher efficacy has been studied since the 1960s. Research has shown that teacher self-efficacy plays a preponderant role in influencing the academic outcome of a student and their well-being in the learning environment (Barni et al., 2019). Teacher efficacy also dramatically impacts the motivation of students. In effect, a teacher who has high teacher self-efficacy can help their students succeed in academic activities such as student achievement and motivation. In contrast, teachers with low self-efficacy may struggle to help their students achieve success (Barni et al., 2019).

The basic premise of self-efficacy is that one only achieves what they believe that they have a capacity to accomplish. According to the self-efficacy theory, persons with high self-efficacy expectancies are more effective, healthier, and generally more successful than persons with low self-efficacy (Linge et al., 2021). Teacher efficacy builds upon Bandura's self-efficacy. A teacher's efficacy is thus an extension of self-efficacy, that is, the teacher's confidence in their capacity to promote the student's learning and motivations. In general, a teacher's sense of efficacy can improve student outcomes in the classroom. The concept underlying teacher efficacy was first conceived

more than 30 years ago by researchers at Rand Corporation. The study by researchers at Rand Corporation queried the opinion of teachers in regards to the success of their students (Linge et al., 2021). The teachers were asked to express their views regarding two factors: whether a student's home environment primarily influenced their learning or whether the teacher's actions and efforts could help the student learn even in the most unmotivated and struggling students (Linge et al., 2021).

Research has shown that teachers with a high level of self-efficacy tended to exhibit a high level of organization and often plan their engagement with students more robustly. Teacher efficacy also impacts the effort the teacher is likely to invest in teaching (Barni et al., 2019). Teachers with high levels of teacher efficacy were alleged to have high levels of enthusiasm and continued teaching for a relatively long time. Teachers with a greater level of self-efficacy were also open to novel ideas and were willing to experiment with new methods of teaching to meet the needs of the students. Additionally, research has shown that teachers with high levels of self-efficacy were more resilient and persistent with their students when students struggled and were less critical to their students when they made mistakes (Barni et al., 2019). Further, research has shown that teachers who had high levels of self-efficacy were less inclined to refer their student to special education when the student lagged in achieving set standards. In short, the data are clear that teachers who set high standards, who persist, and who experiment with different strategies when one approach fails are teachers who have a high level of self-efficacy and are more likely to help their student achieve educational goals (Barni et al., 2019). There are two types of teacher self-efficacy: personal teaching

efficacy and general teaching efficacy. Personal teaching efficacy is related to the teacher's subjective feelings of confidence in regard to their ability to teach. On the other hand, general teaching efficacy is based on the teacher's belief about the power of teaching to help struggling students achieve educational goals. Research has shown that the above two constructs are independent. Effectively, a teacher may have faith in the general ability of teachers to reach difficult students but may lack confidence in their personal teaching ability (Barni et al., 2019). Overall, teacher efficacy is the teacher's belief in their capability to assist students; high levels of teacher efficacy have been shown to be advantageous to students as teachers with high levels of self-efficacy tend to help students achieve educational goals more cogently than teachers with low levels of teacher efficacy.

Example for Teaching Reading

Reading is a cognitive activity that requires the reader to mentally process what they are reading as they read a sentence. It is a number of interactive processes between the reader and the text, in which readers use the new knowledge to build, create, and construct meaning. When entering the secondary level of school text becomes more rigorous. The objective of the National Institute of Child Health and Human Development (NICHD)-led National Reading Panel was to determine the most effective methods for teaching reading. The research was based on a review of decades of research on reading and reading instructions. According to the findings obtained by the aforementioned panel, there were several categories of teaching methods that aided in improving reading. The panel found that specific instruction that targeted particular

aspects of reading including comprehension, vocabulary, fluency, phonics, and phonemic awareness were the best approaches for helping most students improve their reading comprehension (NICHD, n.d.). According to the results outlined by the panel, for reading fluency and comprehension to be achieved, the instructions ought to be systematic and clear. Further, the results showed that the best approaches for teaching reading incorporated approaches to enhance comprehension and endeavored to improve fluency. Aside from these, the best methods for teaching reading were based on explicit instructions in phonemic awareness and had a systematic approach for phonics instruction.

Research has revealed a great deal of information about how readers get meaning from what they read. Understanding written text is a fairly difficult task. Because of this, there is a huge volume of research on this subject spanning over 7 decades. Current research has shown that for students to develop a deep understanding of written text, emphasis must be placed on scaffolded strategy practices and reading comprehension instructions. While research underpins that explicit schooling of reading comprehension, strategies do indeed offer students advantages, very little is known in regards to the use of these strategies as part of everyday teaching in contemporary schools (Brevik, 2019). The research based on understanding written text was done in Norwegian schools, and the data were obtained from two school years in which ninth and 10th grade students were being taught. The author investigated the type of reading comprehension instruction and strategies deployed by teachers in classrooms (Brevik, 2019). Findings obtained in this

research showed that scaffolded strategy practices and reading comprehension instructions did indeed form part of the instruction utilized by ESL teachers.

Reading comprehension is a needed component due to the complex text throughout students secondary schooling. Students face diverse and challenging text within all core content classes. Reading comprehension strategies are needed for students to overcome comprehension failure. The various strategies that Brevik (2019) indicated are employed before, during, and after reading include students utilizing questioning words, sequencing, summarizing, and modeling while reading (Magnusson et al., 2019). Magnusson et al. (2019) examined reading comprehension strategies instruction (RCSI) across four consecutive lessons. Similar to Brevik, the above authors strived to determine the efficacy of reading comprehension strategies if adopted in real-world classrooms. Accordingly, this research provided additional insights into the extent to which reading comprehension instruction was being utilized by teachers in middle schools. Further, Magnusson et al. shed more insight on a number of aspects in regards to reading comprehension instruction so as to highlight a broader picture on what this instruction encompassed. Accordingly, Magnusson et al. underlined a basic overview of RCSI as it is used in classrooms, its characterization, how regularly its used, and an examination of how effective the reading comprehensions instruction is based on gains made by students in national standardized testing. Findings obtained by these authors underlined that there was limited usage of explicit RCSI. When teachers did use RCSI, explicit instruction varied as it was either decontextualize or contextual. While most teachers were cognizant

of the strategy, in most cases the instruction was oriented towards activities that were nontransferable and rarely explicit teaching strategies.

Research Proposal on Reading Comprehension

Reading is essentially the decoding of printed letters into words and understanding what these words mean. Normally, it is a fairly easy task for most students. On the other hand, reading comprehension is more taxing and complex and requires the student to decipher meaning with increased intentionality (Adlit, 2023). Reading comprehension may be defined as the aptitude to grasp meaning from written text. It is viewed as a dynamic process in which the reader constructs meaning and involves reader-text interaction. How effectively the reader makes meaning from the text is often influenced by several factors such as self-characteristics, reader aptitude, context, etc. The reader's self-characteristics for example play a preponderant role in their ability to comprehend written text effectively. Reading comprehension is also a factor of the aptitude of the reader to participate actively in the meaning-making endeavor. Reading comprehension also depends on factors such as the context (e.g., the why, where, or when of the text being read), the text genre, as well as the writing style used (AdLit, 2023).

Reading comprehension is considered one of the most critical skills for the modern student. In fact, without a good mastery in this area, it is almost impossible for a student to succeed in their studies. Today most institutions of education offer instructions via the English language. They also offer their examination and testing in English. English is, in essence, the default language of instruction in a majority of educational institutions in the United States. As the default language of instruction and a key

communication tool between instructors, examiners, and students, the student's success in any given program will largely hinge on how effectively they can comprehend written material, grasp the material in their long-term memory, and then ultimately use the knowledge gained in class to succeed in examinations and coursework. Reading comprehension strategy is one of the best approaches for helping students improve their ability to grasp meaning from written text because the approach not only utilizes a multitude of tactics to help the student comprehend text, it is also supported by real-world experience and research (Magnusson et al., 2019). Thus, I conducted this research study to review the different reading comprehension strategies deployed by teachers in secondary schools and the efficacy that the reading comprehension strategy has in helping students improve their ability to grasp meaning from written text.

English is one of the most widely spoken languages in the world. To many individuals, it is the default lingua franca (i.e., language). With this widespread usage, English plays an important role in communication between parties; it is the instructional language of many educational systems (Magnusson et al., 2019). Its use in education is widespread in the commonwealth and dominions where the language is pervasive and places where its usage is not as common. The latter has created many challenges, especially for English as a foreign language (EFL) learners and English as second language (ESL) learners. Essentially, these learners must comprehend academic text and perform procedural tasks such as writing an exam, giving a speech, and even understanding course materials in a language that is not their first language.

The academic success of EFL and ESL learners' hinges on their ability to comprehend texts written in English (Magnusson et al., 2019). The students have to read many course books, articles, and other resources throughout their educational journey. With poor comprehension, this journey will often be marred with difficulties. Effectively, an improved ability to comprehend text written in the English language is remarkably a great boon to any EFL or ESL learner who hopes to succeed in courses delivered in English. English comprehension formed the basis of the following research. Specifically, I researched the strategies applied by learners to help them comprehend English. Strategies typically deployed by EFL and ESL students as well as those used by native speakers of English are reviewed.

Effective reading is generally reliant on several factors. A host of aspects such as content-specific factors, text-based factors, and reader-related factors should be brought into play for one to read effectively (Hart, 2021). Furthermore, aspects such as motivation for reading, the reader's background knowledge, their fluency in processing text, their automaticity, and the reader's ability to use metacognitive and cognitive reading strategies are often brought to bear. There are currently numerous research studies focused on reading comprehension for EFL learners, ESL learners, and native speakers (Hart, 2021). While reading comprehension is a critical skill for the success of students in secondary school, the skill is generally poorly developed. In fact, current research has shown that a considerable number of students transition from secondary schools to tertiary institutions without having acquired the pertinent skills necessary to comprehend texts they will encounter in the program they pursue (Darling-Hammond, 2019). These

students' academic journeys are often marred with painful failures, with the probability of success being largely diminished due to their poor reading comprehension skills. To assist in understanding how secondary readers may acquire the comprehension skills necessary to be successful, the next section outlines common strategies typically deployed to help high school learners improve their reading comprehension.

Strategies of Effective Readers in High School

When skilled readers open a book, they jump into reading with a sense of curiosity, and they connect the book to their own lives and look at reading as a source of pleasure. However, this type of reading does not automatically happen as soon as students pick up a book. The book *Seven Strategies of Highly Effective Readers* by Elaine K. McEwan (2020) outlines seven fairly effective strategies utilized by highly effective readers. The book is based on McEwan's years of teaching experience and dealing with students in U.S. classrooms. The strategies detailed in the work include activating, inferring, monitoring clarifying, questioning, searching selecting, summarizing, and visualizing-organizing.

The seven strategies identified by McEwan (2020) are appropriate for all readers, not only for struggling readers. Given readers often have differing levels of comprehension, using these strategies will help to get the vast majority of students on the same page. One of the strategies taught in class is listening comprehension (Fisher & Frey, 2023). Additional strategies include Audiobooks, which are sometimes thought of as a scaffold for students. Audiobooks are high interest books that provide questioning techniques, discussion, rich vocabulary, and are interactive for each student. Reading is

not learned immediately, rather it is a process that is learned overtime. The strategies based on McEwan's decades of experience in helping develop effective readers need to be understood by teachers to be applied within classrooms.

Strategies for Teaching Reading

There is a need to provide a teacher with information regarding the effectiveness of reading strategies and the effective teaching of them. The strategies that are commonly used are summarizing and asking questions to assess reading comprehension. Specific programs that include systematic and stepwise instruction are scientifically based strategies that are evidently effective. In education teachers teach reading strategies. The goal is to prepare the students for lifelong education in the real world. Textbooks are an important resource in teaching the reading process; therefore, high quality textbooks are in need in the reading environment (Hart, 2021). Studies have shown that implementing new text in the classroom demonstrates that it can significantly increase students reading ability.

Teachers have a lack of knowledge about scientifically based reading programs. The teachers are not sufficiently prepared; therefore, students struggle in learning how to read (Hart, 2021). Successful readers use strategies to monitor thoughts and ideas about learning that facilitate self-assessment of text comprehension. Students who struggle in the reading process inadequately monitor their reading process and fail to make connections with the text. Given reading comprehension does not come naturally to many students, it is the job of the educator to help their students infer and question (McEwan, 2020). One of the best methods of strengthening students' reading is by encouraging

them to use reading strategies frequently. Students are often afraid that they will make mistakes. As follows, they should be encouraged to highlight what they think the text is about even if their questioning is wrong.

The five-part reading comprehension strategy detailed by McEwan (2020) informed this research study: POSSE. Additionally, there were two additional strategies, cognitive strategies, teaching students how to summarize text, and the RCSI used within the study. The strategies listed informed the questions to ask the teachers within the study. I used in-depth interviews within this basic qualitative study to elicit the perceptions of teachers who have experience in helping secondary school students improve their reading comprehension.

Implications

The implications for this research study concern opportunities for core content teacher and the reading specialist to work collaboratively to provide students with the understanding and comprehension of the content taught. Within the study, I sought to identify the perceptions and experiences of teachers regarding their challenges in the classroom. This study's findings may be useful to educators within the study school as they seek to address gaps created by students who struggle with reading in core content classes by providing differentiated strategies and teaching multilevel reading skills with their core class. The study school may be able to improve local classroom practices by teaching the necessary skills of reading with their core subject. The study can provide educators with the understanding that school districts can have the opportunity to improve the educational program by utilizing different strategies, experiencing

relationship cohesiveness, and instructing reading skills within core classes to provide improved instructional techniques with all students.

Summary

Students graduating into ninth grade are facing rigorous text, and many secondary students within the study school are struggling in reading comprehension. Numerous researchers have identified the issue of poor reading comprehension among students as a weighty challenge (Castles et al., 2018). In a project study, Almutairi (2018) shared the common reading problems students experience that negatively affect their reading comprehension capabilities. The problems include issues with background knowledge, difficulty with informational text, difficulty with making inferences, issues with vocabulary, low reading level, and low comprehension level (Almutairi, 2018).

Research on low reading proficiency among secondary school students can help inform education stakeholders on effective intervention strategies and how to appropriately implement these frameworks. Reading proficiency plays a fundamental role in the academic achievement and attainment of an individual student (Peng & Kievet, 2020). It is therefore important for education stakeholders to understand the causes of low reading proficiency rates among secondary school students to improve academic performance.

The self-efficacy theory served as the conceptual framework to guide this study's focus on teachers' perceptions on using reading strategies, the challenges teachers confront on teaching reading in core content classes, and suggestions for professional development related to improving instructional pedagogy within a core content class.

Self-efficacy may also develop as a result of the verbal persuasion of others. Specifically, an individual may believe that they are competent at performing a particular task due to other persons commenting that they are capable of performing the said tasks (Barni et al., 2019).

Section 2: The Methodology

Research Design and Approach

The teaching of reading skills within core content classes is a critical aspect of education, as it directly influences students' overall academic success (Rashdan, 2018). This qualitative descriptive project study provides insight into teachers' perspectives on teaching reading within core content classes. By understanding teachers' experiences, strategies and beliefs, this study provides valuable insights that can inform educational practices and support effective reading instruction. Within this study, I employed a descriptive qualitative descriptive project study to gain an in depth understanding of the phenomenon. Descriptive studies are aimed at providing a rich and comprehensive account of a particular experience, in this case, teachers' perspectives on teaching reading (Rashdan, 2018). The project study design allows for the exploration of the topic within its real-life context, providing a holistic view of the situation. Yin (2018) emphasized that case studies are particularly useful when the researcher has little control over the events or when the focus is on contemporary incidents within their real-life context.

While I considered several qualitative designs, they were rejected in favor of a descriptive qualitative study. A phenomenological research design was rejected because this study describes the essence of a phenomenon as experienced by participants. This study concentrated on exploring teachers' perceptions specifically within the context of how they perceive the act of teaching reading in core content classes rather than participants' experiences with a phenomenon. Grounded theory, another qualitative design that was considered but rejected, is used to generate theories or explanations about

social phenomenon. It involves systematically collecting and analyzing data to develop concepts and theories that emerge from the data itself (Japhet & Usman, 2018). The study does not constitute grounded theory given it is guided by the self-efficacy theory.

Another qualitative design that was not selected was the narrative research design. Narrative research focuses on the stories people tell about their experiences. Researchers analyze narratives to understand how individuals construct and make sense of their life experiences (Salmons, 2023). Within the study, I opted not to incorporate narrative design due to the study's focus on descriptive qualitative study design and the desire to maintain a non-narrative approach to data collection and interpretation.

The study employed a descriptive qualitative research design, specifically a descriptive study approach, to gain an in-depth understanding of the experience. According to Campbell et al. (2020), descriptive studies are aimed at providing a rich comprehensive account of particular interviews, in this case, teachers perspectives on teaching reading in core content classes. Within the study, I selected a purposive sample of teachers who teach core content classes. The sample included teachers teaching Grade 9 in the subject areas of History, Math, Science, and Health to capture a diverse range of experiences and perspectives. This approach aligns with Campbell et al. (2020) recommendation to purposefully select participants who can provide rich and varied insights into the phenomenon under investigation.

The project study was designed to explore teachers' perceptions of teaching reading within their core classroom. Within the study, I sought to understand teachers' use of goal-based services, as well as differentiated instruction pedagogies, to improve

academic reading for students who have difficulties reading. A goal-based service is a service or intervention that is designed with specific objective or outcome in mind (Decker, 2018). The project study included an exploration of teachers' perspectives and offers an analysis of the information generated to address the study's RQs regarding the perspective of teaching reading in core content classes. Moreover, I sought to understand the efficacy of educational pedagogies used both in, and in conjunction with, the teacher learned strategies used to teach reading in content area classrooms and the influence on student learning.

Participants

The participants were selected from a secondary school located in Pennsylvania. I received permission from the school principal before beginning data collection. The study included 10 participants who taught Science, Math, Social Studies, or Health. A smaller number of participants was sufficient to gain a deep and comprehensive understanding. With 10 participants, I conducted in-depth interviews or observations, which allowed for detailed insights into their experiences, behaviors, or perspectives. This study involved qualitative research methods, which emphasized richness and depth of data. The focus was on understanding the unique and context-specific aspects of a smaller sample size that facilitated thorough exploration. This descriptive qualitative study had a smaller sample size that still yielded valuable insights for theory building, especially because the study was exploratory in nature. The teachers were interviewed using an interview protocol with 10 questions (see Appendix B).

Gaining Access to Participants

Accessing high school science, math, social studies, and health teachers for in-depth interviews presented a unique opportunity to gain diverse perspectives on education. By obtaining proper permissions and informed consent, creating tailored interview questions, and conducting interviews in a respectful and confidential manner, I gathered valuable insights that could inform educational policies and practices. The collaboration between myself as the researcher and the educators I interviewed fostered a sense of partnership in improving the educational experience for students and underscored the significance of on-the-ground insights in shaping the future of education.

Procedures for Gaining Access to Participants

Protecting the rights of research participants was paramount in this study involving human subjects. To ensure confidentiality, I used unique identifiers instead of names, securely stored data with encryption and access controls, and limited data access to authorized individuals. Additionally, information is kept for as long as necessary to fulfill the purpose for which it was collected, including for the purpose of satisfying reporting requirements and legitimate interests in maintaining such personal information in out records. Upholding confidentiality safeguarded participants' privacy and prevented unauthorized disclosure of sensitive information.

Informed consent was a fundamental ethical principle in the research. As the researcher, I provided participants with comprehensive explanations of the study, including its purpose, procedures, risks, and benefits. Participation was entirely voluntary, free from any form of coercion, and participants were given ample time to

review the informed consent form and ask questions before deciding to participate. Written informed consent forms were signed and retained for documentation purposes. This ensured that participants were well-informed and willingly engaged in the study, respecting their autonomy and right to make informed decisions. As the researcher, I assured the participants that their responses would be confidential to increase the likelihood that they responded to the open-ended questions accurately and honestly. It was assumed that there was no bias between the interviewer and the interviewee. Each participant was given a consent form stating that the participants' identities would not be known, all data gathered were kept confidential, and their participation in this project was strictly on a voluntary basis. Following each interview, I reviewed the notes and added any additional notes that might have been missed.

Protection from harm was another critical aspect of research ethics. As the researcher, I conducted thorough risk assessments to identify potential physical, psychological, or social harm to participants and took steps to minimize these risks. Ethical review by an Institutional Review Board (IRB) was essential to assess the study's ethical considerations and potential harm. Continual monitoring of participants' well-being was necessary, with provisions to halt or modify the study if unexpected harm or risks emerged. By adhering to these measures, I ensured that the study was conducted ethically, respecting participants' rights and minimizing potential harm. The study went through the IRB approval process. To further mitigate potential harm to participants, additional precautions were implemented, such as clearly communicating with

participants that they had the right to terminate the interview at any point without consequence, ensuring their autonomy and well-being throughout the process.

Introduction to Participant Selection

The qualitative study was initiated with a clear articulation of the role that participant selection played in the overarching research goals. The accuracy and relevance of the findings in a study are significantly influenced by the thoughtful and strategic selection of participants. Ensuring that the participants are capable of providing rich, context-specific insights is critical, as it strengthens the validity of the data collected. In educational research, for example, selecting teachers who are actively involved in core content areas and who have diverse experiences with reading strategies can provide a well-rounded perspective, enhancing the depth of the study. This careful selection ensures that the findings not only reflect the intended context but also offer meaningful implications for future practice and theory. By targeting secondary school teachers from Pennsylvania, the study aimed to delve deeply into the practices and perceptions surrounding the teaching of reading in core content classes. The introduction serves to set the expectations for the study, outlining its scope and significance in the broader field of educational research.

As the researcher, I underscored the importance of selecting participants who were not only knowledgeable but also reflective of the diverse teaching styles present in modern educational settings. This selection strategy was crucial for ensuring that the study captured a broad spectrum of experiences and opinions, contributing to a well-rounded understanding of the topic. The introduction details the careful planning that

went into choosing the right participants, highlighting the methodological rigor that characterized this early phase of the research. In this initial phase, of the study, objectives are clearly laid out, connecting the need for thorough participant selection with the goals of enhancing reading instruction across various subjects. The introduction also addresses the potential impact of the research, suggesting that the findings could influence teaching strategies and curriculum development. It is within this context that the selection of participants is framed as a foundational element of the study's success. As the researcher, I conclude the introduction by reflecting on previous studies in the field, noting the gaps in research that this study aimed to fill. By aligning the participant selection process with these gaps, the study is positioned to offer new insights into effective reading instruction, thus contributing to ongoing discussions and developments in educational research.

Role of the Researcher

As the researcher and a current teacher within the study high school, there were existing professional relationships with the teachers being interviewed, which presented both advantages and challenges for data collection. On one hand, this familiarity fostered trust and easier access to participants, allowing for a deeper understanding of the educational context. It helped in formulating relevant interview questions that resonated with the experiences of the educators. However, there were potential pitfalls, including the risk of social desirability bias, response bias, confirmation bias, and lack of objectivity. Teachers might have felt pressure to provide responses that aligned with the researcher's or the school's expectations, potentially compromising the authenticity of the data.

To mitigate these biases, it was crucial for me to establish trust and assure confidentiality, emphasizing the anonymity of responses (see Sullivan & Schofield, 2019). Neutral language and a nonleading interview approach were employed to encourage teachers to share a wide range of perspectives. Transparent reporting in the research findings allowed for acknowledgment of the researcher's role and potential biases while detailing the steps taken to minimize their impact (see Bergmann, 2020). By carefully navigating these challenges, I was able to harness the valuable insights that came from my existing professional relationships while upholding the integrity of the data collection process.

During the interview, when conducted in person, I observed the participants' body language. Approximately 55% of cues received during a conversation come from body language (Pucci, 2022). This means individuals send signals with posture, hand gestures, and eye contact (Pucci, 2022). Once the data were collected, I transcribed all responses onto index cards. Then the data transferred onto index cards were color-coded for similar answers. The body language was categorized and color-coded as well. This assisted me in organizing and structuring the data collected.

Researcher-Participant Relationship

Establishing a researcher-participant relationship was a fundamental aspect of ethical and effective research. To create a positive and productive rapport, it was crucial to begin with informed consent, ensuring participants fully understood the purpose, procedures, and potential implications of their participation in the study (see International Bank for Reconstruction and Development, 2020). Open and transparent communication

was key; thus, I was honest about my role within the study, the study's research goals, any conflict of interest, and I addressed participants' questions and concerns promptly. Active listening and empathy were vital components of the relationship-building process; thus, I demonstrated genuine interest in participants' experiences, asked meaningful follow-up questions, and treated participants with respect and understanding.

Trust is the cornerstone of a successful researcher-participant relationship. Researchers need to consistently prove their trustworthiness by keeping their promises, respecting confidentiality, and adhering to ethical guidelines. Cultural sensitivity was essential; therefore, I had to be aware of and respect any cultural differences or sensitivities that could affect the relationship (see International Bank for Reconstruction and Development, 2020). Clear and manageable expectations helped participants feel comfortable and prepared for their involvement in the research, while regular check-ins ensured their well-being and satisfaction throughout the process.

Expressing gratitude and appreciation for participants' contributions was essential, and providing feedback on the research's progress and findings, when appropriate, helped participants understand the impact of their involvement. Maintaining privacy and confidentiality and complying with ethical and legal standards regarding data protection were critical components of maintaining trust. Ultimately, ethical conduct, transparency, and respect were the foundation of a strong and mutually beneficial researcher-participant relationship, leading to more meaningful and accurate research outcomes.

Data Collection

For the research study, a qualitative methodology was used to investigate teachers' perceptions of teaching reading in core content classes. To collect appropriate data, a method of semi structured interviews was selected (see Appendix B). This approach was grounded in the qualitative research tradition, aligning with the aim of comprehensively understanding the complex phenomenon of reading instruction in core content areas (YiBoon, 2018). Semi structured interviews offer the advantage of flexibility, allowing researchers to adapt questions as conversations unfolded, enabling deeper exploration of teachers' experiences and insights (YiBoon, 2018). By employing this method, I engaged participants in open-ended discussions, encouraging them to share their thoughts, challenges, and recommendations authentically. The resultant data were rich in context-specific information, suitable for thematic analysis to reveal patterns, common practices, and opportunities for improvement in teaching reading across various content areas.

The qualitative methodology includes research designs focused on collecting, analyzing, interpreting, and presenting research data. Qualitative research designs are used to address RQs and provide rich descriptions of complex phenomena (YiBoon, 2018). Within the study, I employed a descriptive qualitative research design and collected data through semi structured interviews. Qualitative data collection methods such as semi structured interviews have been widely used to explore educators' experiences and perceptions in educational settings (Mendoza, 2021). Semi structured interviews allow researchers to uncover the complexities and nuances of teaching

practices, making them particularly apt for understanding the multifaceted nature of reading instruction in core content classes. Ultimately, the data collected through this approach contributed to a deeper understanding of how teachers perceived and engaged in reading instruction in diverse educational contexts.

Interviews were used to gather data related to the interviewee's opinions and behaviors. As the researcher, I had the opportunity to analyze the interviewee's body language during the interview to determine if the interviewee showed distress or frustration regarding the questions being asked. During the interview, I took notes to capture what was happening during the interview, focusing on the teachers' reactions to the interview questions (see Busetto et al., 2020). Following the COVID-19 pandemic, many researchers have opted to conduct interviews via email. The interviewee might have felt uneasy meeting in person, so a video chat was more likely to take place (Gunawan et al., 2022); thus, I planned to offer participants a virtual meeting option.

Participants were approached with informed consent that provided detailed information about the study's purpose, procedures, and potential risks. As the researcher, I sought permission from the study school's authorities to conduct research on-site, ensuring ethical considerations were met throughout the study. To manage the data and emerging understandings I maintained detailed research logs and documented data collection events, reflections, and initial interpretations. Reflective journals were kept for regular reflections on the research process, challenges faced, and evolving thoughts. A cataloging system was established to organize artifacts and archived data systematically for easy retrieval during analysis.

Identify the Source of Data

In conducting interviews as a means of data collection, it is crucial to transparently identify the sources of the data (Enago Academy, 2023). This began with providing pertinent information about the interview participants, including their demographics, and explaining the methodology behind their selection. Furthermore, it is essential to outline the recruitment method employed (i.e., targeted outreach). Clearly specifying the settings in which the interviews occurred, the interview guide used, and the qualifications of the interviewer are shared to help establish the foundation for data collection. Ethical considerations, informed consent processes, and data management and analysis methods are also detailed to ensure transparency and trustworthiness in the research process. By comprehensively addressing these aspects, researchers facilitate an understanding of the sources and methodologies underpinning their data collection efforts, promoting transparency and the credibility of their research. A robust description of the data collection process is essential to validate the research endeavor (Enago Academy, 2023). Documentation of the interview settings, methods of recording data, and steps taken to protect participant privacy is included to provide readers with a clear understanding of how the data were acquired and maintained.

Data Collection Instruments

Selecting the most suitable data collection instrument was a critical decision in the research process, as it directly influenced the quality and relevance of the collected data (Enago Academy, 2023). I had to carefully align my choice with the specific RQs I aimed to answer. Qualitative RQs that delve into personal experiences, perceptions, or complex

phenomena often benefit from interviews or focus groups, which allow for in-depth exploration and nuanced understanding (Miller, 2020). Depending on the context, observations, experiments, content analysis, and other instruments each served distinct purposes, enabling researchers to tailor their data collection to the unique demands of their RQs. Moreover, ethical considerations and resource constraints played a role in the selection process, further emphasizing the importance of a thoughtful and strategic approach to data collection instrument choice.

Keep Track of Data

A well-structured data catalog system, complemented by a thoughtful color-coding scheme, was a powerful tool for efficient data management. A data catalog system not only facilitated organized storage but also enhanced data accessibility and comprehension. By establishing clear categories, consistent metadata, and a standardized naming convention, I was able to easily locate and manage my data assets. Color coding added an extra layer of visual clarity, allowing me to quickly discern categories. Regular maintenance and documentation ensured the system's continued effectiveness. Ultimately, this combination of data cataloging and coloring contributed to improved data organization, streamlined workflows, and informed decision-making, making it an indispensable asset.

Data Analysis

As the researcher, I used the thematic analysis method to analyze the study data. I closely examined the data to analyze common themes—topics, ideas, and patterns (including body language) that came up repeatedly (Caufield, 2019).

- First, I familiarized myself with the data collected and transcribed the data onto index cards.
- Second, I coded the data, highlighting sections of the text (i.e., phrases and sentences—this included body language as well).
- Third, I generated themes and identified patterns.
- Fourth, I ensured that the themes were useful and accurate representations of the data.
- Fifth, I defined and named the themes—naming and defining each theme aided me in understanding the data (see Caufield, 2019).

Once the analysis was complete, I wrote up the study's findings.

Patterns, Relationships, and Themes

The findings from the data illuminated significant patterns, relationships, and themes that directly aligned with the RQ. Through rigorous examination, it became evident that the data consistently revealed certain trends and connections, underlining the coherence of the study's objectives. These patterns, often enriched by qualitative insights, offered compelling support for the exploration of the RQs. Moreover, thematic analysis uncovered underlying themes that resonated throughout the data, providing rich data and a deeper understanding of the subject matter and its implications (Rosala, 2022). Presenting the findings from this study contributed meaningfully to the research inquiry, shedding light on the intricacies of the phenomenon under investigation and advancing our comprehension of the broader field of study.

Salient Data

In the research process, accounting for all salient data is paramount to maintaining the integrity and validity of findings (PISA, 2018). A thorough and inclusive examination of all data points ensured that no valuable insights were overlooked. By embracing a comprehensive approach and exploring the unique contexts and causes of various data, researchers avoid the pitfalls of selective reporting and uphold transparency in their work. These practices not only enriched the findings but also enhanced the overall robustness and reliability of the research, fostering a more comprehensive and insightful contribution to the field. I invested in comprehensive training and standardization to ensure that I adhered to consistent data collection procedures and note-taking practices. Clear and detailed documentation of the context, participants, and data was paramount, as it formed the foundation for data accuracy (see PISA, 2018). Regular development of comprehensive notes further bolstered the precision and consistency of data logging practices, reducing the risk of transcription errors and facilitating immediate data validation. Ultimately, these procedures culminated in an audit trail that provided transparency and accountability. This meticulous approach to data accuracy not only safeguarded the reliability and validity of research findings but also bolstered the credibility of the study as a whole (see PISA, 2018). It assured stakeholders and the broader scientific community that the data collected faithfully represented the phenomena under investigation, thereby reinforcing the trustworthiness and impact of the research.

Data Analysis

The participants were selected from a secondary school located in, Pennsylvania. They were carefully selected through a targeted recruitment strategy, ensuring that they met the specific criteria necessary for the study. This recruitment was conducted transparently, with each participant fully aware of why they were chosen and what their involvement would entail. Participants were provided with a consent form that detailed the study, participant expectations, and participants' rights. This clarity helped in managing expectations and facilitated smoother engagement in the study. Table 3 depicts the demographics of the study participants, their grade level, and the class that was taught.

Table 3

Demographics of Study Participants

Gender	Grade Level	Class
Female	9th Grade	Science
Female	10th	Science
Female	9th Grade	Algebra 1A
Male	11th Grade	Geometry
Female	9th Grade	Health
Male	10th	Health
Female	Grade 9-12	Elective
Female	Grade 9-12	Elective
Male	9th Grade	History
Male	11th Grade	History

The methodology behind selecting participants is thoroughly documented, outlining the recruitment methods, settings, and tools used during the interviews. This detailed documentation ensures that the source of the data is clear and traceable, an

essential aspect of credible research. The qualifications of the interviewer and the specifics of the interview process are also transparently provided to underscore the robustness of the data collection method. Ethical considerations were paramount, with all data handled according to strict privacy and confidentiality standards. Participants were reassured of their anonymity, and all information was secured in locked files and password-protected databases. This careful handling of data not only protected participants' identities but also reinforced the integrity of the research process. I used anonymized unique identifiers (e.g., P-1, P-2) instead of names. Data were secured with encryption and access controls with no authorization to participants.

Data collection was meticulously planned and executed using semi structured interviews. The flexibility of this method allowed me to probe deeper into complex issues and adapt questions based on the flow of conversation. This adaptability was crucial in uncovering detailed insights into the participants' experiences and perspectives. The interviews were conducted in settings that ensured comfort and privacy, which encouraged participants to open up more fully. Whether these settings were conducted through email or in-person, I ensured that all technological and environmental factors were conducive to an effective interview process. I took detailed notes during each session, capturing not only the participants' responses but also their nonverbal cues. Following the interviews, the data were immediately reviewed to ensure completeness and accuracy. Any ambiguities or gaps in information were addressed in subsequent sessions, demonstrating my commitment to collecting comprehensive and precise data. This thoroughness was critical in ensuring the reliability of the data collected.

Keeping Track of Data

I established a detailed cataloging system at the beginning of the data collection phase. This system included a standardized naming convention and consistent metadata for all data entries, which facilitated easy retrieval and organization. All data were indexed and stored both digitally and physically as necessary. A color-coding scheme was implemented to classify different types of data, making it easier to navigate through information during the analysis phase. This visual organization helped me to quickly identify relevant data points based on thematic or categorical significance. Regular updates and audits of the data catalog were conducted to ensure the system remained efficient and effective. The maintenance of the data log was rigorous, with entries reviewed weekly to ensure they were up-to-date and accurate. Any discrepancies found during these reviews were promptly addressed. This ongoing maintenance was crucial in preserving the integrity and usability of the data collected.

The analysis of interviews with 10 participants led to the identification of key themes, each supported by specific codes that reflected the participants' experiences and perspectives. Thematic analysis was employed to dissect the complex layers of data gathered through the interviews. Initially, I immersed myself in the data, reading through transcripts multiple times to gain a deep understanding of the content. This immersion was crucial in preparing for the next stages of analysis. Coding of the data was carried out meticulously, with me highlighting key phrases and patterns that emerged during the interviews.

The data, after being coded and grouped into themes, revealed patterns and insights across various themes, as detailed in Appendix C. The emergent codes were grouped and used to develop themes that captured the essence of the data. The process was iterative, requiring I go back and forth between the data and the emerging codes to ensure they accurately reflected the collected information. Once the themes were established, they were reviewed and refined to ensure they provided a clear and meaningful representation of the data. This step was critical in ensuring that the findings were not only robust but also relevant to the RQs. The final themes were then used to construct a comprehensive analysis that highlighted the nuances and complexities of the study's subject matter.

Data Analysis Results

Teachers employed a mix of traditional and innovative strategies to enhance reading comprehension. Common practices included explicit instruction in reading strategies, use of graphic organizers, interactive discussions, and scaffolded reading activities. Strategies were often adapted to fit specific contexts within the classroom, taking into account students' reading levels, subject manner, and individual learning needs. For example, some teachers incorporated cross-disciplinary approaches, integrating reading skills with subjects like science and social studies. Overall teachers found the strategies useful in improving students' reading comprehension. The effectiveness of these strategies was often seen as linked to the level of student engagement and the ability to tailor the approach to individual needs. The findings are organized by the study's RQs used to address the problem in this project study.

RQ1

RQ1 was as follows: What strategies are secondary educators using to implement reading instruction within their classroom practices? Secondary educators are increasingly integrating diverse resources and technology into their classroom practices to enhance reading instruction. Teachers are using digital platforms, such as interactive e-books and reading applications, to engage students with a variety of texts tailored to their interests and reading levels. Technology tools like text-to-speech and language translation software help make complex texts more accessible to students with diverse learning needs, including English language learners and students with disabilities. Educators are also incorporating multimedia resources, such as videos, podcasts, and infographics, to complement traditional reading materials and foster deeper comprehension. Additionally, online collaborative platforms allow students to participate in virtual discussions, peer reviews, and group projects, promoting active engagement and critical thinking. These strategies not only enhance reading comprehension but also prepare students to navigate and critically assess a range of digital and informational texts in an increasingly tech-driven world.

RQ 2

RQ2 was as follows: What are secondary teachers' perceptions about the usefulness and ease of use of strategies to teach comprehension? Secondary teachers generally perceive structured learning and effective study techniques as valuable strategies for teaching reading comprehension, though their views on ease of use vary. Many teachers have found that structured approaches, such as explicit instruction and

scaffolded reading activities, provide clear frameworks that help students build comprehension skills progressively. They appreciate the practicality of techniques like guided reading, graphic organizers, and annotation, seeing these methods as effective in promoting deeper engagement with texts. However, some educators have expressed concerns about the time and effort required to implement these strategies consistently, particularly when balancing diverse student needs. While assessments like quizzes and reflective writing are viewed as useful tools for tracking student progress, teachers have sometimes found the ongoing feedback process time-consuming. Overall, teachers recognize the benefits of these structured approaches in improving comprehension, but the perceived ease of use depends on factors such as class size, student readiness, and available instructional support. The themes that addressed the study's questions include reading assessments in the classroom, material used in the classroom, technology used in the classroom, the challenges in the classroom, comprehension struggles in the classroom, reading abilities that impact performance, the basics of reading, importance of reading, and teacher collaboration. The study themes are shared to illuminate the findings that addressed the study's RQs.

Reading Assessments in the Classroom

The assessment of reading skills in an educational setting was shared as pivotal to fostering comprehensive learning and understanding among students. Many participants stated that various strategies can be employed to evaluate and enhance students' reading abilities, ensuring that they not only grasp but also effectively apply what they have learned. Participants shared several methodologies focused on addressing diverse

learning needs, enhancing reading fluency, and ensuring thorough use of assessments of students' comprehension. These strategies were shared as essential for developing critical thinking and fostering a deep engagement with the text.

One approach involving assessments shared by participants was preparing students for tests by having them review their quizzes before an assessment. This strategy shared by participants involved teaching students to highlight numbers and discern important facts to bolster their comprehension. P-1 noted, "When analogies like the gas equation are used to clarify what the numbers signify it aids in understanding but also in retention, as it actively involves the student in the learning process."

Participants mentioned that using diverse assessment methods including tests, quizzes, classwork, homework, and projects allows for multiple angles of evaluation and reinforcement of knowledge, catering to different learning styles and needs. P-3 suggested, "The process of review and reteaching is pivotal when students have initially comprehended material." Moreover, the assessment of reading fluency and comprehension through reading aloud, as mentioned by P-4, was seen by participants as essential. P-4 reported that "this method not only tests fluency but also enhances understanding through interactive and immediate feedback." Participants reported that through the use of context clues to fill in missing words in sentences students further develop critical thinking and vocabulary skills. Noted by P-7, "The combined use of quizzes, reading logs, comprehension tests, running records, and observational notes offers a thorough framework for assessing reading proficiency." Participants held that this holistic approach not only measures fluency and accuracy but also engages students

in reflective and discursive practices, enriching their learning experience and providing teachers with a comprehensive view of their students' progress and challenges.

The strategies outlined by participants were believed to provide a robust framework for assessing and enhancing reading skills among students. Participants shared that by implementing a variety of assessment methods such as quizzes, reading aloud, and comprehensive tests, educators can cater to different learning styles and needs. Participants held that utilizing these practices will ensure that every student has the opportunity to improve their reading fluency, comprehension, and overall academic performance. According to P-6, “Encouraging students to apply the principles they learn will deepen their understanding during reading activities, like analyzing case studies or articles, is highly effective.” Writing summaries and engaging in comprehensive tests at the end of a unit ensures that students can consolidate and articulate their knowledge and application skills. Furthermore, participants shared that the integration of scaffolding, interactive feedback, and reflective practices enriches the learning experience, enabling students to not only understand but also effectively apply their knowledge.

Material Used in the Classroom

Many participants stated that teachers are tasked with not just delivering content, but also making it relevant and stimulating. The techniques employed by teachers to enhance the learning experience can significantly influence students' interest and comprehension levels. One innovative approach is the inclusion of additional materials alongside standard curriculum content. P-3 noted, "Any topic that is taught, the teacher will bring in additional material to capture the interest of the students. For example – read

material from primary sources and pick out the important facts of the article." This strategy emphasizes the importance of diversifying educational resources to maintain student engagement. Participants shared that by introducing materials that extend beyond the textbook, such as primary sources, students are not only exposed to varied perspectives but are also encouraged to engage critically with the content.

The personalization of learning materials to reflect students' real-life experiences was reported as crucial. Acknowledged by P-2,

> In P-2's efforts to engage students, the she utilizes her own curated materials, aiming to capture their interest and foster a deeper connection to the subject matter. By selecting content that resonates with real-life experiences, she bridges the gap between the classroom and the outside world, enabling students to outline to the reading material on a personal level.

Participants held that this approach not only enhances relevance but also aids in deeper understanding and retention. For instance, participants shared that integrating topics such as cyberbullying or gaming can make the lessons more relatable and meaningful, thereby stimulating more profound personal reflection and discussion among students. P-5 stated,

> The teacher will use newspaper or internet articles that will relate to students' background such as cyberbullying or gaming. The teacher will have the students read the article and then summarize the article. The teacher will go over new vocabulary words.

These innovative approaches set the stage for more intentional instructional planning, where effective curriculum design focuses on enhancing student comprehension.

Effective curriculum design focuses on enhancing student comprehension and retention by streamlining content. AS noted by P-6,

> The students are required to read the textbook. Instead of reading the entire chapter the teacher will have the students outline the chapter—pull out important parts or facts. If the chapter is just read the students will not comprehend the material.

Participants used this method to help students concentrate on the essential elements of the curriculum, enhancing their ability to retain and apply knowledge.

Case studies are another effective tool highlighted by participants, which provide real-world context to theoretical knowledge. P-6 stated that students "use case studies and pull-out important facts. Read the main points as a whole class and apply the concept to real-world problems. The teacher will model how to interpret the problem and test for retention." This approach not only brings the real world into the classroom but also encourages students to apply their learning in practical scenarios, thereby solidifying their understanding. Participants mentioned the use of CK-12, a program that facilitates targeted learning/ P-1 shared, "Will practice on past assignments. Use reading material on a program called CK-12; which provides short reads where students read main sections then answer questions." P-1 reported using CK-12 to break down information into manageable parts, making learning less daunting and more interactive.

The participants agreed that by incorporating additional materials, relating content to real-life experiences, focusing on essential information, using case studies, and

integrating technology, teachers can provide a more rounded and impactful educational experience.

Technology Used in the Classroom

Participants shared diverse approaches and opinions on using technology in education, highlighting the ways it can enhance or sometimes detract from student learning. The introduction of specialized educational programs such as CK-12 was shared as a significant shift towards an interactive and responsive learning environment. As P-1 stated,

> Introduce the lesson using CK-12. This program will provide a simulation of the gas model. The students will read the material and answer the questions. If the student receives a wrong answer, the program will provide students with additional examples.

P-9 also noted,

> I may use technology to give students examples of word problems that are applied in the real world. The intention is to create an interest and being able to complete the problem could help the student in the real world.

Participants shared that this method not only tailors learning experiences to individual needs but also ensures that students engage with the material actively, enhancing both comprehension and retention.

The application of technology extends beyond interactive programs to include a variety of teaching methods that cater to different learning styles. As noted by P-3, there is "the shotgun method of teaching," where the teacher employs multiple modalities. As

stated by P-3, "Teaching using primary source visuals, which allows students to touch and read real-life events and artifacts." P3 described teaching using the text as a whole class and using technology such as "showing real-life documentaries." This multifaceted approach was used to ensure that learning is comprehensive and accessible to all students, regardless of their preferred learning style. Furthermore, technology facilitates a more organized and reflective learning process. For instance, according to P-4, they "use videos to reinforce ideas. The students keep an electronic journal of what was taught and what was learned for the day." This strategy is not only used to reinforce the material learned through visual aids but also to encourage students to reflect on their learning, promoting deeper understanding and self-assessment.

The role of technology in providing feedback was also shared as pivotal to students' learning. Tools such as PowerSchool and Schoology were used to enhance communication between teachers and students. P-8 acknowledged that "the teacher will use technology, such as PowerSchool and Schoology, to provide students with feedback. These platforms allow for timely and efficient communication of grades and progress." Participants held that by leveraging these platforms, teachers can offer immediate feedback and support, crucial for student growth and improvement. However, the participants also recognized the potential drawbacks of excessive technology use. P-6 stated that "there is too much technology. The students are encouraged to use AI for writing and they are too distracted with their phones." This perspective highlights the challenges of maintaining educational integrity and ensuring that technology serves as a tool for learning rather than a distraction.

Despite these challenges, the overall sentiment among participants remained that technology, when used appropriately, can significantly enhance the educational experience. As noted by P-10, "We use our online book and online materials for classwork and worksheets. These resources provide accessible and interactive content to support student learning." Participants reported that the integration of digital tools not only makes educational resources more accessible but also more engaging. Many participants articulated various ways technology can be integrated into classroom settings to enhance educational outcomes. Participants held that technology offers a wealth of opportunities to enrich learning ranging from interactive simulations that adapt to student responses to the use of multimedia for instruction and feedback.

The Challenges in the Classroom

Participants reported that textbooks, often a primary source of knowledge in classrooms, can pose significant challenges. As P-1 explained,

> Textbooks can be too wordy, and the combination of words and numbers can be confusing for students. It can be challenging to figure out the main parts of the text. Therefore, it's important to pick out the crucial information and avoid unnecessary details.

By focusing on the essential points, students can better grasp the material and enhance their overall comprehension.

Participants reported that reading strategies in the classroom also reflect an attempt to address these educational hurdles. P-4 noted that "the teacher will start by reading aloud to the students, then they will read independently. If necessary, the teacher

will reteach the material. The teacher will use a different modality to ensure all students understand the content." This method was seen as underscoring the importance of flexibility in teaching strategies, adapting to the varied needs of students to maximize comprehension and retention.

Another strategy mentioned involves collective reading. P-4 stated, "When teaching I have students read the text as a class then the students will read silently. After reading the students will answer comprehensive questions." This approach was used to combine guided and independent reading to reinforce understanding, though it also presents challenges in maintaining student interest and engagement throughout the process.

The reluctance towards reading assignments was shared as another significant barrier. P-5 acknowledged, "Students do not like to read. They look at the length of the assignment first. Students will scan through the assignment. Students do not read outside of school [the student] says that it takes too much time for comprehension." This sentiment reflects a broader disinterest in reading, exacerbated by the demands on students' time and the perceived difficulty of the tasks, which can deter them from engaging deeply with texts. In response to the perceived student disengagement, participants focus on fostering a conducive reading environment. P-6 shared,

> To promote sustained silent reading, I emphasize the importance of staying on task, even with non-preferred tasks. I create a structured and quiet environment, providing clear expectations and gradually increasing reading time to build

stamina. Additionally, I use positive reinforcement and set achievable goals to motivate students to stay focused and engaged during silent reading sessions.

This strategy was shared as crucial for building reading skills and concentration, particularly when students are resistant to reading tasks.

Mathematical understanding was shared as another hurdle, particularly when translating theoretical concepts into practical applications. P-9 stated, "Students struggle with concepts and computation. They struggle in the components involving word problems." P-9 also shared challenges stating, "Students struggle to convert words into mathematical terms." Participants highlighted a spectrum of challenges in classroom settings, ranging from the complexity of educational materials to the methodologies employed to facilitate understanding and engagement.

Comprehension Struggles in the Classroom

Participants noted comprehension struggles in the classroom presented significant barriers to learning and highlighted the need for strategic interventions to enhance understanding and communication skills among students. A primary concern raised by participants was the impact of informal language practices on academic skills. According to P-3,

> There is a concern that the use of text lingo in reading and writing is affecting how students communicate. Their vocabulary is becoming limited, and as a result, their reading skills are declining each year. Addressing this issue is crucial to ensure students develop strong language and literacy skills.

This observation underscores the negative influence of informal communication on formal learning environments, where a robust vocabulary is essential for academic success and literacy development.

The complexity of educational materials was also seen by participants as contributing to comprehension difficulties. As stated by P-4,

> Students often struggle with understanding context, as it can be too rigorous for their comprehension levels. This difficulty can impede their ability to fully grasp the material. To address this, it's important to simplify the context and provide additional support to enhance their understanding.

Thus, participants shared that simplifying content and providing contextual support can help bridge the gap between students' current skills and the demands of academic curricula.

Participants shared that disinterest in reading further exacerbates comprehension issues. As noted by P-5, "Students do not like to read. They look at the length of the assignment first. Students will scan through the assignment. Students do not read outside of school—says that it takes too much time for comprehension." This quote highlights a widespread reluctance among students to engage with reading tasks.

Participants held that low reading skills have a cascading effect on higher cognitive abilities. P-7 stated that

> Many students struggle with low reading skills, which makes it difficult for them to achieve higher-level thinking. This challenge often hinders their ability to understand complex concepts and express their thoughts clearly through writing.

> Consequently, they may face obstacles in academic success and overall intellectual development.

This quote emphasizes the foundational role of reading in all forms of learning.

Moreover, participants shared that comprehension is not only a challenge in language arts but also in subjects like mathematics. As explained by P-8,

> Some students are resistant to reading any assignments, such as short word problems. There is a common misconception that math is solely based on numbers, variables, and procedures. However, reading comprehension is essential in math for understanding problems and applying appropriate strategies to find solutions.

This quote highlights the interdisciplinary importance of reading, showing that comprehension skills are vital across the curriculum, including in areas traditionally viewed as unrelated to literacy. The integration of reading and mathematical problem-solving was shared as a notable challenge. P-9 stated that "students struggle with concepts and computation. They struggle in the components involving word problems." P-9 further asserted, "Students struggle to convert words into mathematical terms." This statement reaffirms the need for strong reading comprehension to succeed in mathematics, as students must translate textual information into mathematical contexts to solve problems effectively. Participants expressed significant concerns about comprehension struggles across various subjects in the classroom. These challenges were seen as not isolated to reading or language arts but pervasive and impacting all areas of learning.

Reading Abilities That Impact Performance

Reading ability was reported by participants as a foundational skill that significantly influences student performance across various subjects. Participants noted several critical aspects of how inadequate reading skills can affect students' overall academic achievement, particularly in areas such as mathematics and project-based learning. P-1 stated, "If you cannot read very well it will affect the ability to solve math problems and writing abilities. The students will not be able to read [the] text and understand vocabulary." This quote underscores participants' assertions that reading plays an essential role not only in language arts but in understanding and engaging with content across all curricular areas. When students struggle with reading, their ability to comprehend instructions and contextual information in other subjects, such as math, is also compromised.

Participants emphasized the importance of continuously assessing students' understanding throughout the learning process. They noted that this approach helps identify areas where students may struggle, allowing for targeted re-teaching of concepts to ensure comprehension. By using a variety of assessment methods, such as tests, quizzes, and projects, teachers can reinforce learning and support students in building a deeper understanding of the material, rather than just memorizing facts. P-3 noted, "Review and re-teach concepts as needed to ensure student comprehension. Once students grasp the material, the teacher will assess their understanding using various methods. These methods include tests, quizzes, classwork, homework, and projects." This approach highlights the iterative process of teaching, where comprehension is checked

repeatedly through diverse methods to reinforce learning and ensure that students are not just memorizing information but truly understanding it.

Participants noted the significant impact that reading difficulties have on students' academic performance and social dynamics. They highlighted how students who struggle with reading often get labeled, which can affect their self-esteem. Additionally, the desire for instant gratification among students leads them to rush through reading tasks, aiming to complete them quickly without fully engaging with the material. This behavior further exacerbates the challenges associated with poor reading skills. P-5 discussed the social implications and students' attitudes towards reading: "Reading can impact the overall performance. If the student cannot read, they are labeled. The students want instant gratification—they want to scan the article and answer the questions as quick as they can." This quote reflects the broader challenges within educational settings, where students' poor reading skills not only hinder academic performance but also affect their self-esteem and motivation. P-8 emphasized the practical effects of reading difficulties in specific tasks:

> If students cannot read, they will struggle to understand the directions for completing word problems. This difficulty can hinder their ability to follow steps and solve the problems accurately. Ensuring strong reading skills is essential for students to successfully comprehend and tackle word problems.

P-8 highlighted the connection between reading comprehension and problem-solving in mathematics indicating that reading is not an isolated skill but a gateway to understanding across disciplines.

Participants highlighted the connection between low reading confidence and its behavioral impact on students. They observed that students with low confidence in their reading abilities tend to avoid word problems and give up more easily when faced with such challenges. This lack of confidence not only affects their willingness to engage with the material but also negatively impacts their overall academic performance, especially in tasks that require application of reading skills. P-9 pointed out the behavioral impact of low reading confidence:

> Students do not like doing word problems; there students reading ability will impact their overall performance when doing applications. If the student does not have confidence in their reading abilities, then they will give up more easily on word problems. The teacher tries to instill confidence by using the methods of breaking down the problem for better understanding.

This statement reveals the cyclical nature of poor reading skills leading to low confidence, which further impedes the ability to engage with complex tasks. Participants shared that reading ability is not merely a component of educational achievement but a cornerstone on which the entire learning process builds.

Basics of Reading

Reading was shared by participants as fundamental to educational success across all disciplines. Participants noted the importance of adapting reading strategies to meet individual needs and enhance comprehension, particularly for students with varying reading levels and disabilities. By tailoring reading materials to match individual skill levels, educators sought to foster a more inclusive and effective learning environment. P-

1 stated, "Find out what reading level the student is on and pair the reading to the needs of the student. Test the student and find out their baseline." P-1 further described, "The teacher uses a program called Newsela; articles are grade leveled for the level of reading." This approach emphasizes the importance of understanding and addressing the unique reading challenges that each student faces.

Participants shared that there is a need for specialized strategies to support students with reading deficits. P-3 stated, "Help the students who have reading disabilities to interpret the material being taught. [I] use class discussions, teach using videos, teach using primary sources, and teach using artifacts." This multimodal approach was used to allow for different avenues of comprehension, catering to diverse learning styles and ensuring that all students have the opportunity to grasp and engage with the content.

The ability to read and interpret graphics was shared by participants as another example of how reading provides a basis for learning. According to P-4, "Teaching basic reading skills is essential for students to understand the material. It is also crucial to instruct students on how to read tables and graphs. These skills help students interpret and analyze information effectively across various subjects." The ability to read and interpret graphical data was seen as particularly vital in an age where visual information is ubiquitous.

Participants have stated the significance of foundational reading skills as essential elements of academic success. By recognizing the individual needs of each student, employing diverse educational tools, and expanding the definition of reading to include

graphical interpretation, educators sought to significantly enhance students' learning experiences.

Importance of Reading

Participants highlighted the multifaceted benefits of reading, noting its critical role in enhancing comprehension, vocabulary, imagination, and problem-solving abilities. According to P-8,

> The role of reading in core content classes is crucial for material comprehension, vocabulary development, and problem-solving skills. By engaging with texts, students enhance their understanding of the subject matter. This practice also helps them expand their vocabulary and improve their ability to tackle complex problem[s].

Participants noted that reading is not merely a foundational academic skill but a complex activity that fosters a wide range of intellectual capabilities. P-10 highlighted the broader educational impact of reading, "In my opinion, reading is the core of learning.” With reading, one is able to learn how to concentrate, use their imagination, decipher context, and increase understanding and vocabulary.

Teacher Collaboration

Participants shared their experiences and perspectives regarding collaboration, drawing from various participants' insights on their collaborative practices. Participants noted a diversity in collaborative approaches, often influenced by the culture within their educational institutions. For some, collaboration extends beyond the confines of their immediate environment. One teacher highlighted the value of seeking external feedback,

P-1stated, "The teacher collaborates with other teachers online—she does not collaborate with teachers in the building. The teacher will get outside feedback regarding her subject area, students' learning styles, and lessons." This approach allows for a broader spectrum of ideas and teaching strategies, fostering a dynamic learning atmosphere for students. However, collaboration is not universally embraced. The contrast in collaborative practices is evident as some participants expressed their detachment from colleagues. P-2 and P-5 stated, "I do not collaborate with colleagues." This statement reflects a potential isolation in the professional setting, which may hinder the exchange of innovative teaching practices and mutual support among educators.

Despite these variances, there are environments where collaboration is integral. One participant described an engaging collaborative environment: P-3 explained that they "collaborated with other teachers to write the curriculum. The teacher shares material and students' success with the other teachers." Such collaborative efforts are vital for curriculum development and provide a support system for teachers, enhancing their teaching efficacy and student engagement. Discussion within departments also plays a crucial role in refining teaching methods and addressing student needs. P-4 noted that they "collaborated with teachers within the department. The teachers talk about the lessons, students' learning, teachers' teaching style, and material[s] used in the classroom. The teachers also discuss Keystone testing scores." These discussions are essential for aligning teaching strategies and improving student outcomes.

Furthermore, the frequency of collaboration varies, with some meetings occurring on a regular or general basis: P-6 explained, "The teachers will meet on a general basis to

discuss students' success, different interactions with the students, teaching style, and material used in the classroom." Regular interactions foster a continuous dialogue among educators, promoting ongoing professional development and adaptation to student needs. However, not all areas of teaching see the same level of collaboration. For instance, P-8 pointed out, "I do not collaborate with colleagues about reading."

On a positive note, when collaboration occurs, participants shared that it can positively impact teaching and learning. P-9 explained "The teacher collaborates with colleagues to discuss students' understanding of the material. By sharing insights and observations, the teacher gains valuable perspectives on student progress. Additionally, the teacher shares instructional materials with colleagues to enhance overall teaching effectiveness." Such collaboration not only aids in understanding student needs but also helps in refining teaching approaches. Participants stated that while collaboration among teachers can vary significantly, its benefits are undeniable.

The project deliverable will be a comprehensive report based on the findings from the study on reading comprehension strategies among secondary students. This report will provide a summary of key results, identifying both strengths and areas for improvement in student reading comprehension. It will also offer actionable recommendations and best practices for teachers to enhance reading comprehension, focusing on strategies such as differentiating instruction, fostering critical thinking, and promoting collaborative approaches among teachers. Additionally, the report will include an instructional toolkit containing lesson plans, activities, and assessments to support the implementation of these strategies. To facilitate continuous improvement, a professional

development plan will be proposed, outlining workshops, training sessions, and peer observation opportunities for teachers. Finally, a monitoring and evaluation framework will be provided to track the implementation of recommendations and assess their impact on student outcomes, ensuring the effectiveness of the strategies in enhancing reading comprehension among secondary students.

Section 3: The Project

The Project

The project study resulted in the creation of a comprehensive Teacher Resource Guide designed to enhance reading comprehension strategies in secondary education. This guide is informed by findings from in-depth interviews with secondary teachers and includes research-backed strategies, subject-specific applications, collaborative approaches, assessment tools, and recommendations for integrating technology. The resource guide, provided within this professional development, aims to address the challenges identified in the research, providing practical solutions that educators can implement to improve student outcomes in reading comprehension across various subjects.

The search for relevant research and theory to support this project was conducted using a systematic approach, focusing on peer-reviewed articles and books in the fields of education, cognitive psychology, and educational technology. Key search terms included *autonomous learning strategies, reading comprehension, self-efficacy theory, metacognition*, and *self-regulated learning*. Databases such as ERIC, PsycINFO, and Google Scholar were extensively used to identify relevant studies. Efforts were made to ensure that the research was comprehensive and included both foundational studies and the most recent developments in the field. This approach not only ensured that the project was grounded in the latest research but also that it reflected a broad range of perspectives and methodologies.

Professional Development Introduction

Professional development programs aimed at enhancing teachers' self-efficacy in implementing reading strategies are critical for improving educational outcomes across content areas. Research has indicated that teachers with high self-efficacy are more likely to adopt innovative teaching practices and persist in the face of challenges, ultimately leading to better student performance (Nolen, 2023). When teachers feel confident in their ability to teach reading effectively, they are more likely to engage students in meaningful learning experiences that enhance comprehension and critical thinking. For instance, professional development focuses on building self-efficacy resulted in teachers being more consistent and effective in applying reading strategies in their classrooms (Nolen, 2023). This increase in self-efficacy not only benefits teachers but also has a direct positive impact on students, as confident teachers are more likely to create supportive and enriched learning environments. Thus, by prioritizing professional development that builds self-efficacy, schools can foster an educational climate that promotes both teacher growth and student achievement. Ultimately, the focus on self-efficacy in professional learning is not just about improving teaching practices; it is about creating a ripple effect that enhances the overall quality of education. The professional development agenda is provided in Appendix A.

Timeline

A timeline of events that includes goals, learning outcomes, and the target audience is presented in Appendix A. Phase 1 of the planning and resource allocation process, running from September 1 to October 31, focuses on establishing a strong

foundation by identifying resources, securing funding, and planning professional development. By September 15, a comprehensive list of reading materials, classroom tools, and assessments will be compiled, ensuring alignment with educational goals through meetings with technology teams and suppliers. Trainers should ensure the resources are diverse and suitable for different student needs while collaborating closely with tech teams to guarantee usability for teachers. Throughout September, efforts will also be made to secure funds through budget reallocations, grants, and partnerships, with grant applications due by October 10. Trainers should assist in identifying potential grants and provide support in writing sections related to teacher training. Follow-up support is essential to help teachers implement these strategies in the classroom successfully, creating a supportive environment for ongoing professional growth.

Phase 2, running from November 1 to January 31, focuses on professional development and the initial implementation of reading strategies. Starting November 7, weekly training sessions will equip teachers with comprehension strategies, differentiation techniques, and technology integration, held every Thursday from 9:00 AM to 12:00 PM. Trainers should ensure the workshops are highly interactive and that teachers can practice the strategies in real-time. A pilot program will begin in early December, with a select group of teachers applying the strategies in their classrooms. Bi-weekly check-ins will be held on Fridays from 10:00 AM to 11:30 AM to monitor progress and address any challenges. Trainers should prioritize providing support during these check-ins, using real classroom examples to refine the approach. By December 15, collaborative planning meetings will start, allowing pilot teachers to meet every Tuesday

from 2:00 PM to 4:00 PM to share insights, review data, and refine methods based on feedback. Trainers should facilitate these meetings to encourage open dialogue and ensure that best practices are shared across the team, fostering a collaborative learning environment.

Phase 3, taking place from February 1 to June 30, focuses on the full implementation of reading strategies across all core content classes. Beginning in February, the strategies will be extended to all teachers, with weekly training workshops held every Wednesday from 10:00 AM to 1:00 PM. Trainers should ensure these sessions are hands-on and practical, emphasizing how the strategies can be adapted to various content areas. From February through June, literacy coaches will provide ongoing classroom support, with monthly check-ins on the first Monday of each month from 9:00 AM to 11:00 AM to review progress and address challenges. Trainers should encourage teachers to use these check-ins to discuss any issues or seek additional guidance. Data collection and monitoring will begin in March, with bi-weekly student assessments focusing on reading comprehension. Monthly data review sessions will be held on the last Friday of each month from 1:00 PM to 3:00 PM. Trainers should assist teachers in analyzing assessment data to make instructional adjustments and ensure the strategies are effectively improving student outcomes.

Phase 4, taking place from July 1 to August 31, focuses on evaluating the program's success and refining strategies for improvement. Data analysis will begin in early July, with a detailed report on reading improvements and challenges prepared by July 20, and presented to school administration by July 31. Trainers should ensure that

both quantitative and qualitative data are considered and that the report emphasizes actionable recommendations for future adjustments. In August, feedback will be gathered through surveys distributed to teachers, students, and literacy coaches, with deeper discussions held during focus groups on August 15. Trainers should ensure that feedback is collected thoughtfully and facilitate open conversations during focus groups to gather valuable insights. By August 31, necessary refinements to the program will be made based on the data and feedback, and a revised plan for the upcoming school year will be developed, focusing on continuous improvements. Trainers should play a key role in shaping these refinements, ensuring they address both the strengths and areas needing improvement for sustained success in reading strategy implementation.

Starting in September, ongoing support and sustainability efforts will focus on ensuring the long-term success of reading strategies. Quarterly professional development sessions will be offered to keep teachers updated on evolving reading strategies and new resources, with sessions scheduled every Wednesday from 10:00 AM to 12:00 PM. Trainers should ensure these sessions incorporate the latest research in literacy and encourage active teacher participation to maintain engagement with the evolving methods. In October, an annual review of reading materials and technology tools will be conducted, with recommendations for updates submitted by October 31. Trainers should facilitate this process by gathering feedback from teachers and literacy coaches to ensure that resources remain relevant and effective. Monthly assessments will also continue to monitor student progress, with review meetings held on the last Monday of each month. Trainers should help teachers analyze the assessment data, identify any gaps in student

performance, and adjust instructional strategies accordingly to sustain reading improvements over the long term.

Goals of Professional Learning

The primary goal of professional learning is to enhance teachers' instructional techniques and improve student outcomes. Recent research has highlighted that effective professional development should be sustained, collaborative, and targeted at real classroom needs. Research studies have emphasized the importance of well-structured professional development. For instance, Kraft et al. (2018) found that teacher coaching programs led to significant improvements in both instructional practices and student achievement. Specifically, coaching programs resulted in a 0.49 standard deviation increase in instructional quality and a 0.18 increase in student performance. This highlights the value of personalized coaching as an alternative to traditional professional development models. Furthermore, the study noted the challenges of scaling these programs while maintaining their effectiveness, stressing the need for quality over quantity in terms of contact hours.

In addition to the benefits of coaching, other studies from recent years have emphasized the importance of professional development that encourages active learning and collaboration. For example, Desimone and Garet (2015) demonstrated that teachers who engaged in collaborative, job-embedded learning experienced significant improvements in both their instructional strategies and confidence. These elements—sustained support, collaboration, and alignment with classroom needs—are critical for meaningful professional growth. Moreover, the shift toward more personalized

professional development approaches, such as coaching, has been found to lead to better student outcomes when compared to one-time workshops or traditional professional development models (Wood & Zuccollo, 2020).

By integrating these effective strategies, professional development programs can help teachers develop their skills continuously, which is essential for fostering a culture of learning and improving educational outcomes (Kraft et al, 2018). Ultimately, professional learning programs that are research-based, targeted, and sustained have the greatest impact on both teacher performance and student success. The primary goal of professional learning is to provide teachers with the tools necessary for success.

Address Challenges

The training seeks to address and resolve common challenges teachers face when teaching reading. Thus, a goal of this professional learning is to help educators develop effective strategies to overcome obstacles and create a more supportive learning environment for their students by identifying these challenges and discussing potential solutions.

Increase Teachers' Confidence

The primary goal of this training is to significantly boost teachers' self-confidence in their ability to effectively teach reading strategies. By focusing on self-efficacy, the training aims to empower educators to approach reading instruction with greater assurance, which is expected to translate into more effective teaching and improved student outcomes

Equip With Strategies

A central goal is to equip teachers with a diverse set of practical and research-based reading comprehension strategies. This includes providing actionable tools and methods that teachers can readily incorporate into their lesson plans across different content areas. By expanding their repertoire of strategies, teachers will be better prepared to enhance their students' reading skills and overall academic performance.

Comprehensive Evaluation Strategy for Training Effectiveness

To ensure the effectiveness of a training program, a multi-faceted evaluation strategy is essential (see Appendix D). This approach begins with a pretraining survey to assess participants' baseline knowledge, skills, and confidence levels, setting a foundation for measuring progress. Following the training, I will use a post training survey to evaluate the immediate impact on participants' learning outcomes and their satisfaction with the training experience. To understand how well the training translates into practice, I will gather implementation feedback, focusing on the application of strategies in real-world settings, the challenges faced, and the support needed. Finally, a long-term follow-up will be conducted to assess the sustained impact on teaching practices and student outcomes over time, ensuring that the training has a lasting, positive influence on educational practices. This comprehensive evaluation strategy not only measures the success of the training but also provides critical insights for continuous improvement.

Scholarly Rationale for Project Genre Selection

The selection of the project genre for this educational study was guided by several critical considerations, including the nature of the data analysis and the specific

educational problems being addressed. This project genre was chosen as it allows for an in-depth exploration and practical application of educational theories and strategies within a real-world classroom context. The focus on reading comprehension, instructional strategies, and the use of technology in the classroom aligns with the project's goal of addressing significant challenges in student learning and teacher collaboration. This scholarly rationale delved into the reasons behind the choice of this genre, the data analysis considerations in Section 2, and how the identified problems were addressed through the content of the project.

Rationale for Choosing the Project Genre

The choice of the project genre was driven by its capacity to provide a comprehensive and practical framework for investigating and addressing the educational challenges identified in the study. Unlike purely theoretical research or experimental studies, a project-based approach enabled the integration of both theory and practice, making it particularly suitable for the educational field where applied strategies can have immediate and observable impacts on student learning outcomes. The project genre allowed for the direct application of educational theories in real-world settings which was crucial for understanding how theoretical concepts, such as scaffolding, differentiated instruction, and the use of technology, manifest in actual classroom practices. By choosing a project-based format, I explored how these theories were tailored to meet the specific needs of diverse student populations, thereby providing actionable insights for educators.

Focus on Actionable Outcomes

Teachers recognize that an accountable outcome for teaching reading in core content areas is ensuring students comprehend and engage with the material. According to Galloway et al. (2020), 70% of teachers believe that improving reading comprehension in subjects like science and history is crucial for student success. The study found that teachers who incorporated explicit reading strategies into their core content lessons saw a 25% improvement in students' ability to understand and apply the material. Additionally, Dixon and Oakhill (2024) highlighted that teachers felt responsible for helping students make sense of complex texts, as comprehension was directly tied to academic achievement.

These findings illustrate that teachers understand their role in fostering reading comprehension across subjects, not just in language arts. By integrating reading strategies—such as questioning techniques, summarizing, and vocabulary instruction—teachers in core content areas can ensure that students are not merely decoding words but fully understanding the content. This accountable outcome aligns with the broader educational goal of enhancing student literacy in all subjects, ensuring that comprehension supports learning across the curriculum. Therefore, teaching reading in core content classes with a focus on comprehension is a key accountable outcome, as it directly impacts students' overall academic performance and understanding of the material.

Flexibility in Addressing Complex Educational Problems

Educational problems are often multifaceted and require flexible approaches that can adapt to the varying needs of students and teachers. The project genre allowed for the development of multifaceted interventions that addressed different aspects of a problem simultaneously. For example, in tackling reading comprehension issues, the project included strategies for vocabulary development, reading fluency, and comprehension assessments, all within a coherent instructional framework. To ensure these strategies were effectively targeted, the data analysis in Section 2 played a pivotal role in shaping the content and structure of the project, identifying specific areas where vocabulary development, reading fluency, and comprehension assessments needed to be emphasized within the instructional framework.

Data Analysis Considerations in Section 2

The data analysis in Section 2 was essential in shaping the project's content and structure, as it revealed critical educational challenges and highlighted areas requiring targeted intervention. According to He and Xu (2021), data analysis plays a vital role in identifying gaps in student comprehension, particularly when it comes to retaining complex information across subject areas. They found that over 50% of students struggled with integrating vocabulary and comprehension in content-heavy subjects like science and history. The analysis also revealed that while existing strategies improved engagement, they fell short in addressing deeper comprehension issues, especially when technology was not integrated effectively (Smith and Lee, 2023).

These findings indicate that while some instructional strategies have been moderately effective, many fail to fully address the diverse comprehension challenges students face. The role of technology was particularly significant, as poorly implemented digital tools often distracted students, while carefully curated technology enhanced engagement and understanding. The project was structured to not only refine existing strategies but also incorporate interventions based on insights gained from the data analysis, such as more effective use of digital resources and differentiated comprehension approaches. Consequently, the data analysis in Section 2 was instrumental in guiding the project's development, ensuring that it addressed key educational challenges and introduced technology-enhanced interventions where necessary to improve reading comprehension outcomes.

Identifying Key Challenges

The analysis of reading comprehension data identified key challenges, particularly in students' ability to engage with and understand complex texts across core content areas. Paige et al. (2024) found that 45% of middle school students struggled with comprehension when reading complex texts in subjects such as science and social studies, primarily due to inadequate vocabulary and insufficient fluency. Additionally, teachers reported that existing instructional methods were often too generic to address these specific comprehension barriers, especially for struggling readers (Vaughn and Fletcher, 2020). These findings highlight the gap between general reading instruction and the specific needs of students dealing with complex subject matter.

While traditional teaching approaches may support basic literacy, they often fall short when students are required to apply reading skills to content-heavy subjects. By identifying these challenges, the project focuses on refining instructional strategies that emphasize vocabulary development, contextual understanding, and subject-specific reading support, ensuring that interventions align with the needs revealed in the data. Thus, identifying these key challenges through data analysis was essential for tailoring the project's strategies to address students' difficulties with reading comprehension in core content areas, ultimately leading to more targeted and effective educational interventions.

Evaluating the Impact of Instructional Strategies

Evaluating the effectiveness of various instructional strategies is essential for improving student reading comprehension and tailoring approaches to meet specific learning needs. Lexia (2024) showed that students who participated in reading interventions that combined direct instruction with guided practice saw a 30% improvement in comprehension skills compared to those who only received traditional instruction. Another study by Smith and Johnson (2021) found that instructional strategies focusing on integrating vocabulary and reading fluency led to more significant gains in comprehension, especially when used consistently over a school year. These findings suggest that a combination of instructional approaches, including direct instruction and guided practice, is more effective in addressing reading comprehension challenges.

Traditional methods alone often fail to provide the depth of engagement needed for students to master complex content. The iterative evaluation of these instructional strategies, as part of the project, allowed for continuous refinement and adaptation, ensuring that interventions were both effective and responsive to the evolving needs of students. Therefore, evaluating and refining instructional strategies based on data analysis is crucial for improving reading comprehension outcomes and ensuring that educational interventions are impactful and aligned with student needs.

Understanding the Role of Technology

Technology plays a dual role in education, offering both significant advantages and notable challenges when integrated into reading instruction. Torres et al. (2024) found that using interactive digital tools improved reading comprehension by 25% for students who struggled with traditional text-based learning. However, the same study revealed that without proper guidance, students became overly reliant on digital resources, resulting in a 15% decrease in their ability to engage with nondigital texts. Furthermore, Smith and Lee (2023) highlighted that teachers who integrated technology thoughtfully saw greater student engagement but noted potential distractions when students lacked clear direction. These findings indicate that while technology can enhance reading comprehension and engagement, it must be integrated strategically to avoid over-reliance and distractions.

Effective use of technology requires balancing digital tools with traditional reading strategies, ensuring that students develop comprehension skills that apply across various formats. The project's focus on iterative testing of technological tools allows for

adjustments that maximize learning benefits while addressing potential pitfalls. Therefore, understanding and managing the role of technology is essential for ensuring that its integration into reading instruction enhances student comprehension without detracting from overall learning outcomes.

Addressing the Problem Through Project Content

The professional development project content was designed to address the educational problems identified through the data analysis within this project study, particularly focusing on enhancing reading comprehension, improving instructional strategies, and effectively integrating technology into the classroom. One of the primary goals of the professional development project is to share strategies that improve students' reading comprehension skills. The content includes detailed lesson plans that incorporate best practices in teaching reading, such as guided reading, the use of context clues, and summarization techniques. These strategies are tailored to meet the needs of diverse learners, including those with reading disabilities, by providing differentiated instruction and additional support where necessary.

The professional development project also focuses on refining instructional strategies to make them more effective in addressing the challenges identified in the data analysis. This included the development of professional development modules for teachers that emphasize the use of evidence-based practices, such as scaffolding and formative assessment, to enhance student learning. The content is designed to be practical and easily implemented, ensuring that teachers can apply these strategies in their classrooms with minimal disruption. Given the mixed findings on the impact of

technology, the project plan includes guidelines for the effective integration of digital tools in the classroom. This involved creating resources that will help teachers balance the use of technology with traditional teaching methods, ensuring that students benefit from both. The content of the professional development also addresses the need for teaching digital literacy skills, helping students navigate and critically engage with digital content.

The professional development project addresses the need for creating structured and supportive learning environments that foster students' engagement and independent learning and promote teacher collaboration. This includes strategies for establishing clear classroom routines, setting high expectations, and providing ongoing feedback. The content also emphasizes the importance of fostering a growth mindset among students, encouraging them to view challenges as opportunities for learning. Finally, the professional development project includes components that promote teacher collaboration, recognizing the importance of shared knowledge and collective problem-solving in addressing educational challenges. This involved creating platforms for teachers to share best practices, discuss student progress, and collaborate on curriculum development.

The selection of the project genre for this educational study was driven by its ability to bridge theory and practice, provide actionable outcomes, and address complex educational challenges in a flexible and comprehensive manner. The data analysis in Section 2 informed the content of the project, highlighting the need for targeted interventions in reading comprehension, instructional strategies, and technology

integration. By addressing these issues through carefully designed project content, this study aimed to contribute to the improvement of student learning outcomes and the professional development of educators. The project genre not only allows for the development of practical solutions but also provides a framework for continuous reflection and refinement, ensuring that the interventions remain relevant and effective in the ever-evolving educational landscape.

Review of Literature

The main idea of a literature review is to explore reading comprehension strategies in secondary education and how professional development impacts teachers' abilities to teach reading in core content areas. The review also focuses on how teachers perceive the integration of reading instruction into non-language arts subjects, emphasizing the need for effective strategies to support students' reading comprehension in these settings. Studies have indicated that secondary students often struggle with content-area reading because they are not taught specific strategies to understand complex texts in subjects like science, history, and math. For example, Fisher and Frey (2020) emphasized the importance of teaching strategies like summarization, questioning, and predicting in content-area reading to improve comprehension. Several studies have highlighted the effectiveness of professional development in enhancing teachers' ability to teach reading. According to Desimone and Garet. (2015), professional development that is sustained, collaborative, and aligned with teachers' instructional goals leads to more effective reading instruction and improved student outcomes. Research has suggested that teachers often feel unprepared or unsupported in teaching reading in non-

ELA subjects. Smith and Robinson (2020) found that content-area teachers expressed a need for more targeted training and resources to integrate reading comprehension strategies effectively, particularly in subject areas that are not traditionally focused on literacy.

This section focuses on the role of autonomous learning strategies in enhancing reading comprehension among high school students and how this connects to the selected project genre of professional development and training curriculum. The project aims to develop a professional development program that equips educators with the tools and strategies needed to foster autonomous learning in their students. By leveraging findings from recent research (Coronado & Miyashiro, 2019), this professional development program will address critical gaps identified in current reading instruction practices. The literature review underscores the importance of self-directed learning strategies in improving student comprehension, making it clear that incorporating these strategies into teacher training is essential for achieving the desired educational outcomes.

Participation in professional development programs significantly improves teachers' ability to implement new teaching strategies, particularly culturally responsive practices, which in turn leads to higher student achievement in reading. The study cited used a mixed-method approach and found that teachers who underwent such training performed better in applying culturally responsive methods than those in a control group, and their students showed greater progress in reading. Research has indicated that teachers who attend professional learning have significant improvements in implementing new strategies (Cantrell et al., 2023). The study explored the effects of a

professional development program focused on culturally responsive practices on K-8 teachers and their students. Using a concurrent explanatory mixed-method design, the researchers combined quasi-experimental analysis of implementation and achievement data with inductive analysis of interview data. The study involved 21 teachers and their students. The results demonstrated that teachers who participated in the professional development showed significant improvements in implementing culturally responsive practices compared to a control group (Cantrell et al., 2023). Additionally, students taught by these teachers achieved significantly higher gains in reading compared to those in control classes.

Teacher participation in professional development has a significant and positive impact on student reading achievement, as demonstrated by a review of multiple studies. Although teacher professional development improves student outcomes, the analysis did not identify specific factors that explain variations in effectiveness. Additionally, professional development enhances teacher self-efficacy, which is crucial for both teacher and student success, by providing new instructional strategies and engagement methods. Teachers' participation in professional development has been shown to positively impact student achievement (Didion et al., 2019). The impact of teacher professional development on student reading achievement from kindergarten through eighth grade. The analysis included 28 studies published between 1975 and 2017. Findings revealed that teacher professional development has a moderate and statistically significant positive effect on students' reading outcomes (Didion et al., 2019). However, the analysis did not identify specific moderators that could explain variations in the

effectiveness of professional development. Teacher self-efficacy, which refers to a teacher's belief in their ability to engage students and promote learning, which is closely linked to both teacher and student success. Professional development plays a key role in enhancing this self-efficacy by equipping teachers with new instructional methods, problem-solving skills, and strategies for student engagement (Lazarides and Warner, 2020).

Professional development for educators is essential in enhancing their skills and knowledge, particularly in teaching reading strategies. Effective professional development programs focus on equipping teachers with evidence-based methods and instructional practices to support diverse learners, including those struggling with reading comprehension. Research has shown that professional development in reading instruction significantly impacts both teaching quality and student outcomes (Didion et al., 2019). When teachers engage in targeted professional development, they are more likely to implement effective reading strategies across all content areas, leading to improved student engagement and comprehension. Additionally, professional development can boost teachers' confidence and self-efficacy, making them more adaptable and open to new teaching methods (Ray & Fitzpatrick, 2024). High school teachers' self-efficacy in reading instruction and other teaching domains is significantly influenced by professional development, personal growth, and engagement with current educational resources. Ozcan (2022) highlighted the importance of targeted professional development that enhances teachers' confidence and effectiveness in their instructional practices.

Efforts to support teachers' learning and skill development have been associated with improved teacher efficacy. Ozcan (2022) revealed that teachers' self-efficacy beliefs in various domains—academic, professional, social, and intellectual—were influenced by factors such as in-service training, postgraduate education, personal development, communication, and professional sharing. For reading specifically, factors such as staying updated with current resources, engaging in scientific and philosophical reading, and participating in professional activities and organizations played a significant role in shaping teachers' self-efficacy. Ozcan's study underscores the importance of targeted professional development opportunities that address diverse areas of self-efficacy, ultimately enhancing teachers' confidence and effectiveness in reading instruction and overall teaching practice.

Professional development for teachers is associated with improved student engagement (Darling-Hammond et al., 2020). Research conducted with a grant from the Indigo Love of Reading Foundation found that teacher professional development significantly boosted students' motivation for reading and improved literacy practices at an urban middle school (Bright & Loman, 2020). The study by Bright and Loman (2020) highlighted the positive impact of new classroom libraries, dedicated literacy time, and ongoing teacher support on both student engagement and teacher satisfaction. Bright and Loman (2020) demonstrated significant improvements in students' reading engagement and highlighted the value teachers placed on the grant's resources and support.

A comprehensive reading initiative that incorporates professional development for teachers is associated with positive outcomes for teacher participants (Bright & Loman,

2020). Within Bright and Loman's (2020) study, the school implemented several literacy-focused initiatives, including a daily 50-minute Literacy Exploratory period, ongoing teacher professional development, and a $125,000 grant for new books and classroom libraries. Bright and Loman's study used the Motivation for Reading Questionnaire to measure changes in students' intrinsic motivation for reading, finding significant improvements in their perceptions of reading efficacy, importance, challenge, and social aspects. Teachers valued the literacy focus, principal support, and professional learning opportunities, noting that the grant facilitated the creation of classroom libraries. Students also reported increased motivation and suggested more choice in reading materials. The findings are consistent with previous research supporting the effectiveness of comprehensive literacy programs.

Initiatives aimed to create conditions that empowered teachers to enhance their instructional practices foster more effective literacy instruction (Grissom et al., 2021). In a study conducted by Farrell et al. (2023), Canadian teachers began to explore structured literacy by engaging in various learning activities, such as reading articles, taking online courses, reviewing instructional resources, and consulting with experts. As part of this initiative, they hired a literacy consultant to assist principals in developing a plan for integrating structured literacy into their classrooms. The Canadian teachers who participated in the study discovered the importance of creating new positions that would enable the school to focus on improving reading instruction (Cobb, 2021).

Developing creative thinking in future teachers is closely linked to their reading habits, particularly the regular reading of fiction, which enhances their ability to develop

creativity in their students. Reading is transformative that shapes knowledge, skills, and values of future teachers. (Arunkumar, 2024). Those who engaged in regular leisure reading of fiction showed noticeable improvements in their creative thinking abilities (Arunkumar, 2024). The study also found that creativity increased as students progressed in their education, and the diversity of reading materials contributed significantly to this growth. These findings highlight the importance of integrating creative thinking exercises and reading strategies into teacher professional development programs. By promoting regular reading of fiction and fostering creativity, such programs can enhance teachers' instructional effectiveness and engagement with students. This suggests that teacher development should include opportunities to nurture creativity and encourage extensive reading as part of preparing innovative and effective educators.

Professional development in reading within the context of math instruction has also been found to benefit student outcomes in reading and math. In Mariani's (2023), study, they discussed how a small private school implemented data-driven professional learning communities (PLCs) to enhance both math and reading readiness. Within this PLC focused initiative, the school focused on developing a set of mastery skills for math and reading at each grade level, creating a vertical literacy continuum, and establishing eighth-grade readiness standards for a diocesan feeder high school (Mariani-Petroze, 2023). The PLCs are designed to foster a collaborative environment among teachers, promoting continuous improvement and a collective inquiry approach. By integrating reading strategies into math instruction, the school aims to improve students' comprehension of math texts and problems, ensuring they have the necessary literacy

skills to understand mathematical concepts and succeed in assessments. This collaborative model links professional development directly to classroom practice, enhancing both reading and math outcomes through shared learning goals and strategies. By integrating reading strategies into math instruction, the school aims to improve students' comprehension of math texts and problems, ensuring they have the necessary literacy skills to understand mathematical concepts and succeed in assessments. This collaborative model links professional development directly to classroom practice, enhancing both reading and math outcomes through shared learning goals and strategies. As teachers develop these skills through professional development, they become better equipped to meet the diverse academic needs of their students, including those at risk for disabilities and from culturally and linguistically diverse backgrounds.

Professional development is particularly critical as it prepares teachers to meet the varied academic needs of students, including those at risk for disabilities and from culturally and linguistically diverse backgrounds. Response to intervention (RTI) models that provide a tiered system of support for all students require meticulous implementation including professional development to be effective. Key elements common to successful RTI approaches include (a) systematic progress monitoring to track student performance regularly, (b) evidence-based instruction and interventions at all tiers to ensure that teaching methods are grounded in research, (c) targeted professional development to equip teachers with the skills needed to address diverse student needs, (d) collaborative problem-solving to engage educators in finding solutions for individual student challenges, and (e) evaluation of the fidelity of RTI implementation to assess and ensure

adherence to the model's components (Shenoy et al., 2024). Ensuring the effectiveness of RTI involves continuous evaluation and refinement of these practices to optimize student outcomes. By reinforcing these strategies, teachers can not only support students academically but also enhance their cognitive development. Repeated use of specific neural pathways strengthens them, improving brain efficiency over time.

The effectiveness of RTI has been widely studied and is increasingly recognized as a crucial model for supporting diverse learners. Key components of successful RTI include systematic progress monitoring, which allows teachers to frequently assess student performance and identify those who require additional help early on (Jimenez, 2010). This enables timely interventions tailored to individual student needs, reducing the risk of long-term academic difficulties. The use of evidence-based instruction at all tiers. Research has shown that employing instructional methods grounded in proven research significantly improves student outcomes, particularly for those with learning challenges (Tullis et al., 2020). These evidence-based practices help ensure that interventions are not only effective but also appropriate for the specific learning difficulties students may encounter.

Targeted professional development is fundamental to RTI success. Teachers need ongoing training to implement research-based interventions effectively. Recent studies emphasize the importance of equipping teachers with the skills and strategies necessary to address diverse student populations, including students at risk for disabilities and those from culturally and linguistically diverse backgrounds (Garcia & Miller, 2023). Professional development helps teachers understand and apply RTI methods within the

context of their classrooms, enhancing their ability to meet varied student needs. RTI also relies on collaborative problem-solving, which promotes cooperation among educators to find solutions for individual student challenges. This collaboration fosters shared responsibility for student success and builds a community of practice that enhances instructional effectiveness (Shenoy et al., 2024). Teachers working together to analyze data and develop intervention strategies is one of the hallmarks of a strong RTI model. In addition to implementing these core elements, fidelity of implementation must be maintained to ensure that RTI is applied consistently and correctly. Continuous evaluation is necessary to assess adherence to RTI protocols and adjust strategies as needed (Jimenez, 2010). Professional development within RTI also includes helping teachers develop their executive function skills—the cognitive abilities required for planning, organizing, and executing tasks effectively (Wei et al., 2024). Just as repeated use of specific neural pathways strengthens brain efficiency, regular use of instructional strategies in real-world teaching settings helps teachers improve their practice. This practice, under supportive conditions, enables teachers to refine their skills and apply them effectively to address new challenges.

Teachers' perceptions of teaching reading in core content areas are closely tied to their self-efficacy and professional development, which influence their ability to implement effective reading strategies. Many teachers feel unprepared to teach reading skills in subjects beyond language arts, even though reading comprehension is essential in all content areas. This reluctance is often linked to a belief that teaching reading is not within their primary responsibility, particularly in secondary education settings.

However, professional development programs that focus on enhancing teachers' confidence and skills in reading instruction can shift these perceptions. Teachers who receive targeted training in reading strategies are more likely to embrace reading instruction as a key part of their role, seeing its value in supporting students' comprehension across subjects.

According to research, teachers often perceive teaching reading in core content areas as challenging because it requires specialized strategies that differ from typical subject instruction (Smith & Robinson, 2023). In particular, secondary school teachers may view reading instruction as outside their expertise (Cantrell et al., 2009). Professional development that provides teachers with the necessary tools to integrate reading strategies into their lessons has been shown to increase teachers' self-efficacy in this area. Walters (2022) highlighted that professional development focused on discourse-based methods like Socratic seminars can enhance teachers' ability to teach reading comprehension more effectively while improving their perceptions of its importance in non-language subjects. These findings emphasize the need for ongoing professional development that equips teachers to confidently incorporate reading strategies into all areas of the curriculum. By addressing teachers' perceptions and enhancing their skills, schools can foster a more integrated approach to literacy, benefiting both teachers and students across all content areas.

Professional development plays a critical role in addressing the impact of teachers' reading habits on student literacy. As highlighted by Arundel (2023), teachers' preferences for digital reading materials over traditional books can affect how they model

reading behaviors, which in turn influences student engagement. Professional development programs that focus on fostering deeper reading habits among teachers can help mitigate this issue. For example, workshops and training sessions that encourage teachers to diversify their reading formats (both digital and print) and engage in sustained, extensive reading can significantly enhance their ability to foster a strong reading culture in the classroom. By focusing on the enhancement of teacher reading habits through targeted professional development, schools can better support student literacy growth, particularly in EFL settings where extensive reading is essential for language acquisition (Zeng, 2023). Research by Miller and Beers (2021) underscored that when teachers demonstrate a personal commitment to reading, students are more likely to view it as valuable. Professional development initiatives can build on this by offering strategies for teachers to balance digital and traditional reading and model positive reading habits.

Teachers who incorporate daily reading into their routines create more effective literacy environments (Owens & Ramirez, 2022). Professional development can support this by helping teachers integrate structured reading activities into their personal and professional lives, thus improving classroom practices. This ultimately leads to better literacy outcomes for students, particularly in contexts where literacy levels are already low. Professional development focused on promoting diverse and sustained reading among teachers equips them with the tools to model effective reading behaviors, which positively impacts student literacy outcomes.

Professional development programs focused on enhancing teachers' personal reading practices can be utilized to enhance teachers' reading instructional practices thereby improving student outcomes. As Basma and Savage (2018) emphasized, professional development initiatives that target teachers' literacy habits can significantly increase their ability to model reading behaviors effectively in the classroom. Furthermore, these programs should encourage educators to adopt consistent, daily reading habits that can be mirrored by students, thus promoting a culture of reading within schools (Guven and Haddad, 2023). In the context of this project study, which aims to improve student literacy outcomes in core content areas, it is essential to recognize the foundational influence of teacher behavior on student engagement with reading. By integrating professional development focused on strengthening teachers' reading habits, educators can be better positioned to inspire students to develop lifelong reading skills. Ultimately, the research supports the need for a targeted approach to teacher development that not only addresses instructional strategies but also fosters personal literacy practices, leading to broader improvements in student literacy outcomes, particularly in EFL settings.

Continuous professional development focused on writing integration significantly enhances teachers' instructional practices and attitudes, leading to improved student engagement and learning outcomes in various content areas. Hall and Burns (2021) studied the impact of writing-focused professional development on content area teachers' pedagogical practices in a rural public charter high school in North Carolina. Using survey instruments and teacher reflection questionnaires, they found that sustained

professional development positively influenced teachers' attitudes toward using writing as a learning tool (Hall & Burns, 2021). Effective writing practices included structuring tasks to stimulate student interest, using writing to review and extend ideas, and providing opportunities for meaningful student engagement with writing. Additionally, best practices such as organizing writing activities, modeling writing using reading materials, fostering constructive feedback, and conducting mini-lessons were identified as key strategies for enhancing student learning through writing.

There is a need for targeted teacher development in teaching students how to evaluate online information, particularly through the method of lateral reading (Wineburg & McGrew 2019). While teachers and students often focus on specific details about the sources being evaluated, they pay less attention to developing the broader skills and knowledge necessary for future applications of lateral reading. Thus, teachers may require more specialized training and extended support to effectively teach digital evaluation strategies. Wineburg and McGrew (2019) emphasized the importance of teacher education programs that equip educators with the skills to foster critical thinking and digital literacy, ensuring students can apply these skills across diverse contexts. Supporting teachers in this area is crucial for helping students become more discerning consumers of online information.

Students need to develop critical reading skills to analyze complex media and informational texts. According to McCormick and Halvorsen (2021), it is essential that professional development enhances teachers' ability to provide scaffolded reading instruction for teaching civic literacy. The reading apprenticeship model is a promising

approach for improving students' comprehension of civic issues. Collaboration between literacy and social studies educators, supported through ongoing professional development, is crucial for equipping teachers with effective strategies to foster students' reading and analytical skills.

Professional development for Advanced Placement (AP) teachers not only enhances instructional practices but also significantly impacts students' reading comprehension, especially in content-heavy courses such as AP World History: Modern. Activities such as AP Reading, where teachers score student work, deepen their understanding of both the content and the nuanced ways in which students engage with complex texts (Didion et. al. 2019). As teachers improve their ability to assess student responses, they also develop strategies to guide students in breaking down dense readings, a key skill in improving comprehension. Johnson (2022) highlighted those immersive experiences, such as scoring AP exams, enable teachers to align their instructional strategies with the rigorous AP standards. This alignment includes teaching students how to read critically, analyze primary and secondary sources, and extract essential information—skills integral to reading comprehension. Smith and Brown (2021) also emphasized that workshops and peer collaboration during professional development help teachers build confidence in teaching challenging materials. This confidence translates into more effective instruction in reading strategies, particularly when dealing with extensive historical texts, data sets, or comparative essays.

By engaging in these professional development opportunities, AP teachers are better equipped to scaffold difficult readings for their students, ensuring they not only

comprehend the material but also apply it in critical, analytical ways. This reinforces reading comprehension strategies necessary for success in both AP courses and broader academic contexts. Structured professional development programs, such as the Advanced Placement Summer Institutes (APSIs), can be instrumental in enhancing teacher expertise not only in course content and exam preparation but also in promoting higher-order thinking and critical analysis, which are key to developing reading comprehension skills. Reading comprehension involves understanding complex texts, analyzing arguments, and synthesizing information skills that are essential in AP coursework. APSIs support teachers in guiding students through these processes by providing strategies to engage learners in deep reading, critical thinking, and text analysis (Smith & Brown, 2021).

Although some teachers may experience challenges with the duration of activities, those who attend APSIs report feeling better prepared to help students navigate challenging texts, a skill crucial for AP courses that require significant reading and textual analysis. Furthermore, while administrative support is important, it is the quality of the training itself that most directly improves teachers' ability to foster these skills in students (Didion et. al., 2019). This connection suggests that targeted professional development focused on reading comprehension strategies can enhance teachers' ability to implement effective reading practices across content areas. By incorporating autonomous learning strategies, teachers can further empower their students to take ownership of their reading development and foster a more engaging learning environment.

This connection suggests that targeted professional development focused on reading comprehension strategies can enhance teachers' ability to implement effective reading practices across content areas. By equipping teachers with these strategies, schools can also foster an environment where students gradually develop autonomous learning skills, allowing them to independently apply comprehension techniques and become self-sufficient, lifelong learners. This approach ultimately empowers students to take ownership of their reading and learning processes, an essential skill for academic success across various subjects.

Autonomous learning strategies play a pivotal role in developing reading comprehension, especially as students encounter increasingly complex texts in higher levels of education. These strategies empower students to take control of their learning, fostering independence in understanding and analyzing difficult material. Effectively teaching autonomous learning strategies, professional development for educators is essential, equipping them with the necessary tools and techniques to guide students in becoming self-directed learners who can navigate challenging texts with confidence. Coronado and Miyashiro (2019) highlighted the significance of autonomous learning in high school, where students must engage with more sophisticated concepts and texts, requiring them to adopt more advanced reading strategies. Research by Gal (2021) further emphasized that autonomous learners are better equipped to apply critical thinking and problem-solving skills, enabling them to not only comprehend but also to synthesize information across different subject areas. By fostering self-regulated learning behaviors, such as goal-setting, monitoring progress, and adapting strategies as needed,

students improve their ability to navigate various types of texts, ultimately promoting both academic success and lifelong learning.

Autonomous Learning Strategies

Definition and Importance

Recognizing the mutual influence between teachers' cognitive and emotional processes and their teaching environment, professional development programs can more effectively support educators in promoting autonomous learning among students. Autonomous learning strategies are essential for fostering student independence and improving reading comprehension. These strategies equip students with the skills needed to engage deeply with texts, analyze information critically, and apply their knowledge across various contexts. By encouraging students to take control of their own learning processes, autonomous learning strategies help them become more self-reliant and effective readers, capable of navigating complex material without constant teacher guidance. This approach is particularly important in reading comprehension, where students must actively construct meaning, monitor their understanding, and apply strategies to overcome challenges. Research has supported the connection between autonomous learning and reading comprehension development. Coronado and Miyashiro (2019) highlighted that autonomous learning strategies involve deliberate, organized actions that students initiate to solve specific tasks. These actions are rooted in metacognition, where students consciously plan, monitor, and evaluate their reading strategies to meet learning goals. Metacognitive skills such as predicting, questioning, and summarizing allow students to engage actively with texts, improving their

comprehension and retention of material. Additionally, autonomous learners are more likely to adapt their strategies flexibly when encountering difficult or unfamiliar content, which is a critical component of effective reading.

Moreover, autonomous learning strategies have been linked to improved academic outcomes across diverse educational settings. For example, research by Gal (2021) emphasized that students who practice autonomous learning are better able to transfer their reading skills to new contexts, making them more versatile learners. This adaptability is particularly important in content-area reading, where students must interpret specialized texts, such as scientific articles or historical documents, that require a deeper level of understanding. Therefore, cultivating autonomous learning strategies in students not only enhances their reading comprehension but also prepares them for academic success across multiple disciplines. The integration of autonomous learning strategies into reading instruction encourages students to become more engaged, self-regulated learners, leading to more sustained improvements in comprehension. Ultimately, these strategies promote a lifelong ability to approach complex texts with confidence and critical insight.

The importance of autonomous learning strategies in reading comprehension cannot be overstated. As students' progress through their educational journey, the ability to independently navigate and understand complex texts becomes increasingly crucial. Autonomous learning not only enhances comprehension but also promotes critical thinking, problem-solving, and the ability to apply knowledge in new and diverse situations. Coronado and Miyashiro (2019) argued that these strategies are particularly

important in the context of high school education, where students are expected to engage with more sophisticated texts and concepts.

Key Autonomous Learning Strategies in Reading Comprehension

Autonomous learning strategies such as self-monitoring, goal-setting, and metacognitive reflection, significantly enhance high school students' reading comprehension by empowering them to take control of their learning. Research has demonstrated that these strategies improve students' ability to understand and retain complex texts, making them essential tools in effective reading instruction. Key autonomous learning strategies, such as self-monitoring, goal-setting, and metacognitive reflection, are crucial for enhancing reading comprehension among high school students. Recent research by Sanders et al. (2021) found that students who engaged in self-monitoring and goal-setting improved their reading comprehension scores by 28% compared to those who did not use these strategies. Similarly, a study by Juliana and Anggraini (2024), highlighted that incorporating metacognitive reflection into reading instruction significantly enhanced students' ability to understand and retain complex texts. The findings suggest that autonomous learning strategies, including self-monitoring, goal-setting, and metacognitive reflection, empower students to improve their reading comprehension and retention by fostering greater control over and engagement with their learning processes. Self-monitoring helps students track their understanding and adjust their strategies as needed, while goal-setting provides motivation and clear objectives. Metacognitive reflection, on the other hand, encourages students to think about their thinking, fostering deeper engagement with the text. The

effectiveness of these strategies underscores the importance of integrating them into reading instruction to address the challenges identified in previous research and data analysis. Therefore, incorporating autonomous learning strategies into reading instruction can significantly enhance students' comprehension abilities, making these strategies a critical component of effective educational practices in high school settings. In promoting autonomous learning, several key strategies can be implemented to help students take charge of their educational journey and enhance their comprehension skills (Coronado & Miyashiro, 2019).

Expansion Strategies. Expansion strategies involve the development of informational competencies that enable students to seek out additional information beyond what is provided in the classroom. This might include consulting supplementary texts, using digital resources, or engaging in activities that deepen understanding. Coronado and Miyashiro (2019) noted that these strategies are crucial for students who need to broaden their knowledge base to fully comprehend complex texts.

Collaboration Strategies. Collaboration strategies focus on leveraging peer interactions and institutional resources to enhance learning. Students engage in group work, share summaries, and exchange materials to clarify doubts and reinforce understanding. The social aspect of learning is emphasized, as collaborative efforts can lead to a deeper, more nuanced understanding of texts (Coronado and Miyashiro, 2019).

Conceptualization Strategies. These strategies involve organizing knowledge through tools such as mind maps, concept maps, and charts. Students use these tools to structure information logically, making it easier to recall and apply. Reading strategies

like underlining and summarization also fall under this category, as they help students identify and retain key concepts (Coronado and Miyashiro, 2019).

Preparation Strategies. Preparation strategies are centered on the student's ability to plan and organize their academic activities. This includes time management, setting academic goals, and self-evaluating progress. Coronado and Miyashiro (2019) argued that these strategies are foundational for developing autonomous learning, as they encourage students to take responsibility for their learning outcomes.

Participation Strategies. Active participation in the learning process is another key aspect of autonomous learning. Students are encouraged to engage fully in classroom activities, from reading assigned materials to participating in discussions and debates. Such engagement helps reinforce understanding and allows students to apply what they have learned in a collaborative environment (Coronado and Miyashiro, 2019).

Planning Strategies. Planning strategies involve setting clear objectives for learning and systematically working towards them. This might include taking detailed notes, asking questions, and using expansion strategies to clarify doubts. By planning their learning activities, students can more effectively monitor their progress and adjust their strategies as needed (Coronado and Miyashiro, 2019).

Impact of Autonomous Learning Strategies on Reading Comprehension

The impact of autonomous learning strategies on reading comprehension has been widely studied, with many researchers highlighting the positive outcomes associated with these practices (Sanders et al., 2021). Coronado and Miyashiro (2019) found that the effective use of autonomous learning strategies significantly enhances students' ability to

comprehend texts. This is particularly critical in high school settings, where students encounter increasingly complex and diverse reading materials. Research has indicated that when students are equipped with the tools to manage their own learning, they are more likely to engage deeply with texts, retain information, and apply their knowledge in various contexts (Zimmerman, 2011). For example, expansion strategies enable students to seek out additional resources that complement and expand on classroom instruction, leading to a more comprehensive understanding of the material. Similarly, collaboration strategies allow students to benefit from peer learning, which can provide new perspectives and insights that enhance comprehension.

Moreover, conceptualization strategies, such as the use of mind maps and summarization, help students organize and internalize information in a way that makes it easier to recall and apply. These strategies are particularly effective in helping students break down complex texts into manageable parts, facilitating a deeper understanding of the material. Coronado and Miyashiro (2019) emphasized that the successful implementation of these strategies requires a degree of metacognitive awareness, as students must be able to reflect on their learning processes and adjust their strategies accordingly.

Research has also highlighted the importance of teacher support in fostering autonomous learning (Yang et al., 2022). While autonomous learning strategies emphasize student initiative, the role of the teacher as a facilitator cannot be overlooked. Teachers play a crucial role in guiding students in the use of these strategies, providing feedback, and helping students develop the skills necessary for independent learning.

Coronado and Miyashiro (2019) noted that without proper guidance, students may struggle to implement these strategies effectively, underscoring the importance of a supportive learning environment.

Autonomous learning strategies are essential for improving reading comprehension among high school students. These strategies empower students to take control of their learning, engage deeply with texts, and develop the critical thinking skills necessary for academic success. The literature reviewed, particularly the work of Coronado and Miyashiro (2019), demonstrated that these strategies can have a significant impact on students' ability to comprehend and apply what they read. By fostering an environment that encourages self-directed learning, educators can help students develop the competencies they need to succeed in both their academic and personal lives.

Research on Autonomous Learning Strategies

Autonomous learning strategies are emphasized in the Teacher Resource Guide, as research has indicated that students who take responsibility for their learning are more likely to succeed (Smith & Johnson, 2021). These strategies are particularly critical for secondary students, who are expected to engage with more complex texts and concepts. By fostering autonomy, the guide helps students develop the skills necessary for independent learning and long-term academic success. The genre of professional development including a Teacher Resource Guide is highly appropriate for addressing the problem of reading comprehension struggles among secondary students. It provides a practical, research-based solution that teachers can use to implement effective reading strategies in their classrooms. By aligning the project with the self-efficacy framework

and research findings, the guide is positioned to make a meaningful impact on both teaching practices and student outcomes, ultimately helping to improve reading comprehension among the targeted student population. This framework emphasizes the role of teacher and student confidence in their abilities to succeed, which is crucial for effective learning and instructional practices.

Rationale for the Use of a Resource Guide in Addressing Reading Deficits

The professional development project genre, which involves the creation of a Teacher Resource Guide focused on enhancing reading comprehension strategies, is particularly appropriate for addressing the issue of secondary students struggling with reading comprehension in the study school. This genre allows for the practical application of research findings and theoretical insights into a tangible resource that can directly impact teaching practices and student outcomes.

Alignment With the Problem

The problem identified in this study is that secondary students are experiencing difficulties in reading comprehension, a skill crucial for their academic success and overall learning. The Teacher Resource Guide is designed to provide educators with targeted strategies and tools that can be implemented in the classroom to address these specific challenges. By focusing on strategies that promote autonomous learning, the guide can help teachers foster an environment where students are encouraged to engage with texts more deeply and develop the skills necessary to improve their comprehension.

Criteria From Research and Theory

The project is developed based on key research-based criteria and grounded in the self-efficacy theory**,** which serves as the conceptual framework. This theory emphasizes the importance of belief in one's capabilities to organize and execute actions required to achieve desired outcomes. By incorporating self-efficacy into the framework, the project ensures that both teachers and students feel confident in their ability to apply the strategies effectively. The use of research-based criteria ensures that the strategies in the resource guide are grounded in proven methods, increasing the likelihood of their success and sustainability. Ultimately, this approach aims to enhance not only the practical outcomes of the strategies but also the self-efficacy of those implementing them. The integration of the self -efficacy theory as the conceptual framework strengthens the foundation of the strategies, ensuring they are not only applicable but also adaptable to various educational settings. The use of research-backed strategies ensures that the resource guide will offer practical and impactful solutions to educators. The self-efficacy theory provides a framework that aligns the strategies with broader educational goals, allowing teachers to apply these methods confidently in their classrooms. This also ensures the sustainability of the strategies by allowing them to be adapted based on changing classroom dynamics and student needs. In conclusion, the alignment of the project with research-based criteria and the conceptual framework makes the resource guide both practical and reliable, ensuring its relevance and long-term effectiveness in improving instructional practices.

Self-Efficacy Theory

*S*elf-efficacy influences how people think, feel, motivate themselves, and act. Those with high self-efficacy are more likely to set challenging goals, persist in the face of difficulties, and recover quickly from setbacks. In educational contexts, self-efficacy is critical for both teachers and students. When teachers believe in their ability to effectively implement instructional strategies, they are more likely to create successful learning environments. Similarly, students with strong self-efficacy are more likely to engage actively in their learning, embrace challenges, and achieve better academic outcomes. By fostering self-efficacy in both educators and learners, educational programs can improve not only immediate performance but also long-term motivation and resilience.

Metacognitive Strategies

Research has highlighted the role of metacognition in reading comprehension, where students who are aware of their cognitive processes are better able to regulate their learning (Lukes, 2021). The guide incorporates strategies that promote metacognitive awareness, such as planning and self-evaluation techniques, helping students monitor their understanding and adjust their reading approaches as needed. Additionally, Lukes (2021) found that students who regularly engaged in metacognitive activities, such as thinking aloud and journaling about their reading strategies, demonstrated improved comprehension and retention of material across various subjects. Furthermore, Juliana and Anggraini (2024) highlighted that metacognitive strategies not only enhance reading comprehension but also foster students' ability to transfer these skills to new and more complex reading tasks, indicating long-term benefits in academic performance.

Differentiated Instruction

Differentiated instruction is a crucial approach in education that tailors teaching strategies to meet the diverse needs of students, ensuring that each learner has the appropriate support to succeed. In the context of reading comprehension, differentiated instruction allows teachers to provide varying levels of challenge and support, accommodating students' individual skills and learning styles. According to Santangelo et al. (2017), differentiation in education involves adjusting instructional elements such as content, process, and product to align with each student's readiness, interests, and learning profiles. This approach allows students to engage with material at a pace that suits their individual learning needs, promoting deeper engagement and better understanding. By offering multiple ways for students to access information, process concepts, and demonstrate knowledge, differentiated instruction supports diverse learning styles and fosters a more inclusive classroom environment. Additionally, research by Schwab et al. (2020) supported the use of differentiated instructional strategies to improve student outcomes, as it promotes a more inclusive learning environment where every student has the opportunity to develop their comprehension skills effectively. The Teacher Resource Guide reflects this approach by offering a range of strategies, from foundational expansion techniques to more advanced planning strategies, ensuring that students at all comprehension levels can access the tools they need to progress.

Analysis of Theory and Research Supporting the Project

In exploring the intersection of autonomous learning strategies and reading comprehension in high school students, the proposed professional development project

was created from a synthesis of a rich body of theory and empirical research, including the findings of Coronado and Miyashiro (2019). Coronado and Miyashiro's study, *Autonomous Learning Strategies in the Reading Comprehension of High School Students*, served as a pivotal reference, providing a foundational understanding of how self-directed learning can enhance reading comprehension in educational settings. This analysis critically examines the conceptual framework and research evidence that underpin the project, highlighting the interconnectedness of these elements and their implications for educational practice.

Self-Efficacy Framework Supporting Autonomous Learning Strategies

The self-efficacy theory served as the conceptual framework to guide this study's focus on teachers' perceptions of using reading strategies, the challenges teachers confront in teaching reading in core content classes, and suggestions for professional development related to improving instructional pedagogy within a core content class. The conceptual foundation for self-efficacy is based on Bandura's self-efficacy theory. Bandura, a Stanford professor and former APA president, has researched self-efficacy for over 20 years and is regarded as the originator of the concept (Nolen, 2023). According to Bandura, self-efficacy underlines that individuals are capable of human agency (i.e., intentional pursuit of courses of action). Human agency operates based on a triadic reciprocal interconnection (Lent, 2020), where an individual's agency results in future behavior and is a factor of three personal proponents: cognitive, affective, and biological. These factors mutually impact each other and shape what individuals believe about themselves, influencing their choices and actions. In effect, Bandura's theory suggests

that humans are a product of a dynamic interplay between external factors (environment), internal factors (biology), and their behaviors, rather than just one of these elements.

The project is grounded in the self-efficacy theory, which posits that individuals' belief in their ability to succeed influences their actions and persistence in learning tasks. This perspective aligns closely with the emphasis on autonomous learning strategies, as students who believe they can control their learning processes are more likely to engage deeply and retain material. Coronado and Miyashiro (2019) drew on this theoretical framework to argue that autonomous learning strategies are essential for developing the cognitive and metacognitive skills necessary for effective reading comprehension. Their research highlights the importance of strategies such as self-regulation, goal-setting, and reflective thinking, which are all supported by the principles of self-efficacy. These strategies not only help students to manage their learning more effectively but also to engage more critically with texts, leading to improved comprehension. The self-efficacy theory provides a robust lens through which to explore how teachers' beliefs about their ability to implement effective reading strategies influence their teaching practices. Moreover, by understanding the reciprocal relationship between teachers' cognitive and affective processes and their environment, professional development programs can better support educators in fostering autonomous learning in students. This, in turn, may improve students' reading comprehension through strategies grounded in self-regulation and critical engagement with texts.

Research Evidence Supporting the Project

Research has shown that students who are able to take ownership of their learning are more likely to succeed academically. The empirical research conducted by Coronado and Miyashiro (2019) provided robust support for the integration of autonomous learning strategies into high school curricula. Their study, which involved a detailed examination of the relationship between self-directed learning and reading comprehension, found that students who regularly employed autonomous learning strategies demonstrated significantly higher levels of comprehension compared to their peers who relied on more traditional, teacher-directed methods. This finding is consistent with other research in the field, indicating students who take ownership of their learning are more likely to succeed academically. For instance, studies by Kahn and Niazi et al. (2023) have demonstrated a strong correlation between self-esteem, autonomy, and academic achievement, particularly in reading comprehension. Similarly, Maftoon and Alamdari (2020) found that self-learning strategies were a significant predictor of academic success, particularly in environments where students were required to engage with complex texts.

The project also draws on research into the role of metacognition in learning. metacognitive strategies, such as self-assessment and reflection, have been shown to play a crucial role in reading comprehension, particularly for students who struggle with traditional methods of instruction. The work of Aziz and Rawian (2022), for example, emphasized the importance of metacognitive awareness in fostering independent learning and improving reading comprehension outcomes. This aligns with the findings of Coronado and Miyashiro (2019), who argued that metacognitive strategies are a key

component of autonomous learning and are critical for helping students become more effective readers.

Interconnected Analysis of Theory and Research. The integration of self-efficacy theory and empirical research into this project highlights the interconnectedness of these elements and their collective impact on educational practice. The self-efficacy framework provides a strong foundation for understanding the importance of autonomous learning strategies, while the research evidence offers concrete examples of how these strategies can be effectively implemented in the classroom. One of the key insights from the analysis is the importance of aligning teaching practices with the principles of autonomous learning. The findings of Coronado and Miyashiro (2019) suggested that when students are encouraged to take control of their learning, they are more likely to engage deeply with texts, leading to improved comprehension and academic success. This has significant implications for educators, who must consider how to create learning environments that foster autonomy and encourage students to develop the self-regulation and metacognitive skills necessary for success.

Albert Bandura's self-efficacy theory as a framework enriches this understanding by providing a lens through which to view how teachers' beliefs in their own capabilities influence their effectiveness in implementing these autonomous learning strategies. According to Bandura, self-efficacy encompasses cognitive, affective, and biological elements that interact to shape individuals' perceptions of their abilities. In the context of education, this theory suggests that teachers who have high self-efficacy are more likely to create learning environments that encourage student autonomy and foster the

development of critical self-regulation and reflective thinking skills. When teachers believe they are capable of teaching reading strategies effectively, they are more likely to take the necessary steps to align their teaching practices with autonomous learning strategies.

Incorporating the self-efficacy theory is particularly valuable because it acknowledges the pivotal role of teacher confidence and agency in the successful implementation of autonomous learning strategies. By understanding the reciprocal relationship between teachers' cognitive and affective processes, their beliefs, and their behaviors, educators can more effectively develop professional development programs aimed at increasing teacher self-efficacy. This, in turn, leads to enhanced pedagogical practices that support autonomous learning, ultimately improving student outcomes in reading comprehension and other academic areas. The inclusion of this framework adds a crucial layer of depth to the project, emphasizing that both student and teacher development are critical to fostering a successful learning environment. The self-efficacy theory draws attention to the role of the teacher's mindset, reinforcing the idea that teacher empowerment is essential for the full realization of autonomous learning strategies in the classroom.

Moreover, the research underscores the need for ongoing professional development for teachers, particularly in the areas of autonomous learning and reading comprehension. Many teachers are still unfamiliar with the most effective strategies for promoting autonomous learning, and there is a need for more targeted training to help

them integrate these approaches into their teaching practices (Coronado & Miyashiro, 2019)

Search Strategy and Research Methodology

The search for relevant research and theory to support this project was conducted using a systematic approach, focusing on peer-reviewed articles and books in the fields of education, cognitive psychology, and educational technology. Key search terms included *autonomous learning strategies, reading comprehension, self-efficacy theory, metacognition*, and *self-regulated learning*. Databases such as ERIC, PsycINFO, and Google Scholar were extensively used to identify relevant studies. Efforts were made to ensure that the research was comprehensive and included both foundational studies and the most recent developments in the field. This approach not only ensured that the project was grounded in the latest research but also that it reflected a broad range of perspectives and methodologies.

Conclusion

In conclusion, the professional development project is grounded in recent research that emphasizes the integration of autonomous learning strategies into high school reading instruction to improve both teaching practices and student outcomes. Studies have consistently shown that high-quality professional development positively impacts teachers' ability to implement effective instructional strategies. Desimone and Garet (2015) highlighted that professional development programs focusing on active learning, collaboration, and content-specific strategies lead to improved teacher efficacy and student achievement. When teachers are supported in developing new approaches to

instruction, such as autonomous learning strategies, they are better equipped to help students navigate complex reading tasks in core content areas.

Autonomous learning strategies, which involve students actively taking responsibility for their learning through self-monitoring, goal-setting, and metacognitive reflection, are crucial for reading comprehension and overall academic success. According to Coronado and Miyashiro (2020), these strategies enable students to engage deeply with texts, fostering independent problem-solving and critical thinking skills necessary for high school education. Students who are able to self-regulate their learning are better prepared to handle the complexities of reading in various subject areas, from science to social studies, where comprehension of technical and abstract material is critical. Therefore, professional development programs must emphasize the importance of integrating autonomous learning strategies into the curriculum to promote student independence.

Recent research has also indicated that professional development programs that incorporate autonomous learning strategies result in significant improvements in both teacher instruction and student outcomes. Yang et al. (2022) found that teachers who participated in targeted training focused on fostering student autonomy reported higher levels of student engagement and improved comprehension across disciplines. These teachers noted that students were more capable of applying critical thinking and adapting reading strategies independently when working with challenging texts. The study underscores the importance of including autonomous learning components in

professional development, as this empowers teachers to create learning environments that promote deeper comprehension and critical analysis

A well-rounded professional development program that addresses both cognitive and emotional aspects of teaching can equip educators to implement strategies that foster student autonomy, improving reading comprehension and engagement with complex texts across subjects. Professional development programs that focus on both cognitive and emotional aspects of teaching can more effectively support educators in implementing strategies that foster autonomous learning. Kraft et al. (2020) emphasized the importance of addressing teachers' cognitive and affective processes in professional development to enhance instructional effectiveness. By supporting teachers in developing the skills needed to promote metacognitive awareness and self-regulation in their students, professional development can improve reading comprehension across core content areas. This holistic approach helps ensure that students are not only able to comprehend complex material but also apply their knowledge in various contexts, leading to greater academic success. To address the issue of struggling readers in secondary education, the project will identify essential resources, existing supports, potential barriers, and solutions to ensure all students can successfully engage with complex texts across subjects.

Project Description

To address the issue of struggling readers in secondary education, particularly within core content classes, it is essential to identify the needed resources, existing supports, potential barriers, and solutions to those barriers. The necessary resources

include access to high-quality reading materials, professional development for teachers on effective reading instruction strategies, and technology tools that support differentiated learning (Vaughn et al., 2015). Existing supports may include school-based literacy coaches, ongoing teacher collaboration opportunities, and intervention programs that focus on improving reading comprehension skills (Graham et al., 2018).

However, potential barriers to implementing these solutions include limited funding for resources and professional development, resistance to change among staff, and the diverse needs of students that may require personalized instruction (Dietrichson et al., 2021). To overcome these barriers, potential solutions could involve securing grants or reallocating budget resources to prioritize literacy initiatives, fostering a culture of continuous improvement and collaboration among educators, and implementing flexible, tiered instructional approaches that can be adapted to meet the varied needs of students (Peng & Kievet, 2020). Addressing these factors comprehensively can create a more supportive environment for enhancing reading comprehension in secondary education.

To effectively implement strategies aimed at improving reading comprehension among secondary students, particularly those struggling within core content classes, a structured and phased approach is necessary. The proposal for implementation of the professional development project includes key phases and a corresponding timetable as displayed in Appendix D. This phased approach ensures that the implementation is methodical, allows for adjustments based on real-time feedback, and is sustainable in the

long term, ultimately improving reading comprehension among secondary students within the study school.

Roles and Responsibility of Participants

Improving reading comprehension among secondary students is a critical issue facing educators today, particularly in low-income communities where literacy skills are often underdeveloped. The success of students across all subject areas hinges on their ability to understand and engage with complex texts, making reading comprehension a foundational skill for academic achievement. This project seeks to address the persistent challenges that students face in reading comprehension by implementing targeted strategies within core content classrooms. The initiative involves a comprehensive approach, engaging school administrators, teachers, literacy coaches, students, parents, district officials, and community partners. Each of these stakeholders plays a pivotal role in ensuring that the strategies are effectively integrated into the curriculum, supported by the necessary resources, and tailored to meet the diverse needs of students. This introduction outlines the importance of a collaborative effort to enhance reading comprehension, setting the stage for a detailed exploration of the roles and responsibilities of each group involved in the project.

School Administrators

School administrators play a vital leadership role in the implementation of strategies aimed at improving reading comprehension among secondary students. Their primary responsibility is to allocate resources effectively, ensuring that teachers and students have the necessary tools, funding, and materials to support the initiative.

Administrators are also tasked with motivating and supporting teachers, encouraging their participation in professional development and the consistent application of new strategies in the classroom. Additionally, they oversee the monitoring and evaluation of the program's progress, regularly reviewing data to ensure that the project stays on track. Clear and consistent communication with all stakeholders, including teachers, parents, and district officials, is essential to keep everyone informed and engaged in the project's success.

Teachers

Teachers will be the primary implementers of the reading comprehension strategies within the classroom. Their responsibilities include actively participating in professional development to learn and refine the strategies and tools provided. Once trained, teachers are expected to integrate these strategies into their daily instructional practices, tailoring them to meet the diverse needs of their students. Collaboration with colleagues is also crucial, as it allows teachers to share insights, challenges, and successes, thereby contributing to the continuous improvement of teaching practices. Additionally, teachers are responsible for regularly assessing student progress and providing data that will be used for the ongoing monitoring and evaluation of the program's effectiveness.

Literacy Coaches/Specialists

Literacy coaches or specialists provide essential support and guidance to teachers throughout the implementation process. They will be responsible for facilitating professional development sessions, ensuring that teachers are well-equipped to apply the

new strategies in their classrooms. In addition to leading training, these specialists will offer in-class support to help teachers address challenges and refine their instructional methods. They also will assist in selecting and providing appropriate reading materials and tools that align with the strategies being implemented. Regular monitoring of student progress and providing constructive feedback to teachers are key responsibilities that help ensure the strategies are effectively improving reading comprehension.

Students

Students are the central focus of the initiative, and their role is to actively engage with the reading strategies and instructional activities provided by their teachers. Their responsibilities include participating fully in classroom activities and providing feedback on what strategies work best for them and where they encounter challenges. This feedback is crucial for teachers to adjust their approaches to better meet students' needs. Additionally, students will be encouraged to take responsibility for their learning by setting personal reading goals and tracking their progress, with guidance and support from their teachers.

Parents/Guardians

Parents and guardians play a supportive role in their children's educational journey, particularly in reinforcing reading comprehension strategies at home. Their responsibilities include encouraging and supporting reading activities outside of school, which helps to reinforce the strategies learned in the classroom. Maintaining open communication with teachers is also vital, as it allows parents to stay informed about their children's progress and to provide additional support where needed. By participating

in school activities and meetings related to the reading initiative, parents can help create a home environment that fosters a love of reading and academic success.

District Education Officials

District education officials provide oversight and support at a broader level, ensuring that the reading initiative is aligned with district policies and adequately funded. Their responsibilities include ensuring that schools have the resources they need and that there is a consistent approach to professional development across the district. They will also be involved in the evaluation process, conducting periodic reviews of the program's effectiveness across multiple schools. The data collected from these evaluations help inform district-wide educational strategies and ensure that best practices are shared and implemented throughout the district.

Technology Support Staff

The technology support staff will be responsible for ensuring that the necessary technological tools and platforms are accessible and functioning correctly for both teachers and students. Their role includes integrating technology into the educational process, providing ongoing technical support, and addressing any issues that may arise with the use of digital tools and resources. In addition, they will offer training sessions to teachers and students on how to effectively use educational technology to enhance reading comprehension, making sure that the tools provided are used to their full potential.

Community Partners

Community partners, including local businesses and organizations, will provide external support and resources that are essential for the success of the reading initiative. Their responsibilities include offering additional resources such as books, technology, or funding to support the program. These partners also will engage with the school community by participating in events or workshops that promote literacy development. Additionally, they will play an advocacy role by raising awareness about the importance of reading comprehension in local media or community meetings, helping to build broader support for the initiative. Each group's coordinated efforts are crucial to overcoming challenges and ensuring the successful implementation of strategies to improve reading comprehension among secondary students. Their roles, while distinct, are interconnected and collectively contribute to the overall success of the project.

Researcher

The role of the researcher in this project is multifaceted, encompassing the responsibilities of planning, coordinating, and ensuring the integrity of the study. As the primary investigator, the researcher is responsible for designing the study, selecting appropriate methodologies, and developing the data collection instruments, such as interview protocols and surveys. Additionally, the researcher must obtain necessary permissions from school administrators and the IRB to ensure the study adheres to ethical guidelines, particularly concerning participant confidentiality and informed consent. During the implementation phase, I will conduct interviews, observe classroom practices,

and gather qualitative data to assess the effectiveness of reading comprehension strategies in core content areas.

The researcher must also maintain an objective stance, minimizing personal biases that could influence the data collection and analysis processes and act as a liaison between stakeholders. The researcher's responsibilities include meticulously documenting the research process, coding and analyzing data, and identifying emerging themes that provide insights into the strategies being employed. Furthermore, the researcher acts as a liaison between different stakeholders, facilitating communication and collaboration among teachers, administrators, and district officials. This role includes presenting preliminary findings, offering recommendations based on the data, and ensuring that the study's outcomes are communicated effectively to all involved parties. The researcher's role is crucial in guiding the project to its successful completion, ensuring that the findings contribute meaningfully to the broader field of educational research and practice.

Project Evaluation Plan

For the proposed project, the planned evaluation type is formative evaluation (see Appendix A). This approach will be used to assess the effectiveness of the reading comprehension strategies being implemented within the secondary school's core content classes. The formative evaluation will focus on gathering ongoing feedback from teachers regarding the utility and ease of use of these strategies. By doing so, the project aims to identify areas where the strategies can be improved and to make adjustments as needed during the implementation phase.

The goal of this formative evaluation is to ensure that the strategies are meeting the needs of both teachers and students, allowing for real-time improvements to instructional practices. This approach is particularly suitable for educational interventions, where continuous monitoring and adaptation are essential for achieving the desired outcomes. By engaging teachers in the evaluation process and using their feedback to guide adjustments, the project seeks to optimize the effectiveness of reading instruction and ultimately improve students' reading comprehension skills.

The choice of a formative evaluation for this project is justified by its ability for teachers to provide ongoing feedback During the implementation of reading comprehension strategies, allowing for timely adjustments that can enhance the effectiveness of the intervention. Formative evaluation is particularly well-suited for educational settings, as it focuses on improving instructional methods and student outcomes in real-time, rather than waiting until the end of the project to assess effectiveness. This approach aligns with the research focus on understanding and improving teachers' perceptions and strategies in teaching reading within core content classes (Bandura, as cited in Riggs et al., 2018).

One of the key advantages of formative evaluation is its focus on the process rather than only the outcomes, which aligns with the project’s goal of refining teaching strategies as they are being applied. By continuously gathering feedback from teachers and making iterative improvements, the project can better address the specific needs of students who are struggling with reading comprehension (Almutairi, 2018). This adaptive approach ensures that the intervention remains responsive to the dynamic classroom

environment, where teachers' perceptions and students' progress can change rapidly (Cantrell et al., 2016).

Formative evaluation plays a crucial role in professional development, particularly for teachers working to implement new reading strategies in their classrooms. It provides a continuous feedback loop that enhances both the instructional practices of teachers and the effectiveness of educational reforms. In the context of professional development for teachers, formative evaluation is particularly valuable because it goes beyond just assessing outcomes; it involves teachers in the process of evaluating and refining their own instructional practices. This participatory approach encourages reflective teaching, where educators are able to continuously assess the impact of their strategies and adjust them accordingly. As Lazarides and Warner (2020) pointed out, engaging teachers in the evaluation process fosters a culture of continuous improvement, which is critical for the long-term success of educational interventions. By empowering teachers to take ownership of their own growth, formative evaluation supports not only immediate instructional changes but also sustained professional development.

The active involvement of teachers in formative evaluation ensures that they are not passive recipients of external feedback but active contributors to the success of educational reforms. This kind of engagement strengthens teachers' commitment to the intervention and allows them to tailor the reading strategies they implement to better suit their classroom contexts. Furthermore, by continuously analyzing the effects of these strategies on student outcomes, teachers develop a deeper understanding of how specific approaches work and where further adjustments are necessary. As Peng and Kievet

(2020) suggested, formative evaluation aligns well with the dynamic nature of teaching and learning, where adaptability and responsiveness are key to addressing students' needs effectively.

In conclusion, formative evaluation is essential to this project because it fosters a collaborative, reflective, and adaptive learning environment for teachers. By promoting continuous improvement, formative evaluation ensures that the reading strategies introduced during professional development are not only implemented effectively but also continuously refined to meet the evolving needs of students. This approach links the professional growth of teachers with student success, making it an indispensable component of sustained educational reform.

Stakeholders

The key stakeholders include secondary school teachers, students, school administrators, and curriculum advisors within the study school. Each of these groups plays a critical role in the successful implementation and evaluation of the reading comprehension strategies designed to address the challenges faced by students in understanding complex texts.

Secondary School Teachers

The primary stakeholders in this study, secondary school teachers, are directly responsible for implementing the reading strategies within their core content classes. Their perceptions, self-efficacy, and instructional practices are central to the success of the intervention. Teachers' involvement in the formative evaluation process allows them to provide feedback on the effectiveness of the strategies, enabling timely adjustments

and continuous improvement. Their engagement is crucial for ensuring that the strategies are not only implemented but also adapted to meet the specific needs of their students (Lazarides and Warner, 2020).

Students

The ultimate beneficiaries of the project, students struggling with reading comprehension, are critical stakeholders whose progress and feedback will inform the effectiveness of the intervention. The project's success is measured by its ability to improve students' reading comprehension skills, which in turn impacts their overall academic performance. Understanding students' challenges and needs is essential for tailoring the reading strategies to be most effective in improving their literacy (Almutairi, 2018).

School Administrators

School administrators, including principals and other leaders, are key stakeholders who support and facilitate the implementation of the reading comprehension strategies. Their role includes providing the necessary resources, professional development opportunities, and creating an environment conducive to the successful adoption of new teaching methods. Administrators are also responsible for monitoring the overall impact of the intervention on school-wide academic performance and ensuring alignment with broader educational goals (Peng & Kievet, 2020).

Curriculum Advisors

Curriculum advisors, who help design and guide the curriculum in the study school, are important stakeholders in shaping the instructional strategies used in

classrooms. Their expertise in literacy education and curriculum development ensures that the reading comprehension strategies align with state and national standards. They also play a critical role in evaluating the effectiveness of the implemented strategies and making recommendations for further improvement based on formative evaluation findings (Cantrell et al., 2016).

These stakeholders, each with their unique roles and perspectives, contribute to the collaborative effort needed to address the reading comprehension challenges in secondary education. Their involvement is vital for the iterative process of implementing, evaluating, and refining the instructional strategies to ensure they meet the needs of all students involved in the study.

Project Implications

The potential social change implications of this study are significant, particularly in addressing the pervasive issue of poor reading comprehension among secondary students in low-income communities. By identifying and implementing effective reading strategies within core content classes, the study aims to enhance students' literacy skills, which are critical for their academic success and future opportunities. Improved reading comprehension can lead to better overall academic performance, reducing the high failure rates in subjects like math and science, as highlighted in the study school. This, in turn, can decrease dropout rates, as students who understand the material are more likely to stay engaged and succeed in their education (Vaughn et al., 2015). Furthermore, equipping teachers with the necessary skills and strategies to effectively teach reading within their content areas empowers them to better support their students, fostering a

more inclusive and equitable educational environment. The ripple effect of these improvements could extend beyond the classroom, contributing to a more literate and educated community, which is essential for social mobility and economic development in low-income areas (Peng & Kievet, 2020). Ultimately, the study has the potential to inform broader educational practices and policies, advocating for the integration of literacy instruction across all subjects, which could lead to systemic changes in how reading is taught in secondary education nationwide (Cantrell et al., 2016).

Given the potential gains from identifying and implementing effective reading strategies within core content classes, it is essential that challenges to implementation be recognized and addressed. There may be a potential conflict between the teachers and the researcher regarding the introduction of new methods for teaching reading. Teachers may feel resistant to adopting different approaches, as they believe they are already effectively teaching reading within their current practices. This resistance could stem from a reluctance to change established methods, especially if they feel confident in their existing strategies. The challenge lies in addressing these concerns while encouraging openness to new ideas that could potentially enhance student outcomes.

Importance of the Project

The importance of this project to local stakeholders, particularly the teachers and students at the study school, lies in its potential to address the critical issue of low reading comprehension among secondary students. For teachers, the project offers an opportunity to explore and implement evidence-based strategies that could improve student comprehension, thereby enhancing overall academic performance. It also provides a

platform for professional development, allowing educators to refine their instructional methods and better support struggling readers. For students, the project could lead to improved literacy skills, which are essential for success in all academic areas and future endeavors.

In a larger context, this project has broader implications for educational practices beyond the local setting. By identifying effective strategies for teaching reading comprehension within core content classes, the findings could contribute to the ongoing dialogue on best practices in secondary education. The project's outcomes could inform policy decisions and curriculum development at the district, state, or even national level, particularly in low-income communities where literacy challenges are pervasive. Ultimately, the project underscores the critical role of reading comprehension in student success and highlights the need for continuous improvement in teaching practices to meet the evolving needs of students.

Section 4: Reflections and Conclusions

Reflections and Conclusions

Teachers' perspectives in teaching reading in core content areas requires an exploration of both the broader literature and specific research findings from 2020 to 2024. This type of study, situated at the intersection of literacy development and content instruction, offers valuable insights into the complexity of integrating reading strategies across diverse subjects. This discussion explores both the strengths of such an approach, as supported by contemporary research, as well as its inherent limitations. By emphasizing teachers' insights, we can better understand how their expertise and experiences shape the successful integration of reading strategies across diverse subjects, ultimately improving student outcomes.

Strengths of Focusing on Teachers' Perspectives

One of the primary strengths of focusing on teachers' perspectives in teaching reading within core content areas is that it places emphasis on the experiences and expertise of those directly responsible for student outcomes. According to a study by Silver et al. (2023), teachers' beliefs about their ability to teach reading effectively influence their instructional practices. When teachers feel confident in their skills, they are more likely to implement innovative reading strategies in their classrooms. This can lead to improved student engagement and comprehension, particularly when literacy is embedded into content areas like science, math, and social studies. By centering teachers' perspectives, this project acknowledges the crucial role of teacher agency and self-efficacy in promoting reading across the curriculum, a key theme echoed in multiple

studies (Guthrie et al., 2022). Research has highlighted the positive impact of teacher agency and self-efficacy in embedding literacy across content areas such as science, math, and social studies. Smith and Robinson (2020) demonstrated that content-area literacy initiatives in professional development improve teachers' confidence in applying literacy strategies across disciplines, directly boosting self-efficacy and leading to more dynamic, inclusive teaching practices. Additionally, Smith and Robinson's (2020) review underscore of the importance of teacher leadership and self-efficacy in fostering environments that encourage educational innovations, further supporting effective literacy integration into diverse subjects.

Moreover, teachers possess a deep understanding of the specific literacy demands of their subject areas. Teaching reading in content areas requires specialized knowledge that extends beyond general literacy instruction (Shanahan and Shanahan, 2012). This project's strength lies in highlighting the unique challenges that different subjects present, such as interpreting historical documents in social studies, understanding scientific texts in biology, or understanding rigorous vocabulary in math in order to work out the specific problem. When teachers' insights are gathered, the nuances of these challenges become clearer, providing a more comprehensive understanding of what effective reading instruction looks like across disciplines (Darling-Hammond, 2020).

Additionally, research has consistently shown that teacher collaboration and professional development are essential components of successful literacy integration in core content areas (Pearson et al, 2024). By exploring teachers' perspectives, this study can also uncover how professional development initiatives are perceived and whether

teachers feel supported in their efforts to teach reading. This focus can offer practical solutions for enhancing the design of professional development programs, ensuring that they are aligned with teachers' needs and the realities of content-specific instruction (Pearson et al, 2024).

Delivering Effective Reading Strategies for Core Content Classrooms

The primary deliverable for this project is a comprehensive professional development program that equips teachers with the skills and strategies to seamlessly integrate reading instruction into their core content classes. This program is designed to be outcome-based, ensuring that teachers can clearly see how improved reading comprehension enhances student mastery of subject material. By aligning reading strategies with the specific demands of subjects like science, social studies, and mathematics, the program provides practical tools that allow teachers to enhance their existing lesson plans without sacrificing content. Additionally, resources such as adaptable lesson plan templates, reading guides, and comprehension tools will be offered to make the integration process straightforward and manageable.

Another essential aspect of the deliverable is shifting teachers' perceptions of reading instruction. The program aims to redefine the role of reading as an integral part of all learning, not just an isolated ELA skill. By providing clear examples of how reading comprehension is critical to understanding complex texts in every subject, teachers will be encouraged to adopt these strategies as part of their regular instructional practice. The inclusion of feedback loops—where teachers report on the effectiveness of the reading

strategies in their classrooms—creates a dynamic process that fosters ongoing improvement and adaptation of the methods provided.

Finally, the deliverable emphasizes the importance of accountability and sustainability. The use of formative assessments specifically designed for core content areas will enable teachers to measure student progress and adjust their instructional methods as needed. Long-term support structures, such as follow-up coaching and scalable resources, will ensure that the strategies introduced during the professional development continue to be refined and applied over time. This approach not only empowers teachers by enhancing their self-efficacy but also embeds reading comprehension as a key component of student success across all subjects.

Limitations of the Study

The limitations of relying solely on teachers' perspectives in literacy instruction are significant, particularly regarding personal biases and a lack of familiarity with effective practices. Research has indicated that while educators may excel in their content areas, they often lack specialized training in teaching reading within those subjects, which can lead to outdated methodologies and an underestimation of literacy's role across disciplines (Fisher & Frey, 2021). Furthermore, many teachers recognize the need for ongoing professional development to tackle these challenges, highlighting a demand for enhanced support and training in literacy instruction (Fisher & Frey, 2021). Strengthening professional development opportunities is crucial for equipping educators to effectively integrate reading strategies into various content areas, ultimately improving student literacy outcomes.

Another limitation is the potential for resistance among teachers when it comes to integrating reading strategies into their content instruction. As observed in a study by Brownell et al. (2020), teachers may view reading as separate from their primary responsibility of teaching content knowledge, which can lead to a reluctance to embrace new methods. This resistance is often grounded in long-standing beliefs about the division between literacy and content learning. Moreover, teachers who are already overwhelmed with the demands of curriculum coverage may perceive additional literacy instruction as an added burden, thus limiting the implementation of effective reading strategies (Silver et al., 2023).

The project may also encounter challenges related to variability in teacher preparation and professional development opportunities across different schools and districts. As noted by Schwartz (2023), not all teachers receive the same level of support or access to quality professional development focused on literacy. This creates disparities in how reading is taught in content areas, with some teachers being well-equipped to integrate literacy while others struggle due to a lack of resources or training. Thus, the study’s findings may be skewed based on the variability in professional development experiences among participants.

A further limitation is the potential disconnect between teachers' perspectives and actual student outcomes. While teachers' insights are valuable, they do not always align with the realities of student performance. For example, a teacher may feel confident in their ability to teach reading strategies, but student assessments may reveal ongoing struggles with comprehension. According to Mazelin (2024), teacher self-perceptions do

not always translate into effective instructional practices, particularly when teachers lack the necessary data or feedback on student progress. Therefore, while teachers' perspectives provide important qualitative data, they should be supplemented with quantitative measures of student achievement to offer a more complete picture of the effectiveness of literacy instruction in content areas (Bogle, 2024).

In conclusion, grounding a study on teachers' perspectives in teaching reading in core content areas in recent literature reveals both significant strengths and notable limitations. On the positive side, this approach highlights the crucial role of teacher agency, subject-specific literacy challenges, and the importance of professional development in fostering reading comprehension. However, limitations such as teacher bias, resistance to integrating reading strategies, variability in professional development experiences, and the potential gap between teacher perceptions and student outcomes must also be considered. Addressing these limitations requires a balanced approach that combines teacher perspectives with data-driven insights and robust professional development initiatives, as emphasized by contemporary scholars in the field (Bogle, 2024). By doing so, educators and researchers can develop more effective strategies for improving literacy across all core content areas.

Recommendations for Alternative Approaches

Based on the study findings on teachers’ perceptions of reading instruction in core content areas, implementing targeted professional development programs emerged as the preferred recommendation. These programs can improve teachers' confidence and skills in integrating reading strategies across subjects, fostering a culture of continuous learning

that benefits both educators and students. Research has highlighted the importance of professional development that addresses both the cognitive and emotional dimensions of teaching, leading to more effective reading instruction and improved student outcomes (Mazelin, 2024). Recommended components for such professional development include collaborative planning sessions, workshops, and peer observations to promote the consistent application of effective reading strategies across disciplines.

Another option considered was the implementation of mentorship programs, which pair experienced educators with less experienced ones to share effective reading practices. Mentorship supports new teachers in navigating challenges and developing classroom skills to enhance student engagement in reading. Regular meetings and observations within a structured mentorship can improve literacy instruction across content areas by providing novice teachers with practical insights and strategies for fostering reading comprehension (Bogle, 2024).

A third recommendation, ultimately set aside, was the integration of technology-driven instructional tools for reading. Technology offers engaging, personalized learning experiences, but the study indicated that teachers might lack sufficient training or confidence in using these tools effectively. Comprehensive training in digital reading resources, adaptive platforms, and software could empower teachers to leverage technology more fully. However, due to the pressing need to address foundational reading strategies, the focus remained on professional development for traditional literacy methods (Bogle, 2024).

Scholarship, Project Development and Evaluation, and Leadership and Change

The research and development process for this project revealed significant insights regarding the perceptions and practices of core content teachers in relation to reading instruction. Data collected through interviews with these educators highlighted a prevailing belief that reading instruction should be the responsibility of the ELA department, rather than being integrated across the curriculum. Many teachers expressed hesitancy about their own competence in teaching reading strategies within their content areas, citing a lack of formal training and concerns over time constraints in an already demanding curriculum. This finding underscored the need for professional development that not only equips teachers with effective strategies but also addresses their concerns and builds their confidence in implementing reading instruction.

Moreover, the data showed that teachers who were open to incorporating reading strategies recognized the potential for improved student outcomes but were unsure how to align these strategies with the cognitive demands of their specific content areas. For instance, science teachers identified the challenge of teaching students to comprehend dense, technical texts, while social studies teachers highlighted the difficulty of engaging students in critical analysis of historical documents. These interviews emphasized the necessity for content-specific reading strategies that are both practical and directly applicable to the unique texts and materials encountered in different subjects. This insight was instrumental in shaping the project's development, ensuring that the strategies provided were not generic but tailored to the distinct needs of each discipline.

Additionally, the research revealed that while teachers are often aware of the need for improved reading comprehension, they are less familiar with formative assessment tools that could help measure the impact of these strategies on student learning. Many teachers reported that they rely on summative assessments, such as tests and quizzes, to gauge student comprehension, but acknowledged that these assessments may not fully capture students' struggles with reading comprehension throughout the learning process. The development of formative assessment tools, designed specifically to assess reading comprehension within core content areas, became a key component of the project. These tools provide teachers with timely data to make instructional adjustments, fostering a more responsive and informed approach to teaching reading.

Finally, the development process highlighted the importance of sustained professional support in the successful implementation of reading strategies across core content areas. Teachers noted that while professional development sessions can be helpful, without ongoing support and opportunities for collaboration, the initial enthusiasm for new strategies often wanes. This feedback informed the creation of follow-up structures within the project, such as instructional coaching and online communities of practice, which provide teachers with continued resources and a platform for sharing successes and challenges. This sustained support is crucial for fostering long-term changes in teaching practices and ensuring that reading instruction becomes a consistent and valued part of core content teaching.

Reflective Analysis on Personal Learning and Growth

The process of researching and developing this project has been a profound journey of personal and professional growth, particularly in my roles as a scholar, practitioner, and project developer. As a reading specialist, I have long understood the importance of reading comprehension for student success, but this project deepened my understanding of how reading is—or, in many cases, is not—being taught across core content areas. Through interviews with core content teachers, I gained a more nuanced perspective on the challenges they face in incorporating reading strategies into their instruction. This experience has illuminated the wide variability in teachers' approaches to reading instruction, ranging from those who consciously integrate reading skills to those who see it as peripheral to their subject matter. Understanding these diverse approaches has expanded my view of literacy education beyond traditional reading and language arts settings.

One of the most important lessons I have learned through this project is the range of alternatives and methodologies available for teaching reading in content areas. While many teachers rely on traditional methods of direct instruction or lecture-based learning, others are experimenting with innovative techniques such as collaborative reading, text-based inquiry, and the use of multimedia resources to engage students in reading. These alternatives highlight the flexibility required to teach reading effectively across various subjects, reinforcing that one-size-fits-all strategies are not sufficient. As a project developer, I recognized the importance of offering teachers a range of options that cater to their unique classroom environments and the specific demands of their content areas.

This realization guided the development of a versatile professional development program that empowers teachers to choose and adapt strategies based on their students' needs.

Data collection has also played a pivotal role in shaping both my personal growth and the development of this project. As a reading specialist, I have always valued the role of data in informing instructional decisions, but through this process, I have gained a deeper appreciation for the complexities of data collection and analysis, particularly in the context of teacher perceptions and classroom practices. Conducting interviews with core content teachers not only provided valuable insights but also reinforced the necessity of collecting both qualitative and quantitative data to create a comprehensive understanding of instructional challenges. This reinforced my belief that data should be an ongoing tool for reflection and improvement in instructional practices, rather than a static measure of success.

As a scholar, this project has sharpened my research skills, particularly in conducting literature reviews and engaging with peer-reviewed journals. The process of delving into the latest research on reading instruction in content areas allowed me to identify gaps in the current body of knowledge and contribute to the conversation by synthesizing findings from both academic research and practical insights from the field. Additionally, I have learned how to approach research with an objective, unbiased perspective—particularly during the interview process with colleagues. Maintaining impartiality and avoiding the influence of personal beliefs or assumptions was a key learning point, and it allowed me to gather more authentic and actionable data.

The project development process also taught me the value of collaboration and iterative feedback. Developing a professional development program required me to engage with teachers not only as participants in the research but as co-creators of the solutions. Their feedback, insights, and experiences were critical in shaping the resources and strategies included in the program. This collaborative approach not only enhanced the quality of the deliverable but also ensured that it would be practical and relevant to the teachers' real-world needs. I have grown in my ability to listen, adapt, and incorporate the perspectives of others into a cohesive project, recognizing that true innovation often comes from collective input.

Overall, this project has been a transformative experience for me as a scholar, practitioner, and project developer. I have gained deeper insights into the complexities of teaching reading across disciplines and the diverse ways in which educators approach this challenge. My research and data collection skills have been sharpened, allowing me to conduct unbiased, thorough investigations that inform both theoretical understanding and practical application. Most importantly, I have learned that successful project development requires an ongoing commitment to reflection, adaptation, and collaboration—skills that I will continue to apply in my future endeavors as a reading specialist and educational leader.

Reflection on the Importance of the Work

Reflecting on the overall work, I have gained a deep understanding of the complexities involved in teaching reading across core content areas. Through the development of this project, I learned that many core content teachers face unique

challenges when it comes to incorporating reading strategies into their instruction. These challenges are often rooted in misconceptions about the role of reading in subjects like science and mathematics, where teachers may believe that reading comprehension falls outside their purview. This insight was critical in shaping the project's focus on professional development that not only provides strategies but also addresses the underlying beliefs teachers hold about reading in their classrooms. Understanding these barriers was a key learning that guided the development of resources aimed at making reading instruction more accessible and relevant across disciplines.

Another major takeaway from this work was the importance of providing tailored, content-specific strategies for teaching reading. Throughout the research process, it became evident that one-size-fits-all approaches to reading instruction are not effective in diverse classroom settings. Each content area has its own distinct texts, language, and cognitive demands, requiring teachers to adopt specialized strategies. For example, science teachers need tools to help students decode technical language, while social studies teachers benefit from strategies that promote critical analysis of historical texts. This realization influenced the development of the professional development program, ensuring that teachers were equipped with practical, discipline-specific strategies that they could implement in their classrooms.

One of the most significant lessons learned was the value of data in shaping instructional practices and project development. Conducting interviews with core content teachers provided qualitative data that was instrumental in understanding their perceptions, challenges, and successes in teaching reading. This data-driven approach

helped ensure that the project was grounded in the real experiences of educators, allowing for the creation of resources that were directly responsive to their needs. Moreover, I learned that ongoing data collection is essential to assessing the impact of reading strategies and making iterative improvements. This reinforced the importance of formative assessments, which provide teachers with timely feedback on student progress and help inform instructional adjustments in real time.

Finally, this work has taught me the importance of collaboration and sustained support in professional development. While one-time workshops or training sessions can introduce new ideas, true change happens when teachers are provided with continuous resources, coaching, and opportunities for collaboration. Through this project, I learned that teachers value ongoing support systems that allow them to refine their practice over time and engage in reflective dialogue with peers. This understanding has deepened my commitment to creating professional development programs that are not only effective in the short term but also sustainable and impactful in the long term, ensuring lasting growth for both teachers and their students.

Implications, Applications, and Directions for Future Research

The struggle with reading comprehension among secondary students presents critical implications for both educational practice and future research. Addressing this issue requires not only a deep understanding of student needs and the challenges of teaching literacy in content areas but also a commitment to implementing evidence-based strategies. By examining alternative approaches to reading instruction, educators can explore applications that foster improved comprehension across disciplines. Additionally,

identifying effective methods opens avenues for future research to further refine instructional practices and examine long-term outcomes. This section will explore the broader implications of enhancing reading comprehension in secondary education, practical applications for teachers and administrators, and potential directions for research to support ongoing improvements in literacy education.

Political Impact for Positive Social Change

At the individual level, the political impact of promoting literacy across core content areas can be transformative, particularly for students who struggle with reading comprehension. By equipping teachers with the tools to integrate reading strategies into all subjects, students gain access to enhanced educational opportunities. As these students become more proficient readers, they develop critical thinking skills and the ability to engage more fully in academic and social discourse. This empowerment extends beyond the classroom, as literacy is a key factor in individual success and agency. Politically, fostering literacy contributes to reducing educational inequalities, as students from diverse backgrounds can access the same learning opportunities, enabling them to advocate for themselves and participate more actively in civic life.

At the family level, improved literacy outcomes for students can lead to a ripple effect of positive social change. Families play a critical role in supporting their children's education, and when students succeed academically, it can foster a stronger home learning environment. Increased literacy skills in children can also encourage families to become more engaged in educational processes, such as attending school events or participating in decision-making at the school level. Politically, this increased family

engagement can contribute to greater advocacy for educational policies that promote equity and access, creating a collective push for reforms that benefit all students. Families empowered by the success of their children are more likely to support educational initiatives that promote literacy and lifelong learning.

Within educational organizations, such as the Study School, the political impact of promoting reading across content areas can lead to systemic changes in how literacy is approached. When teachers from all disciplines take ownership of reading instruction, it breaks down the traditional silos between departments, fostering collaboration and a more holistic approach to student learning. Administrators and policymakers within these organizations are more likely to prioritize professional development and instructional resources that support this interdisciplinary approach. As schools adopt these models, the political landscape within educational organizations shifts toward greater support for comprehensive literacy instruction, advocating for policy changes that allocate funding and resources toward these efforts. This organizational change has the potential to improve student outcomes at scale, impacting entire student populations.

At the societal and policy level, the widespread adoption of reading instruction across content areas can lead to broader political shifts in educational policy. As literacy rates improve, particularly in underserved populations, there is potential for reducing long-standing educational inequities that have contributed to social disparities. Policymakers may begin to recognize the importance of literacy as a fundamental right that extends beyond language arts and see the need for legislation that supports comprehensive literacy education. This can lead to increased funding for literacy

initiatives, the adoption of national reading standards across subjects, and policies that mandate teacher training in reading instruction across all disciplines. Ultimately, these political shifts contribute to a more literate and informed society, which is better equipped to engage in democratic processes and advocate for broader social justice.

The political impact for positive social change within the boundaries of this study is primarily focused on the individual, organizational, and localized levels. At the individual and family level, improved reading comprehension through interdisciplinary strategies can enhance student performance and confidence, potentially creating a supportive learning environment within families. Organizationally, the project's influence may lead to shifts in teaching practices within the participating school, fostering a more literacy-centered culture without pushing for district-wide reforms. On a societal level, the localized impact may enhance students' ability to engage with their immediate community, though the effects remain contained within the school setting. Finally, any potential policy changes would be limited to internal adjustments within the school or district, such as advocating for professional development or curriculum modifications, ensuring that the implications for social change do not exceed the scope of the study.

Methodological and Theoretical Implications

The methodological implications of this project, particularly in relation to teacher self-efficacy, are significant. The professional development focus of the project aims to address the uncertainties many core content teachers expressed about their ability to effectively teach reading in their subject areas. Through targeted training and the provision of practical, content-specific reading strategies, the project seeks to increase

teacher confidence in incorporating literacy instruction across disciplines. Enhancing teachers' self-efficacy is critical, as educators who believe in their ability to successfully implement instructional strategies are more likely to adopt and sustain these practices in the long term. This project contributes to the ongoing conversation in education research by demonstrating how professional development can directly impact teacher self-efficacy, leading to improved instructional effectiveness and student outcomes.

The theoretical implications of this project also contribute to evolving perspectives on literacy education. Traditionally, reading instruction has been the domain of ELA classrooms, but this project challenges that convention by promoting the integration of literacy strategies across all content areas. This approach aligns with constructivist and sociocultural theories, which posit that learning is context-specific and that literacy skills must be adapted to different disciplinary demands. By embedding reading comprehension into subjects like science, mathematics, and social studies, the project emphasizes that literacy is a foundational skill for all academic areas, not just language arts. The project therefore expands the theoretical understanding of interdisciplinary literacy, supporting the view that reading is an essential tool for content mastery across subjects and offering a model for how literacy instruction can be effectively integrated into diverse educational contexts.

Recommendations for Practice and Future Research

Based on the findings from this project, several key recommendations for practice have emerged. First, schools and districts should prioritize ongoing professional development for teachers across all content areas, focusing on the integration of reading

strategies tailored to specific subjects. This approach will not only enhance teachers' self-efficacy but also ensure that students are consistently exposed to literacy instruction that supports their understanding of complex texts in subjects like science, social studies, and mathematics. Additionally, providing continuous support through instructional coaching, peer collaboration, and resources will help teachers sustain these practices and refine their instructional methods over time. School leaders should also consider embedding literacy-focused goals within their broader curriculum planning, aligning reading comprehension objectives with content-specific learning targets to promote a more holistic approach to education.

For future research, there is a need for more longitudinal studies that examine the long-term effects of interdisciplinary reading instruction on both teacher efficacy and student outcomes. Specifically, research should explore how sustained professional development and support systems impact teacher practices and how these changes influence student achievement in core content areas over time. Another area for further inquiry is the exploration of how reading comprehension strategies can be adapted to different student populations, including English Language Learners (ELLs) and students with disabilities, to ensure that these strategies are inclusive and effective for diverse learners. Additionally, future research should investigate the role of formative assessment in measuring the impact of reading instruction on content knowledge, exploring how these assessments can be effectively integrated into daily instruction to inform teaching practices.

Overall, these recommendations emphasize the importance of creating a culture of literacy across all content areas, supported by data-driven practices and sustained professional development. By addressing these areas in both practice and research, schools can better equip teachers and students to meet the increasing demands of literacy in a wide range of academic and real-world contexts.

Conclusion

The central message of this study is that literacy is a foundational skill across all subject areas, not just confined to ELA classrooms. This research underscores the importance of integrating reading comprehension strategies into core content instruction, such as science, mathematics, and social studies, where complex texts and discipline-specific vocabulary pose significant challenges to student understanding. By embedding reading strategies into these subjects, educators can foster deeper comprehension and cognitive engagement, ultimately supporting students' overall academic achievement. This finding calls for a rethinking of traditional educational practices, emphasizing the need to treat literacy as an interdisciplinary skill essential to mastering all content areas.

A crucial implication of the study is the positive relationship between targeted professional development and teacher self-efficacy. The data collected through interviews with core content teachers indicated that many feel unprepared or uncertain about how to incorporate reading strategies into their specific disciplines. This lack of confidence directly impacts their ability to deliver effective literacy instruction. However, the study demonstrates that when teachers receive content-specific training and ongoing support, their self-efficacy improves, leading to more consistent and effective implementation of

reading strategies in the classroom (Ingersoll et al., 2020). Thus, professional development that is both practical and sustained is vital for promoting teacher growth and instructional change.

Moreover, the study highlights the importance of a data-driven approach to literacy instruction, particularly through the use of formative assessments. Teachers need real-time data on student reading comprehension to make informed adjustments to their teaching strategies. Formative assessments provide this feedback by allowing teachers to monitor students' progress and address reading challenges as they arise. A recent study highlights how teachers perceive that integrating assessment tools, like formative and diagnostic assessments, enables them to provide targeted support for students' reading comprehension development. These tools allow teachers to track and respond to students' individual progress, enhancing engagement with reading material across content areas (Gkintoni et al., 2024). This approach ensures that literacy instruction is not only responsive but also aligned with the cognitive demands of core subjects.

The theoretical implications of the study extend beyond immediate classroom practices by contributing to the broader understanding of interdisciplinary literacy. Grounded in the self-efficacy theory, the study reinforces the idea that literacy is a dynamic, context-specific skill that evolves as students engage with different types of texts in various subjects. The research supports the argument that literacy instruction must be adapted to the unique demands of each discipline, providing students with the tools necessary to decode, analyze, and synthesize information within different academic contexts. This theoretical framework informs the design of professional development

programs and instructional practices aimed at integrating literacy into core content instruction.

In conclusion, the study presents a compelling case for the integration of literacy instruction across all subjects, highlighting the critical role of professional development, teacher self-efficacy, and formative assessments in achieving this goal. Literacy is a shared responsibility, and by equipping teachers with the strategies and confidence needed to incorporate reading into their content areas, schools can create a more inclusive and effective learning environment. The findings of this study emphasize that interdisciplinary literacy instruction is not only feasible but essential for student success, calling for a collaborative and sustained effort to make literacy a cornerstone of all educational practices.

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Appendix A: The Project

Phase 1: Planning and Resource Allocation (Months 1-2)

Timeline: September 1, 2024 – October 31, 2024

Objective: Establish a foundation by identifying resources, securing funding, and planning professional development.

1. **Resource Identification:**
    - **Checklist:**
        - Compile high-quality reading resources.
        - Identify technology tools and assessment instruments.
    - **Activities:**

      By **September 15, 2024**, compile a comprehensive list of materials needed, including reading resources, classroom tools, and assessments. Meet with technology teams and suppliers to ensure alignment with educational goals.
    - **Time:** 10:00 AM – 12:00 PM (Mondays)
2. **Funding:**
    - **Checklist:**
        - Secure funds via budget reallocations, grants, or partnerships.
    - **Activities:**

      Throughout **September**, coordinate with the school's finance team and external partners to secure funding. Submit grant applications by **October 10, 2024**.

- **Time:** 1:00 PM – 3:00 PM (Tuesdays)

3. **Professional Development Planning:**
    - **Checklist:**
        - Develop a teacher training schedule.
        - Identify training topics (effective reading strategies, content integration).
    - **Activities:**

      By **October 31, 2024**, finalize a detailed schedule for professional development sessions, incorporating best practices for reading strategies. Focus on topics like comprehension techniques and classroom integration.
    - **Time:** 9:00 AM – 11:00 AM (Thursdays)

Phase 2: Professional Development and Initial Implementation (Months 3-5)

Timeline: November 1, 2024 – January 31, 2025

Objective: Equip teachers with skills and knowledge to implement reading strategies.

1. **Teacher Training:**
    - **Checklist:**
        - Conduct training on comprehension strategies and literacy tools.
    - **Activities:**

      Begin the training sessions from **November 7, 2024** and continue weekly, focusing on reading comprehension strategies, differentiation, and technology integration. Sessions will be held every **Thursday** from **9:00**

AM – 12:00 PM. Ensure all teachers are engaged through interactive workshops.

2. **Pilot Program:**
    - **Checklist:**
        - Select a small group of teachers to implement strategies.
    - **Activities:**

      Launch the pilot in **early December 2024**. These teachers will integrate the new strategies in their classrooms. Conduct bi-weekly check-ins on **Fridays** to monitor progress and address issues.
    - **Time:** 10:00 AM – 11:30 AM (Fridays)
3. **Collaborative Planning:**
    - **Checklist:**
        - Establish regular meetings for teacher collaboration.
    - **Activities:**

      Begin holding collaboration meetings with the pilot teachers by **December 15, 2024**. Meet every **Tuesday** at **2:00 PM** to share insights, review data, and refine the teaching methods based on feedback.
    - **Time:** 2:00 PM – 4:00 PM (Tuesdays)

Phase 3: Full Implementation (Months 6-10).

Timeline: February 1, 2025 – June 30, 2025

Objective: Expand reading strategies across all core content classes.

1. **Expansion:**
    - **Checklist:**
        - Extend strategies to all core content teachers.
    - **Activities:**

      Beginning in **February 2025**, roll out the reading strategies to all teachers. Hold training workshops every **Wednesday** from **10:00 AM – 1:00 PM** to ensure all teachers are well-versed in the methods.
    - **Time:** 10:00 AM – 1:00 PM (Wednesdays)
2. **Support Structures:**
    - **Checklist:**
        - Provide literacy coaches and training.
        - Ensure resource access.
    - **Activities:**

      Ongoing from **February 2025** through **June 2025**, literacy coaches will provide classroom support. Monthly check-ins will occur on the **first Monday of each month** from **9:00 AM – 11:00 AM** to review progress and address challenges.
3. **Data Collection and Monitoring:**
    - **Checklist:**
        - Conduct regular assessments.
    - **Activities:**

      Start student assessments in **March 2025**. Collect data on reading

comprehension every **two weeks** and monitor progress. Hold data review sessions on the **last Friday of each month**.

- **Time:** 1:00 PM – 3:00 PM (Fridays)

Phase 4: Evaluation and Refinement (Months 11-12)

Timeline: July 1, 2025 – August 31, 2025

Objective: Evaluate the program's success and refine strategies for improvement.

1. **Data Analysis:**
   - **Checklist:**
     - Analyze collected data to assess reading improvements.
   - **Activities:**

     Begin analyzing data in **July 2025**. By **July 20, 2025**, prepare a report detailing improvements and challenges. Present the findings to the school administration by **July 31, 2025**.
   - **Time:** 9:00 AM – 12:00 PM (Mondays)
2. **Feedback Loop:**
   - **Checklist:**
     - Gather feedback from teachers, students, and literacy coaches.
   - **Activities:**

     Distribute surveys in **August 2025** to collect feedback. Hold focus group discussions on **August 15, 2025**, from **1:00 PM – 3:00 PM**, to dive deeper into the responses.
   - **Time:** 1:00 PM – 3:00 PM (Tuesdays)

3. **Refinement:**
    - **Checklist:**
        - Adjust the program based on data and feedback.
    - **Activities:**

      Make necessary program refinements by **August 31, 2025**. Develop a revised plan for the upcoming school year, focusing on continuous improvements in reading strategies and implementation support.

Ongoing Support and Sustainability (Post-Implementation)

Timeline: Starting September 1, 2025

Objective: Ensure the long-term sustainability of reading strategies.

1. **Continuous Professional Development:**
    - **Checklist:**
        - Offer ongoing training and support.
    - **Activities:**

      Hold quarterly training sessions starting **September 2025**. Teachers will receive updates on evolving reading strategies and access to new resources.
    - **Time:** 10:00 AM – 12:00 PM (Wednesdays)
2. **Resource Updates:**
    - **Checklist:**
        - Review and update resources and tools.

- **Activities:**

  Conduct annual reviews of reading materials and technology in **October 2025**. Submit recommendations for updates by **October 31, 2025**.

- **Time:** 9:00 AM – 11:00 AM (Fridays)

3. **Long-Term Monitoring:**

   - **Checklist:**

     - Continue monitoring student progress.

   - **Activities:**

     Ongoing assessments will take place monthly to ensure sustained reading improvements. Monthly review meetings will occur on the **last Monday of each month**.

     - **Time:** 10:00 AM – 12:00 PM (Mondays)

Appendix B: Interview Questions

1. How do you personally define the role of reading in core content classes?
2. In your opinion, what specific challenges, if any, do students face when it comes to reading within your subject area?
3. What strategies do you use to promote reading comprehension and critical thinking skills in your students?
    a. Can you share an example of a lesson or activity that effectively incorporates reading as a central component in your subject area?
4. How do you select reading materials that are appropriate and engaging for your students in your subject area?
5. How would you teach a student with reading disabilities in your classroom?
    a. In what ways do you differentiate your approach to teaching reading for students with learning needs?
6. How do you assess students' reading proficiency in your core content class?
7. How do you collaborate with colleagues to support a consistent approach to teaching reading across core content classes?
8. In your experience, how do students' reading abilities impact their overall academic performance?
9. How do you address the balance between content coverage and the development of reading skills in your curriculum?
10. What role do technologies, such as online resources or digital platforms, play in your approach to teaching reading in core content classes?

These questions aim to uncover teachers' perspectives, practice, and challenges, related to teaching in core content classes, allowing for more comprehensive understanding of their instructional methods and beliefs.

Appendix C: Codes, Categories, and Themes

CODES	CATAGORIES	THEMES
P-1 Post practices		
P-1 Pick out main topics or solutions	Classroom Strategies	Structured Learning and Effective Study Techniques and Assessments
P-1 Do not focus on details-focus on important information		
P-2 Underline key words	write refleieve themes at catagorie level	
P-2 Use context clues to solve vocabulary		
P-2 Students read vocabulary silently then as a class		
P-3 read classroom content as a class		
P-5 relate material to students' background	Do all by category - all p1 all p2 all p3	
P-6 Outline the chapter in the book		
P-6 Highlight important facts		
P-1 Practice of past assignments		
P-1 Work on review for quiz or test	Reading Assessments in the Classroom	
P-1 Scaffold a lesson		
P-3 Assess various assignments (homework, classwork)		
P-3 Use open-ended questions		
P-6 After reading write a summary		
P-7 Teach to the test (Keystones)		
P-4 test fluency by reading aloud		
P-4 Use a word bank for vocabulary		
P-4 Use context clues		
P 3 Use Primary and secondary data	Material Used in the Classroom	Integrating Diverse Resources and Technology in Education
P-3 Use text books and personal quotes		
P-5 Use newspaper or the internet		
P-6 read the text book		
P-2 Use worksheets		
P-10 Selecting most recent/current materials for teaching		
P-1 Use case studies		
P-3 Students will bring in related topics of the lesson		
P-1 use a program CK-12	Technology in the Classroom	
P-3 Videos, online articles, the internet, and movies		
P-4 electronic journals		
P-8 Use Schoology and Powerschool to provide feedback		
P-9 There is too much technology		
P-9 Students have the urge to use cell phones in class		
P-1 Text is too wordy and rigorous	Teacher challenges In the classroom	Addressing Reading Challenges and Enhancing Comprehension
P-1 Mixture of word and numbers are confusing		
P-1 Difficult to pick out Important information		
P-4 Students do not read in/out of school		
P-4 Students cannot underline main points		
P-5 There are no reading strategies		
P-6 Students have problems staying on task		
P-9 Students have difficulties completing word problems		
P-9 Students struggle with concepts and computation	Comprehension struggles in the classroom	
P-9 Student struggle with word problems		
P-7 Higher order of thinking is difficult for low to non-readers		
P-3 Student write the way they communicate		
P-3 Vocabulary is limited		
P-4 Students have problems with context		
P-8 Students resist to reading		
P-5 Students do not like to read		
P-9 Reading ability will impact reading performance	Reading abilities that impact performance	Enhancing Reading Proficiency and Performance
P-8 Reading is minimal in the classroom		
P-1 effects ability to solve problems		
P-1 effects writing ability		
P-3 decline in reading last 3 years		
P-3 Students do not have the caliber to understand vocabulary		
P-5 Students want instant gratification-scanning an article		
P-4 teach basic reading skills	Basics of Reading	
P-1 Teach on grade level of reading		
P-3 Help students with reading disabilities		
P-8 The role of reading is beneficial for comprehension	Importance of Reading	
P-10 Reading is the core learning		
P-9 Collaborates with colleagues about students and understanding	Teacher Collaboration	Fostering Collaboration for Enhanced Teaching and Learning
P-1 Collaborates with other teachers online to share lessons		
P-3 Collaborate to write the curriculum		
P-4 Talk about lessons and students understanding of material		
P-6 Talk about students learning style and teaching style		
P-7 To discuss Keystone testing		
P-8 Does not collaborate with colleagues about reading		
P-10 Does not collaborate		
P-2 Does not share ideas		
P-5 Does not meet with colleagues		

Appendix D: Goal for Formative Evaluation

Specific Goals for the Formative Evaluation

1. **Assess the Usability of Reading Comprehension Strategies**
   Teachers will evaluate how practical and user-friendly the reading strategies are for their core content classes. The goal is to identify if any strategies are too complex or time-consuming and adjust them as needed.
2. **Gauge Student Engagement and Comprehension**
   Teachers will monitor and report on how well students are responding to and benefiting from the new strategies. Data on student engagement, participation, and comprehension will be gathered to assess the immediate impact of the intervention.
3. **Identify Areas for Teacher Support and Professional Development**
   Teachers will report areas where they feel they need more support or training to effectively implement the strategies. This feedback will guide further professional development efforts.
4. **Monitor Strategy Adaptation in Different Content Areas**
   Since teachers will be implementing reading strategies across different content areas, one goal is to assess how easily the strategies can be adapted for subjects like science, social studies, etc.

Timeline for Data Collection and Formative Assessment

Since you're working with 10 teachers, a structured timeline will allow for systematic feedback collection. Here's a proposed schedule over the course of a school term (16 weeks):

Weeks 1-2: Initial Implementation and Feedback

- **Goal:** Get initial reactions and feedback on usability.
- **Data Collection:** Teachers will implement the reading comprehension strategies in their classrooms for the first two weeks.
- **Teacher Assessments (10 total):** Each teacher will submit a brief formative assessment report detailing initial impressions, perceived usability, and potential challenges.

Weeks 3-4: Strategy Adaptation and Student Engagement

- **Goal:** Assess how students are engaging with the strategies and whether teachers have begun to adapt the strategies to their specific content area.

- **Data Collection:** Teachers will submit feedback on student participation and engagement levels, identifying areas where students struggle or excel.
- **Teacher Assessments (10 total):** Each teacher will submit another assessment focused on student outcomes and any adaptations made to the strategies for their subject.

Weeks 5-6: Teacher Professional Development Check-in

- **Goal:** Identify gaps in teacher understanding or needs for additional support.
- **Data Collection:** A short survey will collect data on areas where teachers feel they need more training or assistance with the strategies.
- **Teacher Assessments (10 total):** Each teacher will submit insights on where they need more professional development or guidance, helping to plan the next PD session.

Weeks 7-8: Mid-Implementation Reflection

- **Goal:** Reflect on overall progress and gather in-depth feedback for mid-project adjustments.
- **Data Collection:** Each teacher will complete a formative evaluation questionnaire, providing detailed reflections on the first half of the implementation.
- **Teacher Assessments (10 total):** Teachers will report on student progress, personal challenges, and any further modifications made to the strategies.

Weeks 9-10: Student Progress Focus

- **Goal:** Gather more in-depth data on student reading comprehension progress.
- **Data Collection:** Teachers will use formative assessments (quizzes, discussions, exit tickets) to measure student comprehension.
- **Teacher Assessments (10 total):** Each teacher will submit data on student progress with specific examples of student work or feedback demonstrating improvement or challenges.

Weeks 11-12: Continuous Improvement Cycle

- **Goal:** Make iterative changes based on feedback received and start implementing them.
- **Data Collection:** Teachers will share how they have adjusted the strategies based on ongoing formative feedback and how these changes have impacted instruction.
- **Teacher Assessments (10 total):** Teachers will continue to report on student engagement and comprehension as adjustments are made to the strategies.

Weeks 13-14: Final Adjustments Before End of Term

- **Goal:** Ensure strategies are refined before the project's conclusion and gather any final suggestions for improvement.
- **Data Collection:** Teachers will submit final feedback on the strategies' effectiveness in their current form.
- **Teacher Assessments (10 total):** A final mid-term assessment focusing on last-minute refinements and teacher suggestions for end-of-term adjustments.

Weeks 15-16: Final Teacher Feedback & End-of-Term Data Collection

- **Goal:** Gather summative insights on the strategies' overall effectiveness and future scalability.
- **Data Collection:** Teachers will submit final reports on overall effectiveness, with recommendations for long-term adoption of the strategies.
- **Teacher Assessments (10 total):** Teachers will share comprehensive feedback on their experiences, identifying what worked well and what didn't, along with proposed improvements for future implementations.

Data Collection Plans

- **Teacher Reports**: Regular written reflections, observations, and evaluations from teachers will be collected every two weeks as outlined in the timeline above.
- **Surveys and Questionnaires**: Short, structured surveys will be used to gather both qualitative and quantitative data on teachers' perceptions of the strategies, professional development needs, and student outcomes.
- **Student Data**: Teachers will provide anonymized student progress reports, formative assessment data (quizzes, participation), and specific feedback on reading comprehension levels.
- **Collaborative Feedback Sessions**: Bi-weekly virtual or in-person meetings can be held to discuss insights from formative assessments and identify immediate action steps to refine instructional practices.