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**Project-Based Learning and Third Grade Literacy: Teacher
Perceptions on Viability of Implementation for Content Area
Instruction**

Syndie White

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**Project-Based Learning and Third Grade Literacy: Teacher Perceptions on Viability of
Implementation for Content Area Instruction**

by

Syndie White

A DISSERTATION

submitted to Lynn University in partial fulfillment

of the requirements for the degree of

Doctor of Education

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Ross College of Education

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ABSTRACT

SYNDIE WHITE: Project-Based Learning to Support Literacy: Teacher Perceptions on Viability of Implementation for Content Area Instruction

The impacts of third-grade literacy have resulted in laws and various policies to support reading proficiency. Even with an increased focus on meeting the literacy needs of third-grade students, there remains an important question, “How can schools meet literacy needs while also developing learners with the 21st-century skills needed to contribute to the future workforce?” This study examined teachers' perception of Project-Based Learning to support third-grade reading and writing literacy goals. The following questions guided the study. What are elementary school teachers' perceptions of Project-Based Learning as an approach to enhance literacy outcomes for third-grade students through cross-content integration of targeted English Language Arts standards? How can Project-Based Learning target reading and writing literacy goals across content areas? and is there a correlation between Project-Based Learning implementation and reading achievement of third-grade students within a large urban school district? Utilizing a mixed-methods research methodology, the core of the data collection method was qualitative, which was supported by quantitative data. Data from third, fourth, and fifth-grade teachers working within public schools in a large urban school district in Florida were included in the study. Through open-ended interviews, open and closed-ended survey questions, and analysis of assessment data, the research concluded with the following; teachers perceived Project-Based Learning as a viable means of supporting literacy goals for third-grade students. Teachers identified challenges such as time, a need for professional development, and resources. The benefits included students taking ownership of their work, opportunities for collaboration

and communication, choice, student voice, differentiation, content mastery, real-life experiences, motivation, increased engagement, and increased student confidence. The data showed no significant correlation between teachers' perceived level of use within the third-grade classrooms at their schools and student's performance on state standardized assessments. The data also revealed a correlation between a school's Title I status and the third-grade standardized assessment data. The study shed light on the complexities of instruction and a need for professional development opportunities to address the multifaceted nature of Project-Based Learning while examining consistency, rigor, and student-centered practices.

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Dedication

To my late mother Nativico Lucien, the example you set continues to serve as the model which guides me through life. To every student that has ever stepped foot in my classroom, this work is for you, and the work that I do as I continue my journey as an educator will forever honor your stories and the impact you have made on my life.

TABLE OF CONTENTS

ABSTRACT ii

COPYRIGHT v

ACKNOWLEDGEMENTS vi

DEDICATION vii

LIST OF TABLESxiii

LIST OF FIGURES..... xv

CHAPTER I INTRODUCTION 1

 Background 2

 Significance of the Study 2

 Study Rationale 3

 Conceptual Design 5

 Purpose of the Study 5

 Research Questions 6

 Assumptions 6

 Definition of Terms 7

 Organization of Study..... 8

CHAPTER II LITERATURE REVIEW 10

 Introduction 10

 Project-Based Learning and STEM Education 10

 STEM and Project-Based Learning 11

 Project-Based Learning (Historical Context) 12

 Theories Guiding Project-Based Learning 13

Reading and Writing Literacy.....	15
Effective Reading and Writing Literacy Instructional Practices.....	16
Legislation and Project-Based Learning Principles	17
National Assessment of Educational Progress	18
District and State Achievement Data	18
Third Grade Reading and Project-Based Learning	19
Gaps in the Literature	21
Summary of Literature Review	21
CHAPTER III: METHODOLOGY	23
Introduction.....	23
Research Questions	23
Context/Setting of the Study.....	24
Sample Population	24
Research Design – Rationale for Design	25
Data Collection	26
Instrumentation	26
Survey Instrument Design.	26
Interview Protocols	27
Analysis Procedures.....	28
Qualitative Data Analysis.....	30
Validity	32
Ethical Considerations	32

Anonymity and Confidentiality	32
Reliability/Trustworthiness	33
Limitations and Delimitations	33
Summary	34
CHAPTER IV: RESULTS.....	35
Introduction	35
Summary of Analyses	35
Survey Participants	36
Survey Instrumentation.....	38
Qualitative Analysis	39
Qualitative Data Coding	39
Survey Data Frequency Comparisons	40
Likert Question 1	41
Likert Question 2	42
Likert Question 3	43
Likert Question 4	43
Likert Question 5	44
Likert Question 6	45
Likert Question 7	45
Likert Question 8	46
Likert Question 9	47
Data Analysis: Interview Participants	47
Interview Data Analysis	49
Interview Question 3 Analysis	49

Interview Question 4 Analysis	51
Interview Question 5 Analysis	53
Interview Question 6 Analysis	55
Interview Question 7 Analysis	56
Interview Question 8 Analysis	57
Emerging Themes	59
Online Survey Qualitative Result Analysis	62
Qualitative Data Analysis for Survey Participants	66
Analysis of 2019 Assessment Data	66
Analysis of 2021 Data	68
Analysis of Relationship Between Assessment Data and Survey Responses	69
One-on-One Interview Analysis	70
2022 Testing Data	71
Summary of Data Gathered	72
Results of Research Questions	72
Results for Research Question 1	73
Results for Research Question 2	74
Results for Research Question 3	75
Summary of Results	75
CHAPTER V	77
Introduction	77
Summary of Results	77
Qualitative Data Results	77
Survey Response Quantitative Summary	79

Survey Open-Ended Question Summary	80
Interview Participants	81
Discussion of Results	82
Statistically Significant Findings	82
Statistically Insignificant Findings	83
Limitations and Delimitations	83
Implications for Practice	85
Recommendations for Future Research	86
Summary	87
REFERENCES	88
APPENDIX A – Literature Review Key Words	97
APPENDIX B – Target Population	98
APPENDIX C – Data Collection/Data Collection Method	99
APPENDIX D – Approvals for Research – University IRB	100
APPENDIX E – Approvals for Research – School Board	101
APPENDIX F – Survey Instrument Design	103
APPENDIX G – Teacher Survey	104
APPENDIX H – Participant Email	109
APPENDIX I – Interview Consent	110
APPENDIX J – Interview Online Interview Google Form Consent	112
APPENDIX K – Semi-Structured One-on-One Interview Questions	114
APPENDIX L – Public Records Request	115
APPENDIX M: Descriptive Statistics of Research Participants	116
APPENDIX N: Likert Data Results Frequency Tables	119
APPENDIX O: Interview Data Word Cloud Figures	122

LIST OF TABLES

Table 1: *Survey Instrument Results: Participants Demographics* 37

Table 2: *Mean, Mode, and Standard Deviation of Survey Likert Responses* 41

Table 3: *Meeting Platform, Duration of Participant Interviews, and Participant Demographic* 48

Table 4: *Analysis of Interview Question #3: Derived Themes, Transcript Evidence, & Occurrence* 50

Table 5: *Analysis of Interview Question #:4 Derived Themes, Transcript Evidence, & Occurrence* 52

Table 6: *Analysis of Interview Question #:5 Derived Themes, Transcript Evidence, & Occurrence* 54

Table 7: *Analysis of Interview Question #:6 Derived Themes, Transcript Evidence, & Occurrence* 55

Table 8: *Analysis of Interview Question #7: Derived Themes, Transcript Evidence, & Occurrence* 57

Table 9: *Analysis of Interview Question #8: Derived Themes, Transcript Evidence, & Occurrence* 58

Table 10: *Five Major Themes (Interview)* 61

Table 11: *Examples of Definitive Yes, No, and Non-definitive Open-Ended Survey Responses* . 64

Table 12: *Spearman’s rho Coefficient for Survey Question, Title I Status and, 2019 Assessment Data* 67

Table 13: *Spearman’s rho Coefficient for Survey Question, Title I Status and, 2019 Assessment Data* 68

Table 14: *One-Way ANOVA of 2019 Third-Grade Achievement and Teacher’s Perception of Implementation Effect* 69

Table 15: *One-Way ANOVA of 2021 Third-Grade Achievement and Teacher’s Perception of Implementation Effect* 69

Table 16: *One-Way ANOVA of 2022 Third-Grade Achievement and Teacher’s Perception of Implementation Effect* 70

Table 17: *Spearman’s rho Coefficient for One-on-One Interview Responses, Title I Status, and, 2021 Assessment Data* 71

Table 18: *Spearman’s rho Coefficient for One-on-One Interview Responses, Title I Status, and 2022 Assessment Data* 72

Table 19: *Teachers’ Perception of Ability to Meet Students Needs Frequency Data* 73

LIST OF FIGURES

Figure 1: *Convergent Parallel Mixed Methods* 29

Figure 2: *Segmenting and Labeling Text* 30

Figure 3: *Survey Responses Questions #1 Frequency Graph* 42

Figure 4: *Survey Responses Questions #2 Frequency Graph* 42

Figure 5: *Survey Responses Questions #3 Frequency Graph* 43

Figure 6: *Survey Responses Questions #4 Frequency Graph* 44

Figure 7: *Survey Responses Questions #5 Frequency Graph* 44

Figure 8: *Survey Responses Questions #6 Frequency Graph* 45

Figure 9: *Survey Responses Questions #7 Frequency Graph* 46

Figure 10: *Survey Responses Questions #8 Frequency Graph* 46

Figure 11: *Survey Responses Questions #9 Frequency Graph* 47

Figure 12: *Online Survey Question #1 Word Cloud of Participant Responses* 63

Figure 13: *Online Survey Question #3 Word Cloud of Participant Responses* 66

CHAPTER I: INTRODUCTION

Background

The education field is constantly changing, from the curriculum, targeted areas of instruction, pedagogical approaches, and the overall study of education as a science (Erdogan, 2021). Despite the many changes, reading continues to be a topic of urgency, as seen in the examination of third-grade reading laws and the potential impact on students, families, teachers, school districts, and states (Della Vecchia, 2020). Della Vecchia (2020), details bipartisan legislation in 1998 by the state of California, which placed specific requirements for promotions based on reading requirements. This legislation was followed by reading achievement legislation in Florida in 2002, led by the advocacy of Jeb Bush that focused on the reading achievement of third-grade students. The Florida model became a template for 27 states similarly approving such laws. Duke (2016), in a review of policies that foster early literacy, sheds light on the great debate on how best to support targeted literacy goals. With such great emphasis on reading proficiency and added attention on increasing students' reading proficiency rates across subgroups and grade levels, often measured by standardized assessments and laws aimed at improving reading outcomes, a challenge presents itself. In seeking to meet literacy needs, while also developing curious learners with the 21st-century skills needed to contribute to the future workforce, many strategies and pedagogical approaches are used in schools (Duke & Halvorsen, 2017; Duke et al., 2016). This study examined teachers' perception of Project-Based Learning to support third-grade reading and writing literacy goals.

With an increased focus on STEM education, which incorporates science, technology, engineering, and mathematics, many schools expose students to courses embedded in STEM practices, often through content-area instruction. Research by Seage and Türegün (2020) shows

students benefited from blended models of instruction that deviate from traditional teacher-centered methods.

Significance of the Study

Within a Project-Based Learning framework, students learn to synthesize data collected using knowledge related to problems or big ideas; in doing this, learners progress towards complex modes of thinking beyond simply reading presented documents and answering predeveloped questions (Maher, 2020; Miller & Krajcik, 2019). A high focus on student proficiency creates a need for implementation of pedagogical approaches that work to remediate learning gaps while meeting the needs of all students as they also develop 21st-century skills, as noted by Maher and Yoo (2017).

For this purpose, the researcher selected the exploration of teacher perceptions of Project-Based Learning integrated with effective literacy practices to enhance reading and writing across content areas. By incorporating problem-solving, vocabulary, writing, listening, and speaking into content areas, schools may be able to prioritize high-quality inquiry-based education while maintaining a focus on developing essential literacy skills (Seage and Türegün, 2020).

Reading and writing literacy was selected to support targeted goals outlined by the state and local education agencies and research by Hernandez (2016), published by the Annie E. Casey Foundation. Their report revealed that about 16% of students not proficient in reading by the end of third-grade do not graduate from high school. This rate increases when examining students from low-income areas. Thomas (2014), in his dissertation relating to the integration of science, technology, engineering, and mathematics in elementary school, made the conjecture that producing a competent workforce begins by providing students with STEM education throughout their learning experience in K-12 that aligns to learning targets. Providing K-12

students with STEM education that aligns with learning targets throughout their learning experience thus exposing them to real-life experiences. He further notes that this integration should be seen within all content areas, intersecting naturally with inquiry, real-world application, and standards-based instruction (Thomas, 2014). Analysis of the data collected from this study can provide meaningful access to schools seeking to implement Project-Based Learning in cross-content integrated models to impact students' performance. This study also expanded the current research on Project-Based Learning. Gaps in the research include studies on third-grade literacy and Project-Based Learning and studies that provide data from teachers currently using these methods within and outside of the traditional reading block to enhance literacy outcomes.

Study Rationale

The selected district outlined in its strategic plan targeted goals to increase third-grade reading proficiency from 54% in 2019 to 68% by 2020 and 75% by 2021 (Strategic plan, 2016). Likewise, the state's strategic plan aimed to close achievement gaps, reduce the percentage of low performing schools, increase overall school performance, and provide support for students retained in third-grade due to low reading scores, while other goals targeted postsecondary and career success (Florida Department of Education, 2019). Taken together, these provide the rationale for this study to support the possible use of this pedagogical approach to meet the needs of students. With high-stakes accountability based on standardized assessments to evaluate student achievement, which translates into school grades and Value-Added Matrix scores, third-grade reading remains a crucial focus for schools (Shields-Proctor, 2017). Florida's legislative statute mandates retention of third-grade students whose reading proficiency is not at a level two or higher on the statewide reading assessment (Florida Senate Chapter, 2016). Although good

cause exemptions are available and portfolio options, the need to support students' literacy is a clear priority for stakeholders.

While reading remains a focus, schools are increasingly looking to engage learners and prepare the future workforce, evidenced by state and local strategic plans. With this being the case, Project-Based Learning may provide an avenue for teachers who are not the designated reading teacher to support literacy outcomes. A study on enhancing metacognitive reading awareness and comprehension using Project-Based Learning for students acquiring English showed an increase in students' comprehension and metacognitive abilities (Berenji, 2021). At the same time, many other studies show the added benefits of Project-Based Learning for students and teachers in various areas, from motivation and engagement to academic growth (Adams, 2018; Duke et al., 2016; Fogleman et al., 2011; Johnson & Cuevas, 2016; Kingston, 2018; Krajcik et al., 2018; Neugebauer & Gilmour 2020).

While numerous studies are available on Project-Based Learning and reading and writing literacy, few provide insight into both. This provided another rationale for the researcher supporting further research on Project-Based Learning in relation to reading and writing literacy. This form of learning elicits various components of literacy simultaneously. Rather than teaching these skills in isolation, students are given space to take ownership of them. Within this framework, students are continuously developing skills, monitoring their learning, and engaging in a process where collaboration is critical. As students work together to demonstrate knowledge and strengthen literacy skills through authentic and meaningful activities, they become proficient communicators and advanced problem solvers (Bell, 2010).

Conceptual Design

The study's conceptual framework relied on multiple perspectives from Dewey (1916/1944) and Vygotsky (1978), who shared similar ideas regarding instructional activities and learning, and the work of Piaget (1990) and Zaretta Hammond (2015), whose work lends itself to Project-Based Learning. Vygotsky's work hinges on the Zone of Proximal Development, which is defined in Vygotsky's "Mind in Society" as:

The distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers (p.86).

Project-Based Learning and inquiry learning pedagogies heavily rely on the work of John Dewey and other progressive theorists with a high focus on students "Learning through doing." This student-centered approach to learning, where learners construct their knowledge, is the pillar of Project-Based Learning. This learning often results in students creating artifacts. Dewey's work encourages inquiry and experimental learning and his beliefs that social experiences, active hands-on experiences through experimental learning, and real-world experiences are vital in co-constructing knowledge while allowing students to resolve misconceptions, explore social norms, and reflect on them (Dewey, 1916/1944).

Purpose of the Study

The purpose of this study was to examine teacher perceptions of Project-Based Learning to support reading and writing literacy. Ultimately the culmination of the study provides additional research and data that may aid in implementing models of teaching or help add to existing research to understand shifts that may be needed to make Project-Based Learning a plausible choice for schools. Little research is available on Project-Based Learning and third-

grade reading and writing literacy. While the existing research on Project-Based Learning spans years, few studies on third-grade reading and writing with Project-Based Learning examined through the lens of a cross-content integrated model is available (Adams, 2018; Duke and Halvorsen, 2017; Fogleman et al., 2011; Kingston, 2018; Krajcik et al., 2018; Neugebauer & Gilmour 2020). With mandatory retention laws and school accountability and shifts to departmentalized models of instruction, this data will add to the gaps in the research (Talbot et al., 2019). Departmentalization, defined by Minott (2016), is a model where a teacher provides instruction on a single subject to several groups of students throughout the school.

Research Questions

The following questions guided this study:

1. What are elementary school teachers' perceptions of Project-Based Learning as an approach to enhance literacy outcomes for third-grade students through cross-content integration of targeted English Language Arts standards?
2. How can Project-Based Learning target reading and writing literacy goals across content areas?
3. Is there a correlation between Project-Based Learning implementation and reading achievement of third-grade students within a large urban school district?

Assumptions

It was assumed that knowledge of Project-Based Learning may not be commonplace, and thus educators may have a limited or an inaccurate view of Project-Based Learning. The researcher also assumed that departmentalized schools may teach reading within a designated time block and reading standards may not be integrated throughout every content area (Minott, 2016). Various instructional models implemented throughout different campuses may impact

perceptions as well (Anderson, 2017). At the same time, educators within specialized content areas may not be as familiar with individual student's literacy goals or reading and writing needs as one might be if self-contained to support these needs (Markworth et al., 2016).

Definition of Terms

The following terms have been defined for clarity as it relates to the research.

- **21st Century Skills:** Refers to core competencies such as collaboration, digital literacy, critical thinking, and problem-solving needed to thrive in today's ever-changing society. 21st-century skills also refer to a broader set of skills, work habits, and character traits applied within content, community, and work settings (Glossary of Education Reform, 2014).
- **Literacy:** The term literacy used in this research refers to reading, writing, speaking, and listening with a focus on the ability to read and write at appropriate levels. Literacy refers to the necessary skills needed to read, including phonemic awareness, listening, speaking, writing, etc. (Frankel et al., 2017).
- **Pedagogy:** Pedagogy refers to the science of teaching and methods or approaches to teaching utilized. It relates to theoretical frameworks and processes to education and theories of practice elicited in providing instruction within varied settings that support goals (Britannica, 2021).
- **Project-Based Learning:** Model of instruction consisting of complex tasks based on problems or questions that involve a student design, decision making, problem-solving investigative activities, with autonomy given to students over an extended period culminating in realistic artifacts or products (Dias & Brantley-Dias, 2017).
- **Reading Proficiency:** The term reading proficiency utilized in this research refers to the developmental milestones for readers. For this research, the definition provided by the

National Assessment of Education Progress (NAEP) is used, which defines reading as a complex process that involves understanding written text, interpreting meaning, and using meaning appropriately depending on the text presented (NAEP, 2018).

- **STEM:** This abbreviation for science, technology, engineering, mathematics, which includes computer science, known as STEM, represents four interconnected areas. STEM is an interdisciplinary approach with real-world applications, technology, problem-solving, etc. STEM programs often seek to prepare students for careers in STEM fields or develop 21st-century skills (STEM, 2016).
- **Standardized Assessment:** Assessments requiring students to answer a selected set of questions in the same manner from a bank of questions in a consistent manner, therefore allowing for comparison of relative performance. They can follow various formats, including multiple-choice, true-false questions, short-answer questions, essay questions, or combinations (Glossary of Education Reform, 2014).
- **Reading and Writing Literacy:** The ability to read and write using various skills developed from early infancy years, progressing to the more complex application to make meaning of the text and convey meaning through written expression. The researcher will rely on the standards for reading and writing outlined by the selected state's education agency for reading and writing proficiency (Frankel et al., 2017).

Organization of Study

Research findings address the research questions relating to the perception of teachers on Project-Based Learning as a viable means of supporting reading and writing, with a focus on supporting third-grade students. This study is organized into five chapters. The first chapter will provide information on the background of the problem, the rationale for the study, the

conceptual framework for the research, purpose, research questions, assumptions, and definitions of key terms. Chapter two will review literature related to Project-Based Learning, cross-content integration, previous research, and reading and writing literacy. The third chapter will provide a complete description of the methodology and design. Within the fourth chapter, the findings will be discussed in clear and concise terms. The fifth chapter will provide the conclusion, discussions, and recommendations.

CHAPTER II

LITERATURE REVIEW

Introduction

The purpose of the literature review is to examine the research on Project-Based Learning concerning reading and writing literacy to support third-grade students. While reading across all grade levels remains important, third-grade was selected based on previous data highlighting the correlation between third-grade reading performance and later academic success. This literature review is organized into ten sections, an overview of Project-Based Learning and STEM education, the historical context of Project-Based Learning, theories guiding Project-Based Learning, reading and writing literacy, legislation, assessment data, related research, gaps in the literature, and a summary.

Project-Based Learning and STEM Education

A STEM model of instruction grounded in Project-Based Learning provides learning experiences that maximize students' potential across content areas (Capraro & Slough, 2013; Markworth et al., 2016; Seage & Türegün, 2020). This student-centered approach, which hinges on personalized learning where students take ownership and greater responsibility for learning through cross-content integration in authentic and engaging ways has been used in various educational settings (Seage & Türegün, 2020). It aids students in developing skills in a collaborative space while simultaneously developing oral and written communication skills, critical thinking skills, collaboration skills, and creativity (Anderson et al., 2017; Pierce, 2018). Born of reforms in education grounded on the work of John Dewey, Project-Based Learning allows educators to work with and alongside students, unlike traditional models that promote rote memorization, direct instruction, and other models of instruction (Philen, 2016).

Effective frameworks of Project-Based Learning extend far beyond completing a project but require rigor, student voice, choice, engagement, planning, and skill to execute (Larmer et al., 2015). Larmer et al. (2015) highlight the project design elements, which include a challenging problem, sustained inquiry, authenticity, student voice and choice, reflection, critique, revision, and a public product (Dias & Brantley-Dias, 2017). Project-Based Learning used by several districts has allowed the districts to empower students in developing critical thinking skills, communication skills, and collaboration skills, all while fostering creativity skills (Pierce, 2018). Common threads in the research of Project-Based learning implementation show the following themes for effective implementation, which include:

- Professional development to support teachers, including guidelines to address targeted competencies
- Planning time
- Ongoing support

STEM and Project-Based Learning. Science, Technology, Engineering, and Mathematics, better known as STEM, has a long history, while implementation varies between countries, states, schools, and individual classrooms (Catterall, 2017). Many states began to work collaboratively in 2010 to adopt Common Core Standards, which were more demanding and included real-world problems and complex thinking, staples of STEM education (Thomas 2014), but that hasn't transformed STEM education or provided the traction nationally to bridge the gaps seen in the number of individuals trained in high needs fields (Catterall, 2017; STEM, 2016). The United States Department of Education in a STEM Dear Colleague Letter (2017) sent to states urged states to consider the following:

In an ever-changing, increasingly complex world, it's more important than ever that our

nation's youth be prepared to bring knowledge and skills to solve problems, make sense of information, and know how to gather and evaluate evidence to make decisions (p. 1).

The letter was intended to guide State Education Agencies (SEAs) and Local Education Agencies (LEAs) on ways to utilize funds to provide innovative, equity-focused pre-kindergarten through grade 12 (Pre-K– 12) STEM education. This further shows that STEM is not simply relevant at a local level but nationally as well. Within the same letter, active learning is defined as "A process whereby students engage in activities such as reading, writing, discussion, prototyping, or problem-solving that promote analysis, synthesis, and evaluation of course content (Anderson, 2017)." The definition alone speaks to Project-Based Learning and provides a space for a marriage of content area instruction and Project-Based Learning, especially for schools promoting STEM ideals (Capraro & Slough, 2013).

Catterall (2017) notes that America has had a long record of comparing poorly to other countries in science and mathematics in our long history of assessments. Without necessary improvements to STEM education, the pattern of falling behind in ranking with others may impact our global position (Engineering for Kids, 2016). Therefore, Project-Based Learning within schools can target cross-content integration while enhancing students' outcomes.

Project-Based Learning - (Historical Context)

For some, Project-Based Learning may seem like nothing more than a new-age method born out of the need to develop critical thinkers ready to take on the world's unique challenges. Its emergence can be seen in the 1970s from the works of Dewey on learning through experiences, and Kilpatrick who emphasized a student-centered approach (Philen, 2016). Project-Based Learning, inquiry, and experiential methods answered Kilpatrick call for a student-centered approach (Philen, 2016).

Theories Guiding Project-Based Learning

Dewey's theories, which he wrote extensively about have been woven throughout the constructivist, progressive, learner-centered, and experiential knowledge frameworks of teaching and learning philosophies (Philen, 2016; Williams, 2017). His advanced theories emphasized the need to learn through socially engaging and developmentally appropriate learning experiences (Williams, 2017). This pragmatist view of learning hinges on students needing to interact with their environment to adapt and learn. His view promoted equal voice and a more democratic view of learners, in line with Project-Based Learning. Dewey made strong arguments about veering from teaching concepts in isolation as he promoted the idea of multiple learning objectives, allowing learners to see unity among their learning pursuits. Dewey strongly argued against artificial learning environments most often seen in traditional school settings, opting for a more child-centered holistic approach with allowance for reflection. He strongly encouraged activities to develop morals from real-life experiences as well as social and civic components. With a framework guided by Dewey, one would see projects, presentations, and other differentiated evaluation techniques in the classroom.

A Project-Based Framework also relies on a community of workers as Zaretta Hammond (2015) proposes is a critical component of culturally responsive teaching practices. Within her research, she shed light on factors relating to brain development that result in deep learning within the classroom. Hammond highlights pillars of culturally responsive teaching, such as collectivism which maximizes how the brain learns best (p.26). This is another critical feature of Project-Based Learning, where students work together, deepening their knowledge and developing academic vocabulary while increasing their literacy skills. Much like Dewey's approach, this can also affect students' social development by empowering them to tackle real

issues while also meeting their psychological need for autonomy, competence, and relatedness, evidenced in research by Marshik et al. (2017) on the impact of motivation and autonomy on the reading achievement of third-grade students.

The work of Vygotsky on the "Zone of Proximal Development" also lends itself to this research and reaffirms interactions with other students as an effective means of supporting learning. Vygotsky (1978, p.81) defines this zone as the actual developmental level determined by problem-solving with potential development guided by problem-solving with guidance and collaboration. He further identifies learning as a social phenomenon in which interactions motivate and provide stimulus. Knowledge gained through these interactions proves vital for development and, most significantly, in language development. Dr. Tony Evangelisto (2020) points out, "Comprehension based on constructive principles allows for deep sense-making and comprehension." He asserts that comprehension is gradual and emphasizes that the underlying cognitive and linguistic skills needed are prerequisites developed through constructivist principles, which simultaneously satisfy the need for autonomy (Evangelisto, 2020; Marshik et al., 2017).

Piaget's work on child development, known as the Theory of Cognitive Development, provides stages of development and beliefs that children play an active role in the learning process and supports Project-Based Learning. Piaget asserted that knowledge was not a fixed trait. Instead, it is developed through processes or stages of development supported by the environment. In providing suitable environments that stimulate, motivate, and offer self-directed opportunities, schemas, the basic building block of intelligent behavior adapts (Piaget, 1990). He believed that children were born with schemas, and as children develop, they are reshaped (1990). This requires real-life experiences to engage learners as they mature (Wellen, 2018).

Thus students build knowledge, grow their existing knowledge through meaningful experiences.

Reading and Writing Literacy

For this research, as it relates to reading and writing, the definition by Frankel et al., (2017) defines literacy as, "The process of using reading, writing, and oral language to extract, construct, integrate, and critique meaning through interactions and involvement with multimodal texts in the context of socially situated practices." This definition emphasized critical shifts in the understanding of reading/literacy. Within this definition, they shed light on the complexity of reading and writing literacy. The definition refers to the production of written and spoken language and the receptive nature of literacy, where students develop reading and listening skills (Frankel et al., 2017).

According to the K-12, Comprehensive Literacy Plan for the large urban district where the study took place, the literacy components monitored for students in elementary school are oral language, phonological awareness, phonics, fluency, vocabulary, and comprehension (PBC, 2020). Literacy develops through an array of skills and begins at the early stages of learning. Early literacy experiences provide opportunities to develop language skills and impact the development of later reading skills. Children who struggle to build literacy skills often require additional support to bridge achievement gaps, and the ramification for reading deficits in third-grade is significant and can include retention (DellaVecchia, 2020; Hernandez, 2016; Talbot et al., 2019). The Foundational Skills to Support Reading for Understanding in Kindergarten Through Third Grade, published by Henke et al. (2019), addresses the complexity of reading and writing literacy development from kindergarten to third-grade. As students' progress, an increasing number of unfamiliar terms and advanced vocabulary require students to make sense of interrelated ideas. Reading text is not always presented to students in the isolation of the

reading classroom as it becomes a necessary tool within content area instruction as students get older. The nature of reading changes, with the use of more fact-based text, and curriculums that are more specialized and disciplinary (Horvath, et al., 2016). Data supporting metacognitive benefits of project learning for English Language Learners by Berenji (2021) show how the interconnected process of reading development can be aided by Project-Based Learning.

Within the 1985 report entitled, "Becoming a Nation of Readers: The Report of the Commission on Reading" the education community is reminded of just how complex reading is, where no one method may work for all students (1985). This report dating back more than 30 years, provided a definition of reading which foreshadows more recent studies. These studies define reading as the process in which meaning is constructed from written texts. The author compares reading to an orchestra, making the conjecture that much like an orchestra, many components must come together to support the development of reading (Anderson et al., 1985). These components include literacy being a continuous process that involves motivation and engagement, while reading and writing are viewed as an integrative practice situated in social science shaped by language process and context (Anderson et al. 1985; Frankel et al., 2017).

Effective Reading and Writing Literacy Instructional Practices

With a better understanding of reading and writing literacy, it is equally important to explore effective instruction and practices. There have been many shifts in reading instruction and efforts towards restructuring systemic reforms throughout the years, especially for lower-performing schools. Writing has also been shown to support and improve reading skills. Through integrating reading and writing in authentic ways students' comprehension has been shown to improve (Koons, 2019). Taylor et al. (2002), in an extensive review of literature and research, outlining ways to increase students' achievement while addressing instructional and

organizational factors that impact reading, shed light on the process-product methods, direct instruction, and the direct explanation models of instruction. Regardless of the strategy, the research identified common characteristics of effective reading instruction. The research identified reading real text, avoiding drilling skills, and a high focus on developing higher-order thinking skills, with less emphasis on lower-order skills as effective practices (Taylor et al., 2002). Higher student achievement within this study was attributed to an integrated model of reading and writing with student discussion and collaboration, deep understanding of the text, and skills taught in a context which speaks to the essence of Project-Based Learning. This approach to reading and writing improved students' learning capacity within the reading classroom and across content areas (Taylor et al., 2002). A similar pattern was seen in a study by, Tyner & Kabourek (2021) within their analytic study with a sample of 6, 829 students showing social studies instruction had a clear, positive, and statistically significant effect on reading improvement. Adversely, additional traditional reading instruction did not garner the same results, further supporting that a child's content areas growth outside of the traditional reading block may provide much needed support to enhance literacy outcomes.

Legislation and Project-Based Learning Principles

Every Student Succeeds Act (ESSA) requires implementing evidence-based literacy practices (IDEA, 2017). It also provides an arena and funding for STEM through Accountability (Title I), Teacher Quality Funding (Title II), and Student Support and Academic Enrichment (SSAE) (Title IV). A unique dynamic occurs if Local Education Agencies (LEA) and State Education Agencies (SEA) can leverage effective STEM practices to increase reading performance. In examining components of Project-Based Learning (PBL), which support critical thinking by engaging students in authentic deep learning through real-world experiences,

classrooms can provide a path to STEM education that promotes literacy throughout all content areas (Pierce, 2018).

National Assessment of Educational Progress

The National Assessment of Educational Progress (NAEP) administers assessments to 4th and 8th-grade students every two years. One component of the assessment measures reading comprehension by providing grade-level text with related questions. This data is critical in helping to assess performance across the nation. Recent assessment data showed that students scored a percentage point lower than in 2017 and 4 points higher than in data collected in 1992. In 2017 64% of 4th-grade students scored at basic or below basic, with only 27% scoring proficient. This compelling evidence shows that students continue to struggle with reading. The data shows that 82% of students from low-income families failed to reach the "proficient" level in reading on the National Assessment of Educational Progress (NAEP) in 2011 (NAEP, 2018).

The NAEP data shows a failure to improve outcomes in third grade and prior grades directly impacts students' achievement in the proceeding grades. A report by the Education Advisory Board, "EAB" (2019) showed that 75% of students not proficient by third grade may fail to become proficient readers.

District and state achievement data. Additional data from the NAEP, state testing results, and local results, show minimal growth in outcomes over the last decade. The figures are even more alarming for black students, Hispanic students, English Language Learners, and students receiving free and reduced lunch when compared to their counterparts (Talbot et al., 2019; Tavassolie et al., 2019). Data continues to show gaps between subgroups. A review of assessment data from the large urban districts, "Annual Strategic Plan," shows significant gaps in the baseline data from 2015. The data revealed an overall 51% proficiency rate among all third graders on the

state assessment (Strategic plan, 2016). The subgroup representation was even more alarming with only 37% of black males, 32% of males with disabilities, and 45% of Hispanic males proficient compared to 75% for their white counterparts, with similar figures within the female subgroups (Strategic plan, 2016). This was also representative of the study by Simms (2012) on achievement gaps in third grade and work by Tavassolie et al., (2019) of an analysis of predictors of low-income, ethnically diverse children and third grade.

Moreover, retention data for the large urban school district and state shows the need for support outside of the 90-minute reading block and current interventions in place (Warren & Saliba, 2012). During the 2018-2019 academic year, 28,178 students were promoted within Florida based on good cause exemptions, as English Language Learners, students meeting IEP exemptions, those meeting alternative portfolio requirements, or those meeting other exemptions. Of that figure, 1,857 represented students from the large urban district in which the study was conducted (Florida Department of Education, 2020).

Third Grade Reading and Project-Based Learning

Third grade marks the transition from learning to read to reading to learn (Talbot et al., 2019). In their work, Duke and Halvorsen (2017) revealed many states have adopted standards that provide opportunities to learn from text beginning in kindergarten. Third-grade students are positioned to use reading and writing to discover content related to a specific topic or course (Talbot 2019). Teachers can take great advantage of this and apply reading and writing strategies to provide effective instruction for learners. Moje (2008), within an analysis of a significant body of research over the last 20 years, found in-service teachers rarely enact content literacy strategies in their classrooms. Mallette et al., (2005) also revealed that historically many teachers in the middle grades have believed that instruction in reading and other aspects of literacy is the

responsibility of the language-arts or English teacher, citing the availability of time, resources, and professional development.

Reading and writing instruction through Project-Based Learning or inquiry provides access points to engage all learners through authentic research (Goudvis, et al., 2019). Goudvis, et al., (2019) note, "You can't teach content without teaching students to think about it." Through text-rich environments, students monitor understanding, activate background knowledge, ask questions, make inferences, visualize, make rational decisions on the validity and importance of information, and summarize and synthesize information and ideas (Goudvis et al., 2019, p. 19)". One would traditionally attribute these skills to being used within the reading block and not seen through content areas such as science, social studies, and humanities. Yet, they all play an integral role in supporting students' comprehension while deepening learning throughout the disciplines.

Krajcik et al. (2018), in a published report for the Lucas Foundation, studied rigorous Project-Based Learning within 46 schools, with 2,371 third-grade students selected through a randomized process in 2018-2019. The schools utilized the ML-PBL program, a science program that uses comprehensive instructional approaches alongside a high-quality Project-Based model with professional development offered to teachers. Data collected showed an 8% average increase in the scientific assessment data of those in the control group and positive social-emotional learning and reading results, all evidenced by the data collected. The use of literacy strategies in all classrooms, in turn, can increase students' overall understanding of content knowledge and enhance their conceptual understanding with the added benefit of supporting reading and writing development and preparing students for middle school, high school, and postgraduate success (Kingston, 2018).

Gaps in Literature

Existing research on the effects of Project-Based Learning on specific subgroups and populations provides excellent insight on design principles, perceptions, and implementation needs. Studies targeting literacy for third-grade students and the perceptions of the teacher on the use of the design to support students remain limited. The available research often reports on small sample sizes, with few experimental studies available. Kingston (2018) points to implementation fidelity and measures being an area of concern within existing research. While many studies have revealed the added benefit of implementing Project-Based Learning pedagogies, the limited body of work on the impacts on mathematics and literacy provides the additional rationale of a need for an emergence of studies more closely related to the effects on these two areas (Kingston, 2018). Despite using the search terms in Appendix A, a clear deficit in the available research was revealed while compiling sources for this research.

Summary of Literature Review

Many studies throughout the years have allowed educators to glean the prospective advantages and disadvantages of implementing a Project-Based Learning model. In addition to these studies and published articles, theorists from John Dewey who strongly advocated learning by doing to Vygotsky, Piaget, and Zaretta Hammond, whose work supports Project-Based Learning serve as advocates for the use of this pedagogical approach that relies heavily on the use of a multifaceted approach to instructing students (Dewey, 1916/1944; Hammond, 2015; Vygotsky (1978). Unlike traditional methods used in classrooms ranging from direct instruction, independent models, and small group instruction, which are easily accessed through the conventional method typically used in classrooms (Philen, 2016). Project-based learning presents an opportunity for students to engage in authentic tasks with authentic assessments (Anderson et

al., 2017; Pierce, 2018). Outside of the reading block, studies have shown the added benefits of Project-Based Learning in various areas, from motivation and engagement to academic growth (Adams, 2018; Duke et al., 2016; Fogleman et al., 2011; Johnson & Cuevas, 2016; Kingston, 2018; Krajcik et al., 2022; Neugebauer & Gilmour 2020).

CHAPTER III: METHODOLOGY

Introduction

This dissertation in practice aimed to explore teacher perceptions of Project-Based Learning to enhance students reading and writing across content areas. The selected district's strategic plan had targeted goals to increase third-grade reading proficiency to 54% by 2019, 68% by 2020, and 75% by 2021, which were not met (Strategic Plan, 2016). Similarly, the state's strategic plan aimed to close achievement gaps, reduce the percentage of low-performing schools, increase overall school performance, and provide support for students retained in third grade due to low reading scores (Florida Department of Education, 2019). Taken together, these provide the rationale for this study.

Research Questions

The following questions guided this study:

1. What are elementary school teachers' perceptions of Project-Based Learning as an approach to enhance literacy outcomes for third-grade students through cross-content integration of targeted English Language Arts standards?
2. How can Project-Based Learning target reading and writing literacy goals across content areas?
3. Is there a correlation between Project-Based Learning implementation and reading achievement of third-grade students within a large urban school district?

H₁: Teachers implementing Project-Based Learning with targeted literacy standards demonstrated higher student achievement on state-administered assessments.

H₀: Teachers implementing Project-Based Learning with targeted literacy standards demonstrated no statistically significant achievement on state-administered assessments

compared to those who employ other instructional methods.

Context/Setting of the Study

The study took place in a large urban school district located in the Southeastern region of Florida. The large urban district's demographics comprised of it being among the top 10% in the state for overall student enrollment, serving 190, 567 students, more than 12, 786 teachers, 14, 954 third-grade students, and serving a student population representing 150 languages and dialects (District, n.d; Florida Report Cards, n.d). The significance of selecting this district was based on the diversity of the population, which reflects trends in other large districts.

The targeted population was third through fifth-grade public school teachers certified by the same State Education Agency (SEA) in Florida with two or more years of teaching experience. Due to the nature of the mixed-method research and access needed to educators, the universities' IRB board and Local Education Agency (LEA) served as the intermediary between the researcher and potential participants.

Sample Population

The sample population is defined by Creswell (2012) as the group of individuals with the same characteristics. For this study, the targeted population was third through fifth-grade public school teachers with two or more years of teaching experience. Purposeful homogeneous sampling techniques were used to select educators in public schools with experience with Project-Based Learning for one-on-one interviews. The survey portion relied on emailed survey responses utilizing an email list obtained from the State and Local Education Agency after submitting a request through listserv and the district's Research Department after IRB approval from the university. The researcher also widened the response net through professional networks within the school district. Participants who met specific requirements for inclusion in the study

participated. Individuals outside of these grade levels, those teaching at private schools, those with less than two years of teaching experience, and those teaching art, music, physical education, and other elective (fine arts) courses were excluded from participation, with an exception made for those educators teaching STEM-related courses at least part-time. The identity of the survey participants and interview participants remained anonymous. The target population chart located in Appendix B provides the rationale for each selected participant group. Data from third through fifth-grade educators were used with a targeted sample size of one hundred respondents. The target sample size was selected after the researcher completed a statistical power analysis, which allowed the researcher to determine the smallest sample size suitable to detect the effect of a given test at the desired level of significance.

Research Design – Rationale for Design

The researcher selected a convergent parallel mixed method action research design to allow quantitative and qualitative data collection (Creswell & Creswell, 2012). As Creswell, (2012) states, this research method is effective, especially when qualitative or quantitative data alone proves insufficient for addressing the research questions. This type of research allows for a diverse set of data points triangulated to address the research questions. In essence, Mixed Methods Research or MMR enabled the researcher to provide greater credibility through multiple data collection methods, which offered various viewpoints to support the research findings. Qualitative methods in this mixed-method action study helped explore perceptions, needs, and other factors relating to implementing Project-Based Learning. Simultaneous quantitative data collection supported the results and supplemented the qualitative data. The one-on-one interviews expanded and strengthened the study by providing greater insight from teachers. Morse and Niehaus (2009) describe this design as QUAL + Quan inductive-

simultaneous design where the core component is qualitative, and the additional components are quantitative.

Data Collection

The data collection methods included open-ended interviews, open and closed-ended survey questions, and data mining. The quantitative data supported the open-ended interview questions and provided further insight into participants' responses. Survey data provided insight into teachers' overall perceptions, while data triangulation further supported the findings. The data collection methods chart in Appendix C offers further insight into the data collection methods utilized following approval from the Lynn University Institutional Review Board (Appendix D) and Local Education Agency (Appendix E).

Instrumentation

The mixed-method action research instrumentation refers to collecting, analyzing, and interpreting data (Creswell, 2015). Close-ended and open-ended questioning through surveys, one-on-one interviews, and an analysis of archived assessment data to identify any correlation to students' achievement and survey responses. These multiple means of collecting data provided a complete understanding of the research and results (2015).

Survey Instrument Design

Survey data was collected using Survey Monkey, an online platform. Participants received the survey link via email. Upon accessing the survey, participants were directed to read the research description, explanation of risk and benefits, explanation that no payment would be rendered, and verification that personally identifiable information would be kept private and confidential. Advanced branching available within the programs' logic features allowed the researcher to build conditions based on responses. Responses such as grade level, years of

experience teaching, current schools, subject area(s) taught, and experience with Project-Based Learning enabled participants to progress through specific survey points based on their responses. A similar data collection method was employed by Eckerson (2015) on teacher perceptions of professional development needed to serve Nebraska's Spanish heritage language learners. Within the study, she outlined the benefits of this survey style. Respondents were not all presented with the same questions and moved through the survey based on screening questions at the beginning. This ensured data collected from research participants were from those that met the inclusion criteria—the survey instrument design chart in Appendix F details the survey screening design further.

The parameters within the survey were embedded into the online survey on Survey Monkey to categorize respondents into several categories (a) teaching reading, (b) currently teaching content areas, (c) current grade, and (d) years of experience. Coding was also used for demographic information on years of experience (Kiser, 2018) to provide further data on the characteristics of the respondents and identify if any correlations existed between years of experience and participants' responses. Participants were asked if they were willing to participate in one-on-one interviews within the survey. The survey itself included Likert questions to elicit responses within the following ranges, SA: Strongly Agree; A: Agree; N: Neutral; SD: Strongly Disagree; and D: Disagree, alongside the open-ended questions, which can be found in Appendix G.

Interview Protocol

Interview respondents were asked semi-structured questions eliciting responses on their experience with Project-Based Learning, knowledge, perceptions, successes or challenges, background information, demographics, and student learning outcomes in relation to literacy

goals. Each interview session lasted 20 to 45 minutes, with a follow-up meeting after sharing the transcripts. The semi-structured interviews addressed questions relating to reading and writing literacy. The following questions were explored during these interviews: (a) What are elementary school teachers' perceptions of Project-Based Learning as an approach to enhance literacy outcomes for third-grade students through cross-content integration of targeted English Language Arts standards? And (b) How can Project-Based Learning target reading and writing literacy goals across content areas?

The following protocol was employed with interview participants

- (1) Email (Appendix H) sent requesting participation in the study
- (2) Informed consent form (Appendix I) was sent to participants via email (Google Form). The consent was embedded into the form and a copy was provided to participants (Appendix J)
- (3) Semi-structured one-on-one interviews with questions outlined in Appendix K. The interview date and time was set at a time and date that was convenient for the participant and scheduled using the Google Calendar application, with confirmation of the date and time sent to participants. The interviews were recorded using Zoom or Google Meet and transcribed using the dictate/transcribe feature on Microsoft Word, then coded to identify common themes (Creswell, 2012)

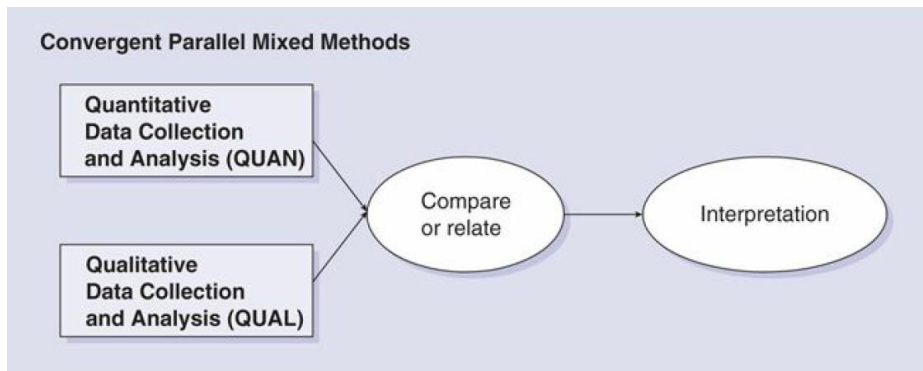
Analysis Procedures

The convergent parallel mixed method design required data collection through data mining to support the responses from the interviews, while simultaneous survey data was collected via Survey Monkey. Survey data was triangulated alongside the quantitative data. This allowed for general categories/topics and perceptions to be identified. Descriptive statistics were

also used to obtain information about demographics and overall response patterns. Quantitative data was analyzed using Statistical Package for Social Science (SPSS) 29 software for frequency comparison, correlation analysis, and Analysis of Variance (ANOVA). Figure 1 below provides insight into the triangulation process for this research.

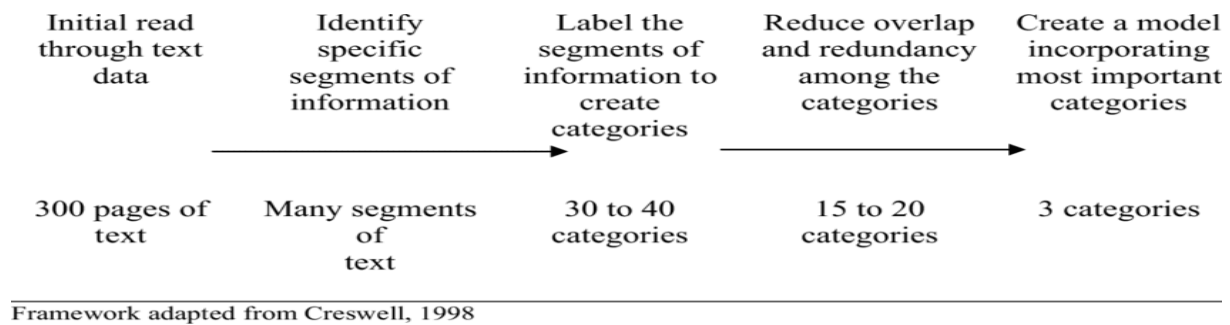
Figure 1

Convergent Parallel Mixed Methods



Creswell (2012)

One-on-one interview data was coded to allow the researcher to derive themes from the coding, which linked different portions of the data collected from the participants to find commonalities and trends. Creswell (2012) states that these common themes would arise as the text was segmented and categorized. Further analysis of keywords was conducted using word clouds, and transcripts were coded and organized by themes. The transcription was completed using the Microsoft dictate/transcribe feature and shared with interview participants for transparency and confirmation of accuracy through member checks. The following process shown in Figure 2 was used to code the interview and open-ended questions using the framework adapted from Creswell (2018).

Figure 2*Segmenting and Labeling Text*

Creswell (2018)

Quantitative Data Analysis

Testing data from the state assessment portal for the 2019-2022 school year was analyzed using descriptive analysis of the testing data, and findings were reported with standard deviation and comparative data analysis based on survey and interview participants responses using the Spearman Rank Order Coefficient in SPSS. The data was analyzed to determine if any correlation existed between student performance on the state-administered assessment and the teachers reporting of use within the third-grade classrooms at their schools. The researcher used the following steps detailed below (Creswell, 2012).

- (1) Collect survey data from the predetermined sample group
- (2) Identify two or more measures for each individual in the study
 - Years of experience with Project Based Learning
 - Overall perceived effectiveness score of Project Based Learning
- (3) Collect data and monitor potential threats
- (4) Analyze the data and represent the results

(5) Interpret the results

Data collected using a Likert scale was then coded using a similar coding method employed by Kiser (2018) in a study examining the effects of pedagogy and student achievement. SA: Strongly Agree correlated with a 5 on the scale, A: Agree correlated with a 4 on the scale; N: Neutral correlated with a 3 on the scale; SD: Strongly Disagree correlated with a 2; and D: Disagree correlated with a 1 (see Appendix G). The correlation assessed covariation in responses to two questions in the survey: Years of experience with Project Based Learning and overall perceived effectiveness score of Project Based Learning, which served as the variables. The values of the coefficient ranged from -1.00 to +1.00. Results closer to the absolute value of 1.00 showed a greater degree of relatedness with statistical significance. The correlation coefficient denoted by r showed a correlation based on the relationship of the variables.

- r values greater than .50 indicated a strong correlation
- r values around .30 indicated moderate correlation
- r values less than .20 indicated a weak correlation

The data compiled only reflected those from the schools identified by participants in their survey and interview responses for the selected schools outlined in the survey. The correlation coefficients provided numerical data of the linear relationship between the selected variables.

Frequency comparisons of the survey findings were conducted using descriptive statistics of the data set using the scale identified. The researcher found the mode (most common score) and mean (average) for each question with data. Interval data was also collected by adding up the scores from each question, obtaining a total score for each participant to further assess if a correlation existed. The Analysis of Variance (ANOVA) verified the Statistical differences among the means of the data sets.

Validity

Mixed-Method Research (MMR) presents a unique challenge, unlike quantitative research, where the data can provide concrete rationale. With MMR, the researcher was called on to make inferences based on a triangulation of qualitative and quantitative data integration (Plano Clark & Ivankova, 2016). Member checks were employed to ensure the trustworthiness of the qualitative research findings. Legitimate checks were implored at each stage of the research. The quantitative data was pulled from an outside source which ensured objectivity.

Ethical Considerations

The Lynn University Internal Review Board (IRB) 's approval outlined specific protocols that were followed, protecting all participants from harm while maintaining anonymity. Each survey completed on Survey Monkey was numerically coded to ensure anonymity, and codes were not published or shared. Online data was housed on the Survey Monkey website. The coded information was downloaded to a password-protected computer and used solely for the researcher's evaluation with no individual names of participants stored. This data will be destroyed after three years. Data from recorded video interview meetings and electronic files will be secured on a password-protected computer.

Anonymity & Confidentiality

To further ensure and maintain confidentiality, interviewees' names and identities were kept anonymous. The participants' information and identity were protected. An additional measure was taken to avoid recording metadata within the survey results by updating collector options within the Survey Monkey platform, the IP tracking information was set to restrict IP addresses in addition to anonymity options (*IP Tracking*, 2021).

Reliability/trustworthiness. To further ensure the reliability of the responses, member checks with interview participants were conducted by sharing transcripts. Participants received informed consent forms, making clear that participation was voluntary. Participants could also choose to withdraw at any point, and all data pertaining to their participation would be deleted.

Limitations and Delimitations

As with any study, limitations are expected and fall outside of the researcher's control. The study's limitations included student factors outside the researcher's control, including COVID-19 impacts on assessment data. Additional limiting factors included teachers currently employing more traditional methods often widely used within schools and districts. Additional challenges included ways to obtain responses from a targeted sample group. Biases among teachers who have experienced success with or without implementing Project-Based Learning may have impacted their responses. New Standards and shifts in assessments are yet another limitation. Covid-19 - interruptions to the state assessment schedule and classroom instructional restrictions could have affected study results and had to be considered when disseminating the data. Survey respondents' completion of the survey question also served as another factor impacting the study. Limited responses and survey completion rates could have impacted findings. The researcher's position as an educator for the district may have resulted in participants providing answers that did not truly represent their feelings and may have been based on past interactions with the researcher, district STEM department, or an eagerness to please the researcher.

The study did not reveal data regarding individuals outside of grades 3-5, those teaching at private schools, and those teaching art, music, physical education, and other elective (Fine

arts) courses as they were excluded from participation with an exception made for those educators teaching STEM-related courses at least part-time. Additionally, the study did not explore systemic issues that may impact Project-Based Learning implementation.

Summary

Education reform continues to challenge systems across our nation to employ methods to achieve greater student achievement. The prospect of Project-Based Learning to support learners of all ages has been used by schools throughout the world, and studies have shown the benefits of Project-Based Learning for students and teachers in various areas, from motivation and engagement to academic growth (Adams, 2018; Duke et al., 2016; Fogleman et al., 2011; Johnson & Cuevas, 2016; Kingston, 2018; Krajcik et al., 2022; Neugebauer & Gilmour 2020). The body of knowledge surrounding Project-Based Learning shows it capitalizes on the benefits highlighted in the literature review and the data collected in this convergent parallel mixed-method action research using interview questions, surveys, and quantitative data collection methods sought to shed light on teachers' perception of Project-Based learning to support third-grade reading and writing literacy goals.

The methodology chapter of this action research study outlined the methods the researcher used to understand the perceptions of elementary teachers on Project-Based Learning to enhance literacy outcomes through cross-content integration of literacy standards while identifying the impact of Project-Based Learning on students' achievement. The triangulated data, which was analyzed for emergent themes, provided meaningful data to help answer the guiding research questions.

CHAPTER IV RESULTS

Introduction

The purpose of this study was to examine teachers' perceptions of Project-Based Learning to support reading and writing literacy within a large urban district located in the Southeastern region of Florida. The results chapter detail the findings of the data collected relating to teachers' perceptions of the viability of Project-Based learning to support reading and writing, with a focus on supporting third-grade students. Participants of the study included third through fifth-grade teachers who met the inclusion criteria detailed in Appendix A.

Prior to beginning the data collection phase of the study, an application was made to the university's Institutional Review Board (IRB) for research involving human subjects. Once approved, an application was submitted to the school district's Department of Research, Evaluation, and Assessment, and an approval letter was provided to the researcher. A sample of the approval letters is found in Appendix D and Appendix E.

Summary of Analyses

To capture data relating to the perceptions of a specific instructional group the research data was gathered using a convergent parallel mixed-method action research design, which allowed for quantitative and qualitative data collection. Open-ended interviews, open and closed-ended survey questions, and data mining were used. The quantitative data supported the open-ended interview questions and provided further insight into participants' responses. Survey data provided insight into teachers' overall perceptions, while data triangulation further supported the findings. The data collection methods chart in Appendix C offers further insight into the data collection methods. The instruments included survey data collected using Survey Monkey, an

online platform. This allowed for descriptive statistics to be obtained with information about demographics and overall response patterns. Quantitative data was collected and analyzed using Google Suite and Microsoft Excel Statistical Package for Social Science (SPSS) 29 software for frequency comparison, correlation analysis, and Analysis of Variance (ANOVA).

Survey Participants

The sampling for the study was purposeful, and participants included third through fifth-grade teachers in a large urban school district. Email addresses were obtained by submitting a public records request to the district's research and evaluation department (Appendix L). The survey was distributed to 1,350 third through fifth-grade teachers from a list obtained from the school district after submitting a public records request. The initial survey was sent out to participants on September 8, 2022, with a follow-up email sent on October 14, 2022. Due to low participation rates, another follow-up email was sent on December 20, 2022. Of the 1,350 emails sent, the researcher received an undeliverable message from thirty-one email addresses. The total survey response rate was 108 or 8%, with 86 (79.6%) of the responses completed for inclusion in the research data. The large sample size, while not the targeted 100, represented a meaningful sample size. The response rate was impacted by participants' incomplete responses, and reports that the emails sent were directed to the teacher's spam file. To widen the data pool, the researcher elected to include all participants that completed 75% or more of the survey. Similar to a method employed by Benjamin (2020). This allowed the researcher to include 86 of the 108 survey responses and exclude nine, which did not meet the inclusion criteria and 13 that were less than 75% complete.

The participant demographics included teachers from three of the four regions within the district. Although emails were sent to teachers within all four regions, excluding research

prohibited schools, responses were only received from the regions detailed in Table 1, 19 of the participants were from region 12JU, 31 of the participants were from region 12OP, 36 of the participants were from region 12TY. Appendix M further details the subject areas taught, certification, self-contained status, reading endorsement status and participants National Board Certification status.

Table 1

Survey Instrument Results: Participants Demographics

Survey Instrument Results: Participant Demographics			
	Survey Choices	Frequency (n)	Percentage of Sample %
Years of Experience	(0-3) Years	10	11.6
	(4-6) Years	12	14
	(7-10) Years	16	18.6
	(11-15) Years	20	23.3
	(16-20) Years	17	19.8
	(20+) Years	11	12.8
Current Teaching Assignment	3rd Grade	44	51.2
	4th Grade	16	18.6
	5th Grade	26	30.2
Reading Endorsement Status	No	33	38.4
	Yes	53	61.6
Certification Type	Temporary	6	7
	Professional	80	93
Title I Status of Participant School	No	53	61.6
	Yes	33	38.4
District Region of Employment	Region 12JU	19	22.1
	Region 12OP	31	36
	Region 12TY	36	41.9
National Board Certification Status	No	79	91.9
	Yes	7	8.1

The large urban school district in which the school district was located had 105 elementary schools, with the exclusion of the district's virtual school and inclusion of K-8 schools. The 86 participants included in the study of the 108 who completed the survey represented 28.6% (30 schools) of the schools. Participating schools included 40% Title I schools, as identified by participants, which was then verified using the district's Federal and State Programs page. Appendix M provides a detailed view of the participating school, the number of participants, and the Title I status of participants from the 30 schools within the school district.

Survey Instrumentation

The survey instrument included 19 questions, which included 10 demographic questions (including school name), nine Likert qualitative questions, and three open-ended questions using Survey Monkey, an online platform. Participants received the survey link via email. Upon accessing the survey, participants were directed to read the research description and explanation of risk and benefits. Participants were also informed that personally identifiable information would be kept private and confidential. Advanced branching within the programs' logic features allowed the researchers to build conditions based on responses. Responses such as grade level, years of experience teaching, current school, subject area(s) taught, and experience with Project-Based Learning that fell within the inclusion criteria allowed participants to progress through specific survey points based on their responses. This ensured the data collected from research participants were from those that met the inclusion criteria. The survey instrument design chart in Appendix F provides additional details on the survey screening design.

The parameters within the survey included (a) teaching reading, (b) currently teaching content areas, (c) current grade, and (d) years of experience. Coding was used for demographic

information on years of experience (Kiser, 2018). The survey included Likert questions to elicit responses within the following ranges, SA: Strongly Agree; A: Agree; N: Neutral; SD: Strongly Disagree; and D: Disagree, alongside the open-ended questions, which can be found in Appendix G. Participants were also asked if they were willing to participate in one-on-one interviews within the survey.

Qualitative Analysis

This study collected qualitative data in the form of open-ended questions embedded into the online survey and one-on-one open-ended interviews. The sections below will share the findings of the qualitative data gathered.

Qualitative Data Coding

The researcher coded each response that was qualitative in nature to analyze the data using Statistical Package for Social Science (SPSS) 29 Predictive Analytic Software for frequency comparison, correlation analysis, and Analysis of Variance (ANOVA). The demographic information, “I currently hold a teaching position in the selected school district.” “I hold a teaching certificate issued by the Department of Education,” “Are you reading endorsed?” “Are you a National Board-Certified Educator?” and “Is the school you currently work for Title I eligible?” were coded “yes” as one and “no” as zero. The demographic information, “Identify your most current teaching assignment(s) was coded with the following values, self-Contained (all) was coded as one, Math was coded as two, Science was coded as three, Language-Arts was coded as four, Social Studies was coded as five, STEM (Any related course) was coded as six, Fine Arts (P.E, Music, Art, Media) was coded as seven, and other was coded as eight. The demographic question, “Identify your most current teaching assignments,” was coded as follows, intermediate third was coded as one, intermediate fourth coded as two, and fifth intermediate was

coded as three. Primary and Middle/High were excluded from the survey, and added parameters did not allow these participants to proceed with the survey. Participants were asked to identify their current school, and each school was identified by an assigned random identification value using a random generator. Years of experience were coded as follows, 0-3 years were coded as one, 4-10 years were coded as two, 10-15 years were coded as three, 15-20 years were coded as four, and 20 or more years were coded as five. The Likert scale questions were coded SA: Strongly Agree correlated with a five on the scale, A: Agree correlated with a 4 on the scale; N: Neutral correlated with a three on the scale; D: Disagree correlated with a two; and SD: Strongly Disagree correlated with a one (see Appendix G).

Survey Data Frequency Comparisons

Survey participants were asked to respond to nine Likert questions related to the research topic. The mean, mode, and standard deviation for each question are detailed in Table 2. For each question, the mean was calculated by totaling the sum of all the numbers in a data set and dividing that by the total number of data points. This gave the researcher a better view of the central tendencies of the participants' responses. The mode was the value that appeared most frequently and was less affected by outliers, while the range was reported to provide data on the difference between the highest and lowest values in the data set, and the spread of the data. Standard deviation provided insight into how the data was distributed or spread across participants, as detailed in Table 2.

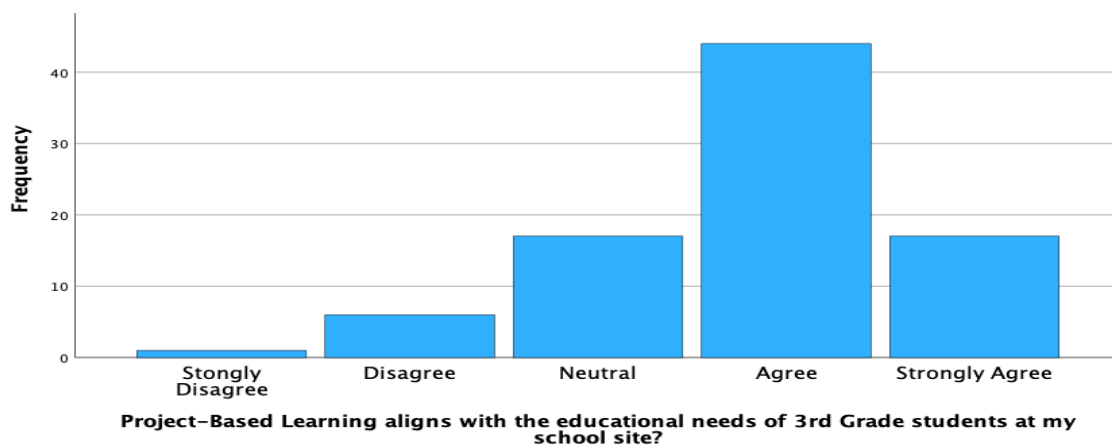
Table 2*Mean, Mode, and Standard Deviation of Survey Likert Responses*

	Project-Based Learning aligns with the educational needs of 3rd Grade students at my school site?	Project-Based Learning is an effective way to enhance literacy outcomes for third-grade students?	Cross-content integration of targeted English Language Arts standards should be seen throughout all subject areas for third grade students, even in departmentalized settings. Examples, science and social studies teachers supporting reading and writing standards.	Content area teachers should assess and monitor targeted reading, writing and communication standards to support third-grade literacy goals?	Content areas outside of Language-Art provide the space and time to support literacy standards for third-grade students.	Content areas outside of Language-Arts should assess literacy standards informally or formally.	A standard reading block provides enough support for third-grade students to master expected reading and writing skills.	Project-Based Learning can be implemented with efficacy in a departmentalized setting to support third grade reading and writing standards.	Students' performance on district and state tests has increased as a result of Project-Based Learning implementation in my classroom or school site?
Participants	86	86	86	86	86	86	86	86	86
Missing	0	0	0	0	0	0	0	0	0
Mean	3.78	4.12	4.35	4.12	3.76	3.65	2.81	3.66	3.47
Mode	4	4	5	5	4	4	2	4	3
Standard Deviation	0.963	0.758	0.732	0.938	1.017	1.026	1.193	0.835	0.916
Range	5	3	3	3	4	3	4	3	4
Sum	325	354	374	354	323	314	242	315	298

Likert Question 1. For this question, research participants were asked to respond to the following question, “Project-Based Learning aligns with the educational needs of third-grade students at my school?” Results show that the mean score was 3.78, mode 4, range of 5, and standard deviation of 0.963. The mean, or average response of 3.78, was indicative that the average participant selected agree as shown in Figure 3.

Figure 3

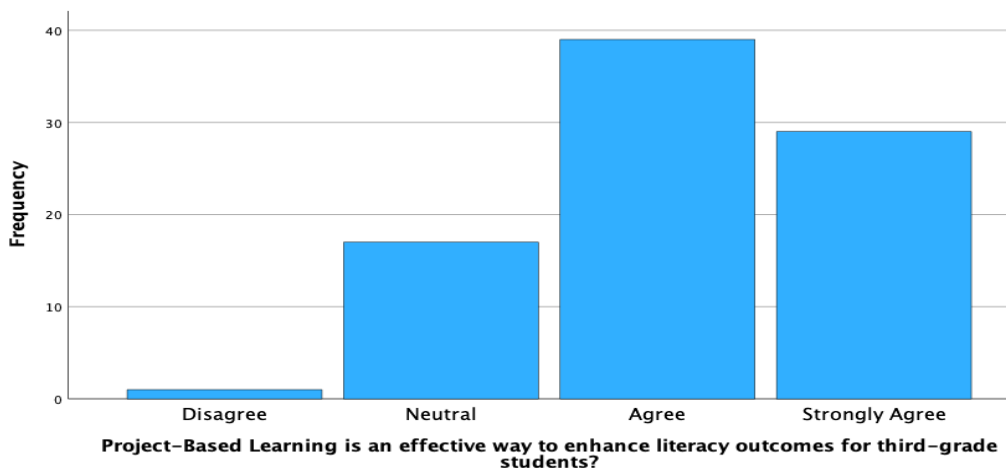
Survey Responses Question #1 Frequency Graph



Likert Question 2. Question two, “Project-Based Learning is an effective way to enhance literacy outcomes for third-grade students?” This question resulted in a higher mean score than the first question at 4.12. This was indicative that the average response was agree, followed by strongly agree as shown in Figure 4. The mode of 4 shows that most participants selected agree, with a standard deviation of 0.78 as shown in Table 2.

Figure 4

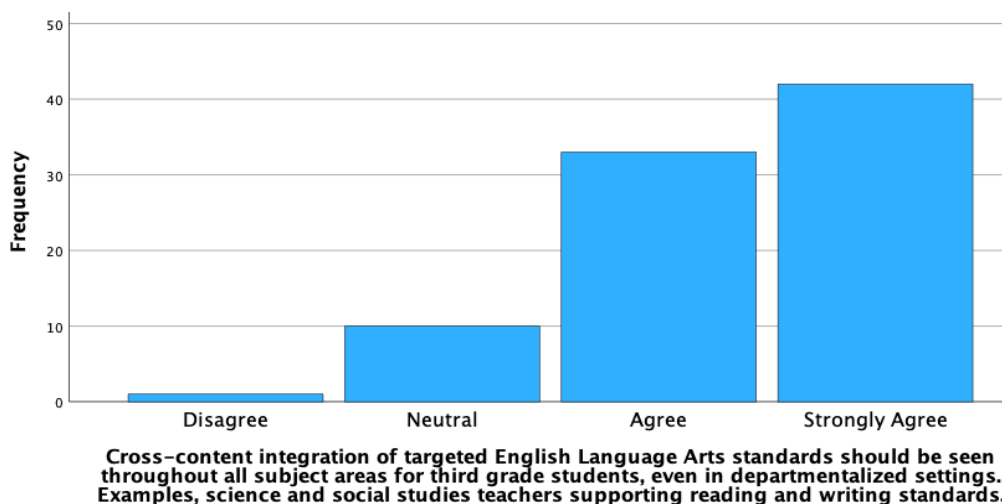
Survey Responses Question #2 Frequency Graph



Likert Question 3. Question three, “Cross-content integration of targeted English Language Arts standards should be seen throughout all subject areas for third-grade students, even in departmentalized settings?” The responses resulted in a mean score of 4.35, a mode of 5, and a standard deviation of 0.732. These results as supported by Figure 5, showed a majority of those surveyed agreed or strongly agreed that English Language Arts Standards should be integrated across content areas.

Figure 5

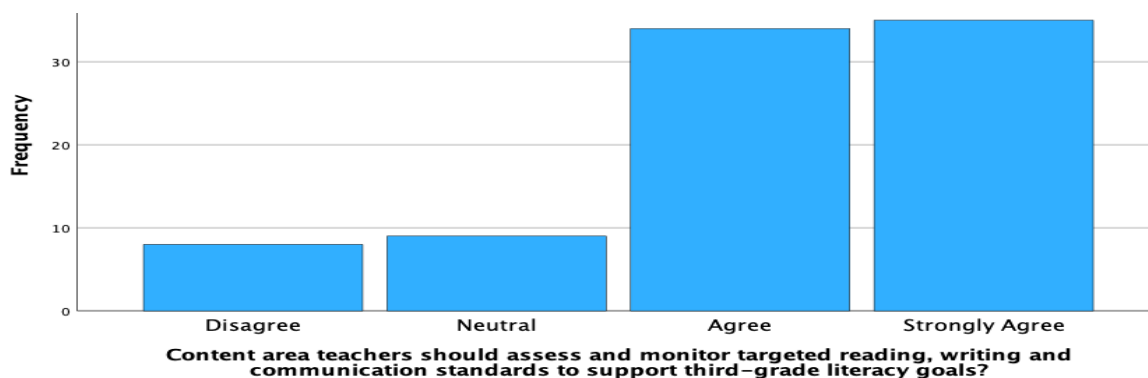
Survey Responses Question #3 Frequency Graph



Likert Question 4. The fourth survey question, “Content area teachers should assess and monitor targeted reading, writing, and communication standards to support third-grade literacy goals?” had a mean of 4.12, mode of 5, and a standard deviation of 0.938. This data shows that most participants surveyed either selected, agree, or strongly agree. Participants’ responses show that they perceived that monitoring of Language-Arts standards should occur across subject areas as seen within a Project-Based Framework.

Figure 6

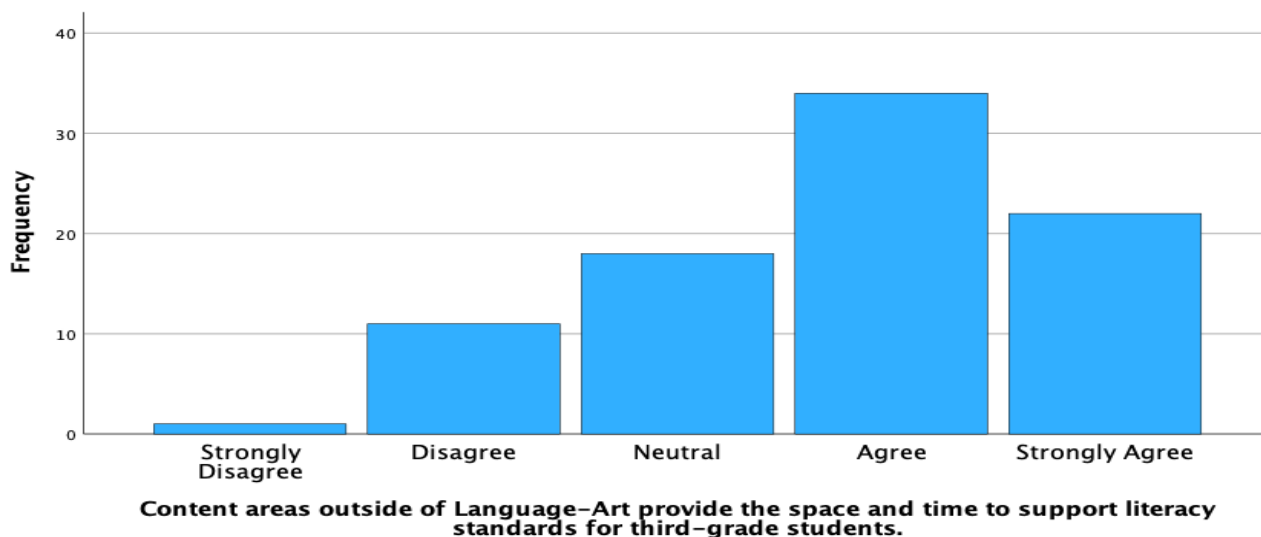
Survey Responses Question #4 Frequency Graph



Likert Question 5. Question five, "Content areas outside of Language-Art provide the space and time to support literacy standards for third-grade students." This question had a mean of 3.78, a mode of 4 and a standard deviation of 1.017. The spread of data was more significant, with most survey participants selecting agree, followed by strongly agreed, and neutral as shown in Figure 7.

Figure 7

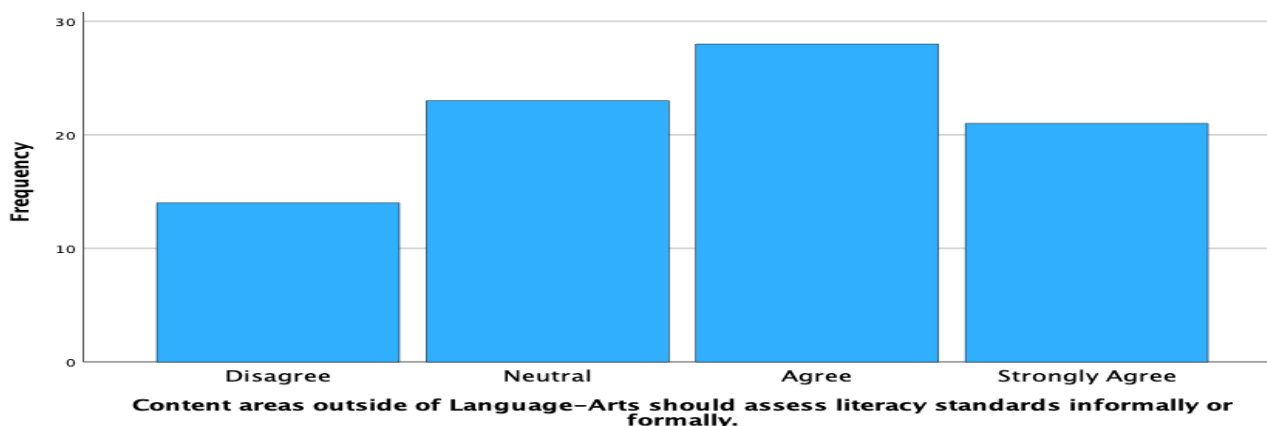
Survey Responses Question #5 Frequency Graph



Likert Question 6. Question six, “Should content areas outside of Language-Arts assess literacy standards informally or formally?” This question had a mean of 3.65, a mode of 4, and a standard deviation of 1.026. Agree was selected by a majority of participants, with the standard deviation indicating a wider spread of the data. The data was further analyzed to show how the data was spread among participants. Of the 86 participants, eight selected disagree, nine selected neutral, 34 selected agree, and 35 selected strongly agree, as shown Appendix N, a graph of the survey responses for question #5 is shown in Figure 8.

Figure 8

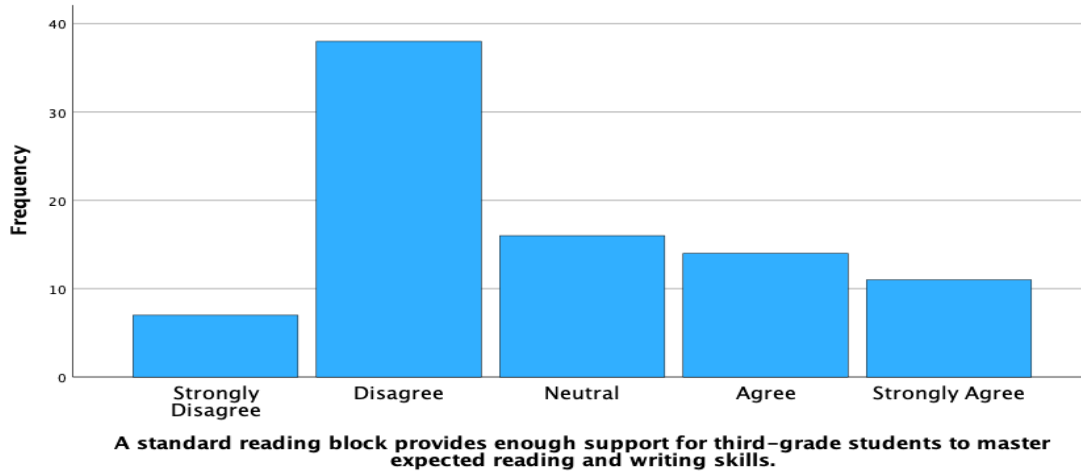
Survey Responses Question #6 Frequency Graph



Likert Question 7. Question seven, “Does a standard reading block provide enough support for third-grade students to master expected reading and writing skills?” The responses showed a mean of 2.81, mode of 2 and a standard deviation of 1.193. The standard deviation shows a wider spread of data, while the mean and mode support the data in Figure 9, showing a majority of participants selected disagree, which was indicative that they perceived the standard reading block provided did not provide the time needed to meet students' needs.

Figure 9

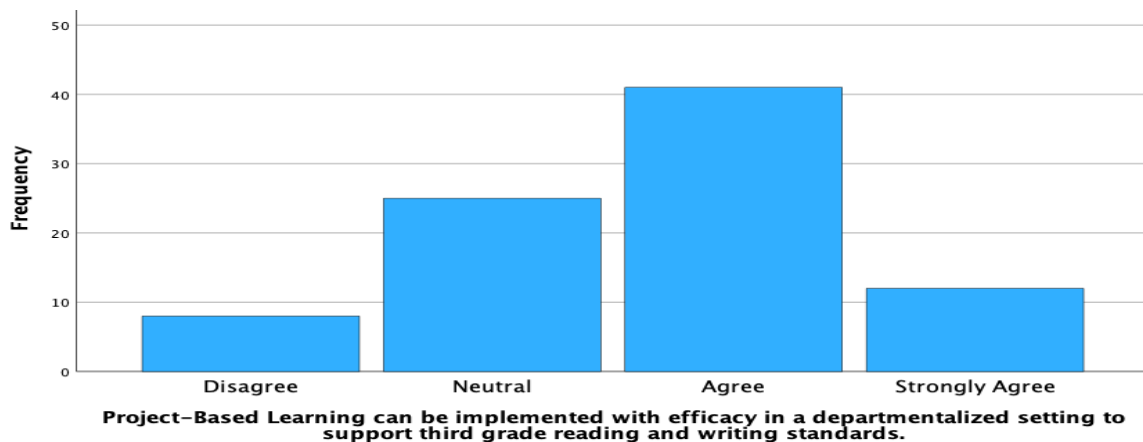
Survey Responses Question #7 Frequency Graph



Likert Question 8. Question eight, “Project-Based Learning can be implemented with efficacy in a departmentalized setting to support third grade reading and writing standards,” resulted in a mean of 3.56, mode of 4, and a standard deviation of 0.835. The majority of participants agreed that Project-Based Learning could be implemented with efficacy in a departmentalized setting.

Figure 10

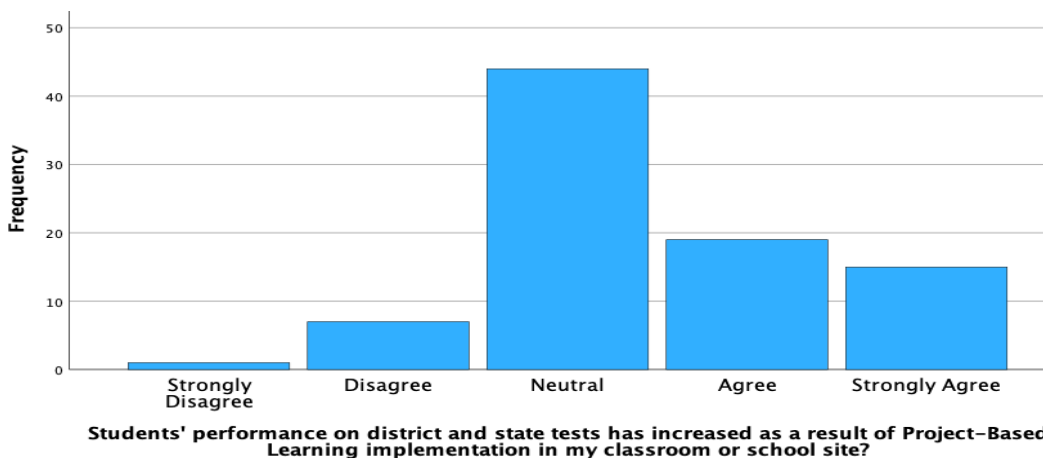
Survey Responses Question #8 Frequency Graph



Likert Question 9. Question nine, “Students' performance on district and state tests has increased as a result of Project-Based Learning implementation in my classroom or school site?” had a mean of 3.47, mode of 3 and a standard deviation 0.916. A majority of survey participants selected neutral, which was indicative that they did not agree or disagree with the statement.

Figure 11

Survey Responses Question #9 Frequency Graph



Qualitative Data Analysis: Interview Participants

The one-on-one interview data included results from five individual interviews using the nine questions found in Appendix G. The following questions were explored during the interviews: (a) What are elementary school teachers' perceptions of Project-Based Learning as an approach to enhance literacy outcomes for third-grade students through cross-content integration of targeted English Language Arts standards? And (b) How can Project-Based Learning target reading and writing literacy goals across content areas? Interview participants meeting the inclusion criteria in Appendix B were selected after contacting the researcher. Of the 19 individuals who selected yes within the survey for an interview, the five who contacted the researcher were sent a Google Form with the informed consent and interview dates. Table 3 displays the meeting platform and duration of each meeting.

Table 3*Meeting Platform, Duration of Participant Interviews, and Participant Demographics*

Participant Identifier	Meeting Platform	Duration	Title I Status	Grade Level	Project-Based Learning Pedagogy Experience	Schedule Model
192837465	Google Meet	20 minutes	Non-Title I School	Third Grade	15 + years	Self-Contained
192837464	Google Meet	33 minutes	Title I School	Fourth Grade	3 years	Departmentalized
192837463	Google Meet	22 minutes	Non-Title I School	Fourth Grade	7 years	Departmentalized
192837462	Google Meet	35 minutes	Title I School	Third Grade	8 years	Departmentalized
192837461	Google Meet	40 minutes	Non-Title I School	Third Grade	3 years	Departmentalized

Once selected a calendar invite was sent to each participant, and a recorded Google Meet was held on the selected date. The transcripts were then e-mailed to the participants after school hours on their personal e-mail accounts, with 48 hours given to participants to provide any corrections to the transcript after the review. Each participant was given an unidentifiable numeric code, and data was collected from interview participants' schools through data mining to find commonalities and trends. Demographic information for the interview participants is found in Table 3 and includes their schools' Title I status, years of experience with project project-based learning, current grade, and current classroom schedule model. The interviews were completed over a 5-day period consisting of afternoons, nights, and a weekend following the protocol below,

- (1) An email (Appendix H) was sent requesting participation in the study
- (2) Informed consent form embedded into the Google Form sent to participants via email (Google Form) (Appendix J)

(3) Semi-structured one-on-one interviews were conducted with questions outlined in Appendix K. The interviews were recorded using Google Meet and transcribed using the dictate/transcribe feature on Microsoft Word, then coded

Interview Data Analysis

The interview data was coded by the researcher to derive themes from the coding. An analysis of keywords was conducted using word clouds, and the transcribed interview was coded and organized by themes. After the initial reading of all interviews, three additional readings of each interview were conducted. Specific segments of information were identified from interview questions #3 to #8. The final analysis resulted in five themes that emerged from the original 25 themes. For each interview question below, a set of themes were derived. Further analysis of the interview questions subsequently led to the major themes. The researcher used the following analysis method. For each interview question the research coded the themes that occurred for just one participant as “Rare” while the Categories which occurred for two to more participants were labeled “Variant”, and categories that occurred within all participants were labeled “Typical,” following a similar methodology utilized by Jalma (2008).

Interview Question #3 Analysis

Within interview question #3, interview participants were asked, “How do you think this approach impacts literacy outcomes for third-grade students?” Table 4 details the evidence that subsequently led to the four themes, student engagement, independence, ownership, and motivation. All five participants made statements relating to students' level of engagement being positively impacted as a related outcome of Project-Based Learning. An increased level of independence was stated in two of the interviews. An increase in students' ability to take ownership of their work was mentioned by four interview participants, while an overall increase

in student motivation was seen in students when working on reading and writing was mentioned by all participants, which led to a label of “Typical.” This indicated that all five participants had a similar increase in motivation. A word cloud of the interview responses located in Appendix O further supports these findings.

Table 4

Analysis of Interview Question #3: Derived Themes, Transcript Evidence, & Occurrence

Interview Question #3	Transcript Evidence	Derived Theme #1	Derived Theme #2	Derived Theme #3	Derived Theme #4
How do you think this approach impacts literacy outcomes for third-grade students?	<ul style="list-style-type: none"> • The impact I think it has is it encourages them to read more about the topic that they are studying or researching • Ownership in their learning and in their reading • Independent and how engaged they become in reading based on the project that they are doing • Eagerness for learning and desire to increase their knowledge base because they are often engrossed in products that are meaningful to them • They are so excited for the learning and to use what you have shown them in different ways • Increase in performance in informational text because students are engaged in deep thinking and learning • Students become confident in their abilities to express themselves • I have seen an increase in student motivation and increase in willingness to complete challenging task or activities • I think we don't do enough to motivate them • The ownership that they have 	Student Engagement (Typical-5)	Independence (Variant -2)	Ownership (Variant- 4)	Motivation (Typical -5)

Interview Question 4 Analysis. Within interview question #4, interview participants were asked, “What are your thoughts on a cross-content integration of targeted English Language Arts standards?” The interviewer noted that this question elicited more emotion from the interviewers, primarily those that were departmentalized, where they taught a specific subject course throughout the day to multiple classes. Four themes derived from this question, monitoring and time, focus on content mastery, aligning standards together, and language–arts across content areas. Monitoring and time were labeled as, ‘Variant’, with three participants referencing the challenges of finding time and collaboration. Focus on content mastery was discussed by one participant at length. The participant stated, “I like it better the other way around, like the language-arts teacher teaching the science or social studies and then introducing those topics through reading and research.” This similar sentiment was also seen in several of the other interview questions and survey results. Therefore, a subsequent category was given. Aligning standards together was labeled “Variant” with three significant mentions. These participants all noted the importance of aligning the curriculum and standard together, but ultimately time and monitoring remained a significant challenge. Language-Arts across all content areas was labeled “Variant” as three participants noted the importance of ensuring language arts standards within across-content integration model.

Table 5*Analysis of Interview Question #:4 Derived Themes, Transcript Evidence, & Occurrence*

Interview Question #4	Transcript Evidence	Derived Theme #5	Derived Theme #6	Derived Theme #7	Derived Theme #8
<p>What are your thoughts on a cross-content integration of targeted English Language Arts standards? Science teachers etc., supporting targeted reading and writing goals</p>	<ul style="list-style-type: none"> • I like it better the other way around, like the language arts teacher teaching the science or social studies and then introducing those topics • Monitoring the literacy components like, writing and grammar when it comes to the science and social studies subject can be hard • Kids should be reading in all subjects • Ties in with all your standards • I think it's vital for students to be successful • I do like it in both but as far as targeting the standards and grading the standard, no • As a self-contained teacher this kind of comes naturally. in my classroom I often integrate all the subject areas together • Hard to find the time to collaborate • Maximize the learning • Monitoring the literacy components like, writing and grammar when it comes to the science and social studies subject can be hard. • Kids should be reading in all subjects • Ties in with all your standards. • I think it's vital for students to be successful • I do like it in both but as far as targeting the standards and grading the standard • As a self-contained teacher this kind of comes naturally where my classroom I often integrate all the subject areas together • Hard to find the time to collaborate • Maximize the learning 	<p>Monitoring & Time (Variant - 3)</p>	<p>Focus on Content Mastery (Rare - 1)</p>	<p>Aligning Standards Together (Variant - 3)</p>	<p>Language Arts Standards Across Content Areas (Variant - 3)</p>

Interview Question 5 Analysis. Within interview question #5, interview participants were asked, “How do you think Project-Based Learning could target reading and writing literacy goals across content areas? The interview participants’ responses resulted in four categories, interconnected concepts, accountability, increased engagement, and real-life experiences. The themes represent commonalities within the five interview participants' responses. Three of the interview participants' responses gave insight into a need to connect concepts; therefore, this theme was labeled “Variant.” Increased engagement was the highest-rated theme within this question and received a label of “Typical” this indicated that all five participants mentioned a need to increase student engagement or that Project-Based Learning increased their student's level of engagement. Real-life experience was labeled “Variant,” with three participants stating that Project-Based Learning can provide real-life experience. Accountability was labeled “Rare,” with only one participant detailing the need for accountability systems in place for this question. Accountability was given a theme due to its prevalence within the other interview questions and survey responses.

The accountability theme was also created after an analysis of responses related to the rigor of Project-Based Learning. While many teachers addressed the aspects they most found beneficial, some statements revealed concerns over meeting promotion criteria, and maintaining a schools grade. These were common among the interviews and written survey responses.

Table 6*Analysis of Interview Question #:5 Derived Themes, Transcript Evidence, & Occurrence*

Interview Question #5	Transcript Evidence	Derived Theme #9	Derived Theme #10	Derived Theme #12
How do you think Project-Based Learning could target reading and writing literacy goals across content areas?	<ul style="list-style-type: none"> • Increases student engagement • Makes it meaningful for them and increases their desire to be involved • The more we can make it concrete for our students, the more they will learn and remember the content • Incorporating in math • It's important for kids to tie all the lessons together • Thematic type Studies where everything is connected • I think all the content areas need to be interconnected so the kids make these connections throughout their learning experiences and carry that into their real life • Hold students accountable for writing standards whenever they write, even if they are writing about science of social studies <ul style="list-style-type: none"> • Creating a product and a presentation • Invite guests and parents to view their work, it's important that it represents their best work • Makes it meaningful for them and increases their desire to be involved • The more we can make it concrete for our students, the more they will learn and remember the content • Incorporating in math • It's important for kids to tie all the lessons together • Thematic type Studies where everything is connected • I think all the content areas need to be interconnected so the kids make these connections throughout their learning experiences and carry that into their real life. • Hold students accountable for writing standards whenever they write, even if they are writing about science of social studies • Creating a product and a presentation <ul style="list-style-type: none"> • Invite guests and parents to view their work it's important that it represents their best work and I instill that within all subject areas 	Interconnected Concepts (Variant- 3)	Accountability (Variant- 2)	Real-Life Experiences (Variant- 3)

Interview Question 6 Analysis. Within interview question #6, interview participants were asked, “What are your perceived thoughts on the impact of Project-Based Learning on the reading achievement of third-grade students within your school, classroom, or district?” Interview responses for this question fell into four themes, sticks/long-term memory, application of knowledge, students' growth, and increased students' confidence. Using the same labeling method, the themes were labeled based on occurrence in each interview. The themes received the following labels sticks/long-term memory (Variant), application of knowledge (Variant), students' growth (Variant) and increased students' confidence (Variant). The survey respondents were not able to quantify student growth, yet three participants indicated student growth, while participant 192837463 stated, “The data doesn't necessarily show that, but I also don't think it's been done with fidelity to a point where I can say with full certainty whether or not it was effective or not, but I have seen some positive results.”

Table 7

Analysis of Interview Question #:6 Derived Themes, Transcript Evidence, & Occurrence

Interview Question #6	Transcript Evidence	Derived Theme #13	Derived Theme #14	Derived Theme #15	Derived Theme #16
What are your perceived thoughts on the impact of Project-Based Learning on the reading achievement of third-grade students within your school, classroom, district?	<ul style="list-style-type: none"> • Maintaining an eye on rigor and standards • rubrics to focus their work • Monitoring that they are progressing as readers and not just doing a fun project • They used that knowledge to share with other people and listen to other people • I have seen growth • Increased confidence • Hands-on on activities, it sticks, you know they don't have to memorize things 	Sticks/Long Term Memory (Variant - 3)	Application of Knowledge (Variant - 3)	Student Growth (Variant - 3)	Increased Student Confidence (Variant 3)

Interview Question 7 Analysis. Within interview question #7, interview participants were asked, “Do you believe Project-Based Learning can support all learners?” A common theme emerged in the area of differentiation throughout each interview, resulting in the label of “Typical” each of the 15 statements related to differentiation were positive, and participants found Project-Based Learning allowed for differentiation of instruction, which supported the conceptual framework assumptions. This was supported by the work of Philen (2016) in an analysis of frameworks guided by Dewey, such as Project-Based Learning, where one would see projects, presentations, and other differentiated evaluation techniques in the classroom. The additional themes derived from the interview analysis were collaboration and communication, student voice, choice, and instruction. Each of these themes received a label of “Variant” with two themes, choice and collaboration and communication supported by research on effective frameworks of Project-Based Learning. Three of the five participants, 60%, discussed student voice, choice, engagement, planning, and helping students develop the skill to execute projects, cornerstones of Project-Based Learning (Larmer et al., 2015). Another common theme was the need to provide instruction to ensure all students' needs were met. One participant stated, “While I believe Project-Based Learning can meet the needs of all students, the teaching matters.”

Table 8*Analysis of Interview Question #7: Derived Themes, Transcript Evidence, & Occurrence*

Interview Question #7	Transcript Evidence	Derived Theme #17	Derived Theme #18	Derived Theme #19	Derived Theme #20
Do you believe Project-Based Learning can support all learners?	<ul style="list-style-type: none"> • Student choice • Can show significant improvement with project-based learning • Kinesthetic strategies • It also just helps them retain information • Allows for movement • Students still require explicit instruction to master skills • Ownership that they take and the engagement • In the real world, we must get along with people and we must accept other people's contributions to our craft, and I just think this fosters curiosity and a love of learning • The teaching matters. • Can show significantly improvement with project-based learning • Kinesthetic strategies • It also just helps them retain information • Allows for Movement • Students still require explicit instruction to master skills 	Collaboration and Communication (Variant - 3)	Differentiation (Typical – 5)	Choice (Variant - 3)	Instruction (Variant - 3)

Interview Question 8. Interview question #8 explored the interview participants' perceptions of the advantages and disadvantages of Project-Based Learning. Interview participants were asked, “What are some advantages and challenges to Project-Based Learning from your experience? (Primarily with a focus on third grade). The same coding was used to derive the four themes from this question. The four themes that emerged from the participant interviews were time (Typical), motivation (Typical), testing and instructional pacing (Variant), collaboration & parent involvement (Variant), and Professional Development (Variant). Due to the question, the researcher used an additional analysis method used by Pont (2001). Interview statements were coded with a plus for a positive statement (advantage), a minus sign for a

negative (disadvantage), and an asterisk for a neutral statement. The coding was then shared with interview participants for confirmation. The interviews and triangulation of the coding data indicated that the teachers perceived time, professional development, and testing, and instructional pacing as disadvantages when implementing a Project-Based Learning framework, while student motivation, collaboration & involvement were perceived as advantages.

Table 9

Analysis of Interview Question #8: Derived Themes, Transcript Evidence, & Occurrence

Interview Question #8				
What are some advantages and challenges to Project-Based Learning from your experience?				
Derived Theme #21	Derived Theme #22	Derived Theme #23	Derived Theme #24	Derived Theme #25
<p>Time (Typical - 5)</p> <ul style="list-style-type: none"> • Time (-) • Not part of a daily schedule (*) • The time to implement it, the time to plan or just the overall, time in the day to teach everything (-) • Time and training remain a challenge (-) • It takes time, you know, to do a meaningful project. It takes time, you cannot do it in one day (-) • We have to be giving direct instruction, guided instruction, and independent work (*) • I need to make sure that I am fitting everything in (*) • The time (-) • It's time-consuming (-) 	<p>Motivation (Typical - 5)</p> <ul style="list-style-type: none"> • They can apply what they learn in the classroom (+) • Possibilities are endless (+) • Not all rote memorization and I think project-based learning gives more meaning to what we're teaching (+) • Grit and perseverance are developed (+) • Self-esteem (+) • This type of learning feels authentic (+) • The student-driven components make it a natural motivator for students (+) • The advantages include students who love learning and can set their own goals (+) • The kids because they're taking ownership of it and can really remember what they're learning (+) • Perseverance helps people become successful citizens (+) • The ability to select their materials and be creative, and have an idea that they can see comes through to the end (+) • They want to complete the project, so they are motivated to do it, and at the same time, they are learning (+) 	<p>Testing and Instructional Pacing (Variant - 4)</p> <ul style="list-style-type: none"> • Everybody's trying to increase scores (*) • Administrative pressure (-) • Rigor of the testing sometimes wears students and maybe teachers out as well (-) • Testing schedule (-) • Fighting for validation because this model of learning conflicts with test preparation models (-) • With the way things are set up in the classroom with the schedule and the standards, everything that we have to cover (-) • They are so pressed and worried about mandates (-) • We're just so concerned about test scores we don't think about the importance of Project-Based learning that we can do in the classroom (-) • This is the schedule we're going to do this in five days, and then you are going to take a test, and it's too much testing, too much testing (-) • Does not fit into the typical plan (-) 	<p>Collaboration & Involvement (Variant- 4)</p> <ul style="list-style-type: none"> • Increased family involvement (+) • They could collaborate as a team and work together (+) • Family involvement increases (+) • They can socialize, and they learn together. Kids learn from each other (+) • Student engagement increases and just overall student learning making it more concrete(+) • They could have many aha moments, you know, from working together (+) 	<p>Professional Development (Variant - 3)</p> <ul style="list-style-type: none"> • Can seem overwhelming (-) • I teach myself (*) • Time and training remain a challenge (-) • Teachers have to know the teaching is still critical (*) • Unit planning needs to happen upfront to make it work (*)

Notes:

- + = Positive perception
- = Negative perception.
- * = Neutral

Emerging Theme: Dimensions of Student Engagement (cognitive, emotional, and behavioral)

The emergence of five themes resulted from the original twenty-five themes that emerged from the interview participants' responses to the selected interview questions. Once the data was analyzed for new themes, categories, or patterns, five themes emerged. The five themes that emerged were dimensions of student engagement (cognitive, emotional, and behavioral), instructional factors, outcomes, challenges, and advantages of Project-Based Learning pedagogy. Table 10 illustrates these five themes and the original five that were categorized into them.

Next, the researcher looked at the relationship of the themes to the conceptual framework and found that teacher's perceptions of the advantages of Project-Based Learning, which included student taking ownership, collaboration and communication, choice, collaboration, and involvement, which were variant themes across all the interview responses aligned with progressive ideals. The responses revealed that teachers viewed one advantage to implementation in third-grade was the ability to allow learners to construct their own knowledge, a pillar of Project-Based Learning.

Another theme that emerged from the original 25 themes was student engagement, independence, motivation, increased engagement, increased students' confidence, and motivation, which was a reoccurring theme that was categorized into a larger overarching theme. These were categorized into a larger theme, labeled, "Dimensions of Student Engagement (cognitive, emotional, and behavioral). The analysis of the statements made by participants all centered around what the researcher deduced as connecting to the work of Fredricks (2016), which supported the interview participants' perception of Project-Based Learning's ability to increase third-grade students' level of engagement on a multifaceted level. This was supported by

research literature, which defines engagement in three ways cognitive, emotional, and behavioral. This analysis was supported by the interview responses below;

- “The impact I think it has is it encourages them to read more about the topic that they're studying or researching”
- “Ownership in their learning and in their reading”
- “They become more independent and how engaged they become in reading”
- “Eagerness for learning and a desire to increase their knowledge base because they are often engrossed in products that are meaningful to them.”
- “They are so excited for the learning and to use what you've shown them in different ways”
- “Increase in performance in informational text because students are engaged in deep thinking and learning”
- “Students become confident in their abilities to express themselves”
- “I have seen an increase in student motivation and increase in willingness to complete challenging task or activities”

The next theme that arose from the original 25 themes related to instructional factors that impacted teacher's perception of Project-Based Learning as an approach to enhance literacy outcomes for third-grade students through cross-content integration of targeted English Language Arts standards. This theme also addressed teachers' perceptions of how Project-Based Learning could target reading and writing literacy goals across content areas.

The next theme, “Outcomes,” emerged from six of the original themes and addressed the teacher's perception of the outcomes of Project-Based Learning implementation within their school or classroom for third-grade students. Variant themes included interconnection of

concepts, accountability, long term memory retention of concepts, application of knowledge and differentiation, which were all typical themes throughout each interview.

The challenge of implementation was the next emerging theme with variant responses that included monitoring, time, testing and instructional pacing, and a need for professional development as evidenced by the interview participant statements in Table 9. Time remained the typical responses, which was also dominant in the survey data. The final theme that emerged from the interview data addressed the advantages of Project-Based Learning Pedagogy and included variant themes found across the data. These themes included students taking ownership, collaboration and communication, students' choice, and involvement. The responses also echoed research on effective frameworks of Project-Based Learning centered on student voice, choice, engagement, reflection, critique, revision, and a public product (Dias & Brantley-Dias, 2017; Larmer et al., 2015).

Table 10
Five Major Themes

Dimensions of Student Engagement	Instructional Factors	Outcomes	Challenges	Advantages of Project-Based Learning Pedagogy
Theme #1 - Student Engagement (Typical - 5)	Theme #6 - Focus on Content Mastery (Rare - 1)	Theme #9 - Interconnected Concepts (Variant - 3)	Theme #5 - Monitoring & Time (Variant - 3)	Theme #3 - Ownership (Variant - 4)
Theme #2 - Independence (Variant - 2)	Theme #7 - Aligning Standard Together (Variant - 3)	Theme #10 - Accountability (Variant - 2)	Theme #21 - Time (Typical - 5)	Theme #17 - Collaboration and Communication (Variant - 3)
Theme #4 - Motivation (Typical - 5)	Theme #8 - Language Arts Standards Across Content Areas (Variant - 3)	Theme #13 - Sticks/Long Term Memory (Variant - 3)	Theme #23 - Testing and Instructional Pacing (Variant - 4)	Theme #19 - Choice (Variant - 3)
Theme #11 - Increased Engagement (Typical - 5)	Theme #12 - Real-Life Experiences (Variant - 3)	Theme #14 - Application of Knowledge (Variant - 3)	Theme #25 - Professional Development (Variant - 3)	Theme #15 - Collaboration and Involvement (Variant - 4)
Theme #16 - Increased Student Confidence (Variant - 3)	Theme #20 - Instruction (Variant - 3)	Theme #15 - Student Growth (Variant - 3)		
Theme #22 - Motivation (Typical - 5)		Theme #18 - Differentiation (Typical - 5)		
<i>Note:</i>	Key	Rare = Occurred in one interview		
		Variant = Occurred in more than one interview		
		Typical = Occurred in every interview		

Online Survey Qualitative Result Analysis

Open-ended survey questions were embedded into the online survey and coded using the same method used in the analysis of the one-on-one interviews. The data was coded to derive themes, and analysis of keywords was conducted using word clouds.

Online Survey Question One

The online survey data for 86 participants were included in the overall study. Of these participants, 66 completed the three extended response questions. The following themes were derived from participants' responses to the first question, "Are there any barriers to implementing a Project-Based Learning Framework in third-grade classrooms?" Participants were asked to list any challenges or barriers. The results fell into three of the themes derived from the one-on-one interviews, instructional factors, outcomes, and challenges. Within instructional factors, curriculum restrictions were listed by 27% of respondents, and scheduling and a need for autonomy were listed by 15% of the respondents. Within the next theme, "Outcomes," which related to the academic outcomes of students, 38% of the respondents listed barriers concerning assessment, which included challenges to align Project-Based Learning to state assessments. The next theme was the need to address the varied needs of students, which was listed by 15% of the survey participants. The next major category from the themes that emerged was, "challenges." Survey responses showed the following; 62% listed time, 30% listed a need for professional development or training, 17% listed a need for resources, and 15% listed planning and time to collaborate. The figure below provides a visual of the survey responses for question one in a word cloud. Dominant phrases or words are depicted visually and appear larger and bolder.

Table 11

Examples of Definitive Yes, No, and Non-definitive Open-Ended Survey Responses

Online Survey Responses: Do you think Project-Based Learning is an effective way to teach Language-Arts standards outside of the traditional literacy block, why or why not?	
Evidence	
Definitive Yes (+)	Yes, I believe giving the student the freedom to discover things in their own way will be much more beneficial in problem solving and a general sense of learning
	While some students certainly benefit from explicit instruction there are significant benefits to a Project-Based Learning model. Students are motivated and often look forward to coming to school
	Yes, it can incorporate all subjects
	Yes, because no matter what you're teaching reading is required. Reading is in any and everything you do
	Yes, it is a whole content incorporating all subjects not just in isolation
	Yes, I think connections made across all content areas increases mastery and engagement
	I feel it is an authentic and a creative way to apply the standards while giving the students purpose and meaning for what they're doing
	Yes, it is more engaging and focuses on the student doing most of the work, finding the answers to their own questions, collaborating, and it is fun
	Yes, students learn best when problem-solving, working together and learning from trial and error
	Yes, I've done Project-Based Learning and because of the level of engagement, students naturally enjoy reading activities
	Yes, because you can include a variety of ELA concepts while showing real life connections to education
	Yes, more engaging for students
	Absolutely yes, it boosts critical thinking skills, creativity, and autonomy
	Yes, with support
	Yes, PBL (Project Based Learning) offers students the opportunity to extend and engage in real life application style of learning. As a result, students take full ownership of their learning
	Project-Based Learning allows students to interact better with the materials
	It's giving each student exactly what they need individually
	Yes, I do feel that PBL is an effective way to practice language arts because the project aspect of the learning would provide hands on application for the literacy skills targeted for success
	Yes, because it enhances the student's knowledge of topics while incorporating skills. They can also use a variety of skills to learn a standard being taught
	Yes, students learn more when they are engaged, and learning is meaningful
Yes, I do, it's inquiry-based, so it encourages students to think critically and solve real-world problems	

Table 11 Continued:

Examples of Definitive Yes, No, and Non-definitive Open-Ended Survey Responses

Online Survey Responses: Do you think Project-Based Learning is an effective way to teach Language-Arts standards outside of the traditional literacy block, why or why not?	
Evidence	
Definitive No (-)	At our school we really target instruction so it's hard to target that with Project-Based Learning
	I do believe there is merit to Project-Based Learning. However, I don't think it is effective due to the way the students will be assessed by the state
	I fear it would not prepare them for the tests
	Our reading block is already packed with the new curriculum and there is not much space for changes
	Does not align to state assessments
Non-Definitive (*)	Yes. However, it is imperative that the teacher have strong classroom management and organizational skills
	Yes, if its balanced and the focus of standards isn't lost
	I believe that in certain populations, it is wonderful, but my struggling learners often struggle if not provided explicit reading and writing instruction
	It's hard to tell because our kids require a lot of remediation and support
	It works well for my gifted learners
	Not everyone implements it correctly
	It could be. It depends upon the students and teachers
	Yes and no it depends on a lot of things
	It can be effective for certain students
	I do think it is an effective way but struggle to figure out the time component
	If the teacher is adept at teaching the standards, I think PBL can be effective.
	In the gifted advanced room
	I think it matters who is teaching. Not everyone can target standards and teach through Project-Based Learning. Some just do the fun stuff
	If I implemented correctly and with efficacy
	Maybe, Sometimes the structure of sentence writing, paragraph writing and all the conventions that go with it can be assumed to be learned during a PBL activity but instead can be easily lost in bad habits, which are hard to break. Perhaps some structure before a PBL unit is needed to form a foundation. Where a PBL activity can enhance the learning experience, some students continue to make the same mistakes and the activity does not allow for enough practice to fix the mistake well enough
As a new teacher I would need more training and projects are hard to plan	

Online Survey Question 3. Survey question three asked participants, “What is necessary to support content area teachers in using a Project-Based Learning framework to support targeted Language-Arts standards?” Participant responses fell into five major categories time (instructions

and planning), professional development, support, fewer assessments, and autonomy. Figure 13 provides a visual of responses in a word cloud. Of the 66 participants 76% of responses discussed the need for additional time, both instruction and planning. A need for professional development was discussed among 53% of the survey responses, 23% listed additional support, 17 % listed fewer assessments, and 26% discussed a need for autonomy.

Figure 13

Online Survey Question #3 Word Cloud of Participant Responses



Quantitative Data Analysis for Survey Participants

Third Grade assessment data from the state assessment portal was analyzed using descriptive analysis of the testing data, and findings were reported with standard deviation and comparative data analysis based on survey and interview participants responses using the Spearman Rank Order Coefficient in SPSS.

Analysis of 2019 Assessment Data

The results of the Spearman's rho Correlation Coefficient for 2019 assessment data and survey question nine show a moderate negative relationship between survey responses and assessment data, $r_s = -.053$, $n = 86$, $p > .05$. The results provided no significant evidence that a correlation exists between teachers perceived effectiveness of Project-Based Learning within the third-grade classrooms at their school and assessment data. The p -value indicates that these results are not statistically significant. The negative rho denotes a relationship that travels in

different directions. The correlation between the participants' responses and the respondents' schools Title I status showed a, $r_s = .098$, $n = 86$, $p > .01$, which indicates no significant association between the variables, while the positive rho shows that the relationship of the variables travels in the same trajectory. No significant correlation was found among survey respondents perceived effectiveness and assessment data, but there was a significant correlation between Title I status and schools' assessment results, with a $r_s = -0.786$, $n = 86$, $p < .01$.

Table 12
Spearman's rho Coefficient for Survey Question, Title I Status and, 2019 Assessment Data

			Students' performance on district and state tests has increased as a result of Project-Based Learning implementation in my classroom or school site?	Percentage in Level 3 or Above 2019	Title I Status
Interview Question	Students' performance on district and state tests has increased as a result of Project-Based Learning implementation in my classroom or school site?	Correlation Coefficient	1.000	-.053	.098
		Sig. (2-tailed)	.	.631	.368
		N	86	86	86
Third Grade State Assessment Data	Percentage in Level 3 or Above 2019	Correlation Coefficient	-.053	1.000	-.786**
		Sig. (2-tailed)	.631	.	<.001
		N	86	86	86
Title I Status	Title I Status	Correlation Coefficient	.098	-.786**	1.000
		Sig. (2-tailed)	.368	<.001	.
		N	86	86	86

Analysis of 2021 Assessment Data

The results of the Spearman's rho Correlation Coefficient for 2021 assessment data and survey question nine show a negative relationship between survey responses and assessment data, $r_s = -.007$, $n = 86$, $p > .05$. The results provided no significant evidence that a correlation exists between teachers perceived effectiveness of Project-Based Learning within the third-grade rooms at their school and assessment data. The p -value indicates that these results were not statistically significant. The negative ρ denoted a relationship that traveled in different directions. The correlation between participants responses and the respondents' schools showed a, $r_s = .098$, $n = 86$, $p > .01$, which indicates no significant association between the variables, while the positive ρ shows that the relationship of the variables travels in the same trajectory. There was a significant negative correlation between Title I status and schools' assessment results, with a $r_s = -0.746$, $n = 86$, $p < .01$.

Table 13*Spearman's rho Coefficient for Survey Question, Title I Status and, 2021 Assessment Data*

		Students' performance on district and state tests has increased as a result of Project-Based Learning implementation in my classroom or school site?	Title I Status	Percentage in Level 3 or Above 2021
Students' performance on district and state tests has increased as a result of Project-Based Learning implementation in my classroom or school site?	Correlation Coefficient	1.000	.098	-.007
	Sig. (2-tailed)	.	.368	.952
	N	86	86	86
Title I Status	Correlation Coefficient	.098	1.000	-.746**
	Sig. (2-tailed)	.368	.	<.001
	N	86	86	86
Percentage in Level 3 or Above 2021	Correlation Coefficient	-.007	-.746**	1.000
	Sig. (2-tailed)	.952	<.001	.
	N	86	86	86

Note: *. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

Analysis of Relationship Between Assessment Data and Survey Responses. In an analysis of the degree of the relationship between assessment data and teacher responses to the survey question, “Students' performance on district and state tests has increased as a result of Project-Based Learning implementation in my classroom or school site?” A one-way ANOVA was computed. The results showed no statistical difference between the teachers' responses and the 2019 assessment data, $F(4,81) = 2.136, p > .05$ and shown in Table 14.

Table 14

One-Way ANOVA of 2019 Third Grade Achievement and Teacher's Perception of Implementation Effect

Source	SS	df	MS	F	P.
Between Groups	3157.545	4	789.386	2.136	.084
Within Groups	29932.838	81	369.541		
Total	33090.384	85			

An analysis of ANOVA for the 2021 data also showed no statistical difference between the teachers' responses and the 2021 assessment data, $F(4,81) = 1.462, p > .05$, as shown in Table 15.

Table 15

One-Way ANOVA of 2021 Third Grade Achievement and Teacher's Perception of Implementation Effect

Source	SS	df	MS	F	P.
Between Groups	2261.618	4	565.405	1.462	.222
Within Groups	31333.277	81	386.831		
Total	33594.895	85			

An analysis of ANOVA for the 2022 data also showed no statistical difference between the teachers' responses and the 2021 assessment data, $F(4,81) = 1.462, p >.05$, as shown in Table 16.

Table 16

One-Way ANOVA of 2022 Third Grade Achievement and Teacher's Perception of Implementation Effect

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P.</i>
Between Groups	2398.241	4	599.560	1.736	.150
Total	30379.535	85			

One-on-One Interview Analysis

Spearman's *rho* Coefficient for One-on-One Interview Responses, Title I Status, and the most recent assessment data for the 2021 and 2022 Assessment years was calculated. The 2019 data set was excluded due to one participant moving to a new school site within that academic year.

The results of the Spearman's *rho* Correlation Coefficient for 2021 assessment data and the one-on-one interview responses show a negative relationship between survey responses and assessment data, $r_s = -.918, n = 5, p <.05$. The results show a negative correlation between teachers perceived level of implementation within their schools' third-grade classrooms during that 2021 assessment year. The p-value indicated that these results are statistically significant. The negative *rho* denotes a relationship that travels in different directions. The correlation between participants' responses and the respondents' schools Title I status showed a, $r_s = .968, n = 5, p <.01$, which indicated a significant association between the variables, while the positive *rho* showed that the relationship of the variables traveled in the same trajectory. There was a

significant negative correlation between Title I status and schools' assessment results, with a $r_s = -0.889$, $n = 5$, $p < .01$ as shown in Table 17.

Table 17

Spearman's rho Coefficient for One-on-One Interview Responses, Title I Status, and 2021 Assessment Data

		Participant Rating of Implementation in Third Grade	Percentage in Level 3 or Above 2021	Title I Status
Participant Rating of Implementation in Third Grade	Correlation Coefficient	1.000	-.918*	.968**
	Sig. (2-tailed)	.	.028	.007
	N	5	5	5
Percentage in Level 3 or Above 2021	Correlation Coefficient	-.918*	1.000	-.889*
	Sig. (2-tailed)	.028	.	.044
	N	5	5	5
Title I School	Correlation Coefficient	.968**	-.889*	1.000
	Sig. (2-tailed)	.007	.044	.
	N	5	5	5

Note: *. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

2022 Testing Data

The results of the Spearman's *rho* Correlation Coefficient for 2022 assessment data and the one-on-one interview responses show a negative relationship between survey responses and assessment data, $r_s = -.803$, $n = 5$, $p > .05$. The results showed a negative correlation between teachers' perceived level of implementation within their schools' third-grade classrooms during the 2022 assessment year. The p-value indicated that these results are were statistically significant. The negative rho denoted a relationship that traveled in different directions. The correlation between participants' responses and the respondents' schools' Title I status showed a, $r_s = .968$, $n = 5$, $p < .01$, which indicated a significant association between the variables, while the

positive ρ showed that the relationship of the variables traveled in the same trajectory. There was a significant negative correlation between Title I status and schools' assessment results, with a $r_s = -0.889$, $n = 5$, $p < .01$.

Table 18

Spearman's rho Coefficient for One-on-One Interview Responses, Title I Status, and 2022 Assessment Data

		Participant Rating of Implementation in Third Grade	Percentage in Level 3 or Above 2022	Title I Status
Participant Rating of Implementation in Third Grade	Correlation Coefficient	1.000	-.803	.968**
	Sig. (2-tailed)	.	.102	.007
	N	5	5	5
Percentage in Level 3 or Above 2022	Correlation Coefficient	-.803	1.000	-.889*
	Sig. (2-tailed)	.102	.	.044
	N	5	5	5
Title I School	Correlation Coefficient	.968**	-.889*	1.000
	Sig. (2-tailed)	.007	.044	.
	N	5	5	5

Note: *. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Summary of Data Gathered

The researcher collected quantitative data through the online survey instrument used (Survey Monkey) and one-on-one interviews. Assessment data from the English Language Arts Florida Standards Assessment for third-grade students from the schools identified by participants was obtained for the 2019-2022 assessment year through data mining on a public domain.

Results of Research Questions

The following section provides an overview of the results of the three research questions that guided this study.

Research Question One

The first research question was, “What are elementary school teachers’ perceptions of Project-Based Learning as an approach to enhance literacy outcomes for third-grade students through cross-content integration of targeted English Language Arts standards?” For this question, research participants were asked to respond to the following question, “Project-Based Learning aligns with the educational needs of third-grade students at my school?” Results show that the mean score was 3.78, mode 4, range of 5, and standard deviation of 0.963. The mean, or average response of 3.78, was indicative that the average participant selected agree as shown in Figure 3. Table 19 below also shows that 19.8 % of participants selected strongly agree, 51.2% of the survey participants selected agree, 19.8% selected neutral, 7% selected disagree, and 1.2% selected disagree. A majority of the participants selected strongly agree or agree. The data suggests that teachers believe Project-Based Learning aligns with the educational needs of third-grade students at their school sites. This was further supported by interviews and open-ended data that supported the teachers' responses.

Table 19

Teachers Perception of Ability to Meet Students Needs Frequency Data

Project-Based Learning aligns with the educational needs of 3rd Grade students at my school site?				
	Frequency	Percent	Valid Percent	Cumulative Percent
Stongly Disagree	1	1.2	1.2	2.3
Disagree	6	7.0	7.0	9.3
Neutral	17	19.8	19.8	29.1
Agree	44	51.2	51.2	80.2
Strongly Agree	17	19.8	19.8	100.0
Total	86	100.0	100.0	100.0

The next question within the study that supported this research question was Likert question three “Cross-content integration of targeted English Language Arts standards should be seen throughout all subject areas for third-grade students, even in departmentalized settings” The responses resulted in a mean score of 4.35, a mode of 5, and a standard deviation of 0.732. These results as supported by Figure 5 suggest that a majority of those surveyed agreed or strongly agreed that English Language Arts Standards should be integrated across content areas. These results are further supported by responses to survey question five, "Content areas outside of Language-Art provide the space and time to support literacy standards for third-grade students.” This question had a mean of 3.78, a mode of 4 and a standard deviation of 1.017. The spread of data was more significant, with a majority of survey participants selecting agree, followed by strongly agreed, and neutral, as shown in Figure 7.

Results for Research Question Two

The second research question “How can Project-Based Learning target reading and writing literacy goals across content areas?” Likert question seven (Figure 9) suggests that the standard reading block does not provide enough time. The survey responses detailed in Figure 12 show that factors such as a need to address curriculum restrictions, scheduling, a need for autonomy, ways to align Project-Based Learning to state assessments, time, professional development or training, resources, and planning time to collaborate were all common themes. The online responses were corroborated by the one-on-one interview data where major themes shown in Table 10 also included time, professional development, testing restrictions, and instructional pacing.

Results for Research Question 3

The third research question sought to reveal if there was a correlation between Project-Based Learning implementation and reading achievement of third-grade students within a large urban school district? The hypotheses for this question are listed below:

H₁: Teachers implementing Project-Based Learning with targeted literacy standards demonstrated higher student achievement on state-administered assessments.

H₀: Teachers implementing Project-Based Learning with targeted literacy standards demonstrated no statistically significant achievement on state-administered assessments compared to those who employ other instructional methods.

The results of the data collected led to the acceptance of the null hypothesis. Teachers implementing Project-Based Learning with targeted literacy standards demonstrated no statistically significant achievement on state-administered assessments compared to those who employ other instructional methods. There was no statistically significant evidence that a correlation exists between Project-Based Learning Implementation and performance on state-administered assessments.

Summary of Results

The research provided no statistically significant evidence that a correlation exists between Project-Based Learning implementation and the achievement of third-grade students on state administered assessments. The data suggest teachers' positive attitude toward implementation and overall positive perception of Project-Based Learning and students' outcomes. The results revealed factors that teachers saw as challenges and perceived benefits. These include students' taking ownership of their work, opportunities for collaboration and

communication, choice, student voice, differentiation, content mastery, real life experiences, motivation, increased engagement, and student confidence as detailed in Table 10.

CHAPTER V DISCUSSION, CONCLUSIONS & RECOMMENDATIONS

Introduction

This study examined teachers' perceptions of Project-Based Learning to support reading and writing literacy, with a focus on third-grade, and examined if a correlation existed between assessment data and teachers' perceived effectiveness. This chapter presents a summary of the results, interprets the findings from the data, discusses the limitations, implications of the findings, and offers recommendations for future research.

Summary of Results

Research data collected showed an overall positive perception of Project-Based Learning from teachers who participated. The participants also provided meaningful data on areas of need and areas of strength. The various means of data collection allowed the researcher to answer the three research questions detailed in Chapter IV. Participants provided data through an online survey, which included Likert questions, open-ended questions, and one-on-one open-ended interviews conducted with survey participants who elected to participate by contacting the researcher. Interview and survey questions included demographic questions and questions that sought to determine the teachers' perceptions of Project-Based Learning as an approach to enhance literacy outcomes for third-grade students. Survey responses also sought to address teachers' perceptions of how Project-Based Learning could target reading and writing literacy goals across content areas. The survey responses and interview questions were then analyzed to determine if any correlation existed.

Quantitative Data Results

The data collected provided evidence to reject the alternate hypothesis and accept the null hypothesis. The null hypothesis as defined by Creswell (2012) is a statement that there is no

actual relationship between variables. The hypotheses, which were constructed before the data collection portion of the research began are stated below with H_1 being the alternate hypothesis and H_0 being the null hypothesis.

H_1 : Teachers implementing Project-Based Learning with targeted literacy standards demonstrated higher student achievement on state-administered assessments.

H_0 : Teachers implementing Project-Based Learning with targeted literacy standards demonstrated no statistically significant achievement on state-administered assessments compared to those who employ other instructional methods.

The data indicated that implementing Project-Based Learning resulted in no statistically significant achievement differences on the state-administered reading assessment for third-grade students. The analysis of 2019 assessment data showed, $r_s = -.053$, $n = 86$, $p > .05$. The p -value provided evidence that the correlation was not statistically significant. The negative ρ showed a relationship that travels in different directions. The correlation between the participants' responses and the respondents' schools' Title I status showed, $r_s = .098$, $n = 86$, $p > .01$, which indicated no significant association between the variables, while the positive ρ showed that the relationship of the variables traveled in the same trajectory. The 2020 data was excluded for reasons detailed in this chapter's limitations and delimitations section. Assessment data for the 2021 school year showed $r_s = -.007$, $n = 86$, $p > .05$. This again suggested no significant evidence that a correlation existed between teachers' perceived effectiveness of Project-Based Learning within the third-grade classrooms at their school and assessment data. The p -value indicated that these results were not statistically significant. There was a significant negative correlation between Title I status and schools' assessment results, with $r_s = -0.746$, $n = 86$, $p < .01$, which indicated Title I status may be a greater indicator of student achievement on state-administered

standardized assessments. The negative correlation between teachers' perceived level of implementation within their schools' third-grade classrooms during the 2021 school year and assessment data was statistically significant, as denoted by the p -value. The researcher noted this could have been indicative of multiple factors, including hybrid teaching models from COVID-19.

Survey Response Quantitative Summary

Data collected showed that a majority of the participants selected strongly agree or agree when asked, “Project-Based Learning aligns with the educational needs of third-grade students at my school” For this question, the results showed that the mean score was 3.78, mode 4, range of 5, and standard deviation of 0.963. The mean, or average response of 3.78, was indicative that the average participant selected agree with 19.8 % of participants selecting “strongly agree. 51.2% of the survey participants selected agree, 19.8% selected neutral, 7% selected disagree, and 1.2% selected disagree. The data suggests that the teachers perceive that Project-Based Learning aligns with the educational needs of third-grade students at their school sites. This was further supported by interviews and open-ended data that supported the teachers' responses.

A similar response pattern was seen within the data for questions 1, 2, 3, 4, 5, 6, 8, and 9, where the mean score ranged from 3.47 to 4.35, as detailed in Table 2, in Chapter IV. One question elicited the highest response of, “Disagree.” Question #7 asked participants, “Does a standard reading block provide enough support for third-grade students to master expected reading and writing skills?” The responses showed a mean of 2.81, a mode of 2, and a standard deviation of 1.193. The standard deviation showed a wider spread of data, while the mean and mode supported the data in Figure 9, showing most participants selected disagree, which was indicative that they perceived the standard reading block did not provide the time needed to meet

students' needs. Research on reading has provided evidence that a traditional ninety-minute reading block should include high-quality literacy instruction, with instruction on phonological awareness, phonics, fluency, vocabulary, and comprehension, in addition to scaffolded instruction and multi-tiers of support (Underwood, 2018). Participants' responses and the research suggest that more time is needed in a reading block, or a restructuring of the traditional models may be needed to infuse Project-Based Learning throughout the content areas, which will not interrupt the reading block.

Open-ended responses within the online survey for the following question, “Do you think Project-Based Learning is an effective way to teach Language-Arts standards outside of the traditional literacy block? Why or why not?” revealed that 68% answered yes, 23% provided non-definitive responses with rationales or suggestions, and 9% provided a response of no, which provided evidence that a majority of the teachers feel that Project-Based Learning is an effective method to support literacy standards outside of the traditional literacy block.

The results from the survey responses provide evidence that suggests teachers are receptive to this model or instruction. Their receptive nature may be best served by providing time and the training needed to capitalize on their positive attitudes while also creating plans to expand the reading block. This may also result in an increase in students' literacy performance as seen in a study by Tuttle & Adams (2021) where they examined the achievement of students in one 9th-grade English/Language Arts class and found that Project-Based Learning resulted in an increase in literacy performance.

Survey Open-Ended Question Summary. Themes derived from participants' responses to three open-ended questions included instructional factors, outcomes, and challenges. Within instructional factors, curriculum restrictions were listed by 27% of respondents, and scheduling

and a need for autonomy were listed by 15% of the respondents. The next themes that were derived were outcomes, barriers concerning assessment, which included challenges to align Project-Based Learning to state assessments, in addition to the theme addressing the varied needs of students, which was listed by 15% of the survey participants. Within the theme challenges, responses revealed 62% of participants discussed time, 30% listed a need for professional development or training, 17% listed a need for resources, and 15% listed planning and time to collaborate. Figure 13 in Chapter IV provides a visual of responses in a word cloud. Of the 66 participants who completed the extended response portion, 76% discussed the need for additional time, in both instruction and planning. A need for professional development was discussed among 53% of the survey responses, 23% listed additional support, 17% listed fewer assessments, and 26% discussed a need for autonomy. These results could lead to a similar outcome as in a study by Goo, et al. (2020) where an analysis of the perception of current Project-Based Learning implementation among teachers and administrators in an urban elementary school revealed a need to further refine instruction, provide more time, methods of targeting instruction, and additional professional development. The results of the study led to the development of a Project-Based Learning professional training as a 4-day professional development program to support teachers.

Interview Participants. Five major themes were derived from interview participants' responses, as detailed in Table 10 in Chapter IV. The first major theme, "Dimensions of Student Engagement (cognitive, emotional, and behavioral)," included student engagement, independence, motivation, increased engagement, confidence, and motivation. The next major theme, "Instructional Factors" included a focus on content mastery, aligning standards together across areas, providing real-life experiences and instructional factors. The third major theme,

“Outcomes,” included interconnected concepts, accountability, long-term memory, student growth, and differentiation. The fourth major theme, challenges, included monitoring and time, testing and instructional pacing, and professional development.

The last major theme derived from the participants’ responses was the advantages of Project-Based Learning Pedagogy. Themes included students taking ownership of their work, increased collaboration and communication, student choice and collaboration, and involvement within the community with various stakeholders, including parents. These results were similar to findings in a study published by Krajcik et al. (2022) on a rigorous Project-Based Learning program within 46 schools, with 2,371 third-grade students who were selected through a randomized process. The data showed a positive impact on social-emotional learning and reading results. Much like the perceptions revealed in this research, the schools reported an increase in students' overall understanding of content knowledge, enhanced conceptual understanding, and the added benefit of supporting reading and writing development and preparing students for middle school, high school, and postgraduate success (Kingston, 2018).

Discussion of Results

The following section will examine the findings and make connections to the literature presented in Chapter IV.

Statistically Significant Findings

The survey participants' positive attitudes towards Project-Based Learning were evidenced by the higher percentage and mean values, which correlated with agree or strongly agree for questions that related to effectiveness, use within departmentalized settings, and ability to support cross content integration. Challenges such as monitoring progress, time, a need for shifts within the instructional pacing plan and assessment schedules, and a need for additional

professional development were dominant themes within the responses and thus were significant. The most significant challenges, as evidenced by survey and interview responses, were time and the need for additional professional development. These received a labeled variant due to the prevalence within the participants' responses. Similar studies on third-grade literacy instruction with various instructional groups revealed factors such as time and professional development as factors that impact instruction overall (Howell, 2016; McClain, 2021).

Additional data collected showed that Title I status had a more statistically significant negative impact on students' assessment outcomes. There was a significant negative correlation between Title I status and schools' assessment results, with a $r_s = -0.889$, $n = 5$, $p < .01$ as shown in Table 17 in Chapter IV for the 2022 assessment data, with a similar pattern seen within other years. This was similar to a study by Edgell (2020) where an examination of proficiency rates in English Language Arts in Title I public elementary schools compared to non-Title I public elementary schools showed statistically significant proficiency rate differences between Title I and non-Title I schools.

Statistically Insignificant Findings

The data collected showed no correlation between assessment data and implementation of Project-Based Learning or between teachers' perceived effectiveness and student outcomes.

Limitations and Delimitations for the Study

As with any study, limitations are expected and fall outside of the researcher's control. The limitations include student and teacher factors outside the researcher's control, including COVID-19 impacts on assessment data and instructional practices. The researcher's control of the survey participants was limited by access to participant emails provided by the research and evaluation department. The emails provided to the researcher excluded participants working in

research-prohibited schools, those who may not be correctly coded as teaching third, fourth, or fifth grade. In addition to this, participants responded that the initial emails sent were sent to their unsolicited bulk email folder, which is indicative of emails being flagged by the email service providers. This created an additional barrier for the researcher in obtaining responses from the targeted sample group.

Another limitation that fell outside of the researcher's control was the biases among teachers, and the implementation of new standards and shifts in assessment models that may have impacted responses. Additionally, data collected through data mining reflects data that may have been impacted by Covid-19 interruptions to traditional school models. Survey respondents' completion of the survey questions was yet another factor outside the researcher's control. This resulted in protocols being put in place to include or exclude incomplete surveys.

The researcher's position as an educator for the district may have resulted in the participants providing answers that did not truly represent their feelings and may have been based on past interactions with the researcher, district STEM department, or eagerness to please the researcher. Additional limitations also included the small sample size, which results in a generalization that may not fully capture the full population of educators within the selected school district.

The delimitations included the targeted group of third, fourth, and fifth grade teachers, which excluded a large population of teachers outside of the inclusion criteria. The inclusion of teachers in other grades who may have taught third-grade in the past would have widened the number of participants obtained within the initial public records request. A limited number of online survey participants contacted the researcher regarding the one-on-one interview which was another delimitation. The conceptual framework of the study, which relied on multiple

perspectives from Dewey (1916/1944) and Vygotsky (1978), who shared similar ideas regarding instructional activities and learning, and the work of Piaget (1990) and Zaretta Hammond (2015) may have also played a role in participants understanding the full scope of Project-Based Learning. While the researcher included a video to support participants' understanding of Project-Based Learning, a novice understanding of the framework and underlying research may have resulted in responses that were less thought-out from participants. A lack of professional development as evidenced by participants' responses may have further lessened the pool of participants and depth of responses received.

Implications for Practice

A need for more teacher input in instructional design, scheduling, assessment models, autonomy, and additional opportunities for professional development was revealed within the research. The advantages that arose provide evidence that teachers favor instructional models that are more student-centered and allow learners to construct their knowledge with personalized learning. This may also allow teachers to take advantage of other perceived advantages from the collected data, including ownership, engagement, and authentic real-world experiences. Seage and Türegün (2020) also speak of these advantages, including ownership and greater responsibility of learning through cross-content integration in authentic and engaging ways. Engagement itself was an advantage that permeated the results, which leads one to consider engagement as a perceived advantage. Creating engaging learning opportunities within the classroom that capitalizes on a more multifaceted view of engagement may be warranted. The study revealed that the complexities of instruction are far-reaching and that multiple factors contribute to student success. Professional development opportunities should seek to address the multifaceted nature of Project-Based Learning and teaching. Essentially, equipping teachers to

take advantage of research showing that Project-Based Learning can improve equity and outcomes for students through engaging tasks, rigor, high expectations, authentic learning opportunities, asset-based teaching, and the development of social and emotional skills as discussed in a new report by the Lucas Educational Research (2021).

This research also suggests that further emphasis is needed on the demand to examine the complexities between state assessment, Project-Based Learning and rigor. Research by Duke et al. (2016) showed how consistency with Project-Based Learning was associated with higher growth in writing, motivation, and reading. Practitioners need to examine how to marry consistency, rigor, and student-centered practices with assessment complexity. Within an article by Krajcik et al., (2018) detailing research at a Michigan school, results demonstrate the potential of rigorous Project-Based learning, reporting an 8% increase in state science assessments among third-grade students in Project-Based-Based Learning classrooms compared to their peers receiving more traditional (typical) science instructional methods regardless of reading level. This further demonstrates a need to marry assessment and student-centered practices.

Recommendation for Future Research

The researcher recommends selecting specific schools, Title I and non-Title I, and collecting data that correlates to individual research participants and their classrooms, making the data more reliable and allowing for additional means of data collection, such as observations. Additional research on underrepresented groups and students attending Title I schools would provide further insight into the correlations between assessment data, teacher perceptions, Project-Based Learning and Title I status.

Overall, the low number of studies on elementary level students, primarily third-grade and the efficacy of Project-Based Learning needs to be expanded. An analysis of eleven articles on studies with a pre-post design and control groups, measuring the quantitative impact of Project-Based Learning on content knowledge of students supports the recommendation for more research. The analysis included data from 722 students and revealed how low the number of studies pertaining to the effectiveness of Project-Based Learning is within Elementary settings. Their analysis not only demonstrated the inconclusive nature of some studies, but also revealed methodological flaws and insufficient data (Ferrero et al., 2020).

The limited number of studies makes it a challenge to determine the effectiveness of Project-Based Learning in relation to increased reading and writing literacy. Additional studies in the future will also provide research that is not limited by the impacts of COVID-19.

Summary

This study examined teachers' perceptions of Project-Based Learning to support reading and writing literacy for third-grade students and examined if a correlation existed between third-grade reading assessment data on the Florida Standards Assessment and Project-Based Learning. Overall findings revealed teacher's positive attitudes toward Project-Based Learning, while also shedding light on a need to address challenges that serve as barriers. No significant evidence was found correlating Project-Based Learning and increased performance on third-grade standardized assessments, yet the results provide evidence that classroom teachers have positive views on the possibilities Projects Based Learning can offer students that extend beyond assessment data.

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APPENDIX A: Literature Review Key Words Search

Key Search Words

1. Project-Based Learning
2. Project based learning and 3rd grade
3. 3rd Grade literacy
4. Early childhood education
5. Literacy development
6. Reading achievement
7. Reading instruction
8. Third-grade writing AND Project-Based Learning
9. Grade retention AND 3rd Grade
10. School performance
11. Student-centered learning
12. Teacher beliefs
13. Teacher collaboration
14. 3rd Grade collaboration
15. Third-grade student engagement
16. 3rd Grade reading motivation
17. PBL
18. Project-based learning
19. 3rd Grade reading and writing literacy
20. STEM
21. NAEP
22. Professional development
23. Constructivist theory
24. Technology and engineering education
25. STEM curriculum
26. STEM schools
27. STEM Education
28. Embedded STEM programs
29. Student engagement
30. 3rd grade reading achievement Inquiry
31. Literacy AND PBL

APPENDIX B: Target Population

Target Population	
Population	Rational
3rd-5th <ul style="list-style-type: none"> • Classroom teachers • Reading, Writing, ELA • Math • Science • Social Studies • STEM-related courses 	Students take the state assessment in third grade, tied to retention. As students' progress into 4 th and 5th-grade, schools monitor learning gains. Students are expected to show performance gains each year. As a result, teachers within these grades in traditional K-5 settings have a vested interest in student performance in the previous grade level. Survey input from teachers provide various data points that can be disseminated to consider the needs of the groups they represent. Data collected from a large pool of educators may give further insight into barriers and target ways to enhance literacy outcomes through cross-content integration of targeted English Language Arts standards.
3rd-5th Grade Teachers <ul style="list-style-type: none"> • Project-Based Learning Experience 	Selected teachers from survey participants will be interviewed to provide insight into what Project-Based Learning looks like within their programs, perceptions of possible use, challenges, etc. The appendix section includes background information on the selected schools, including Free and Reduced Lunch (FRL) data, state assessment data, subgroup representations, years of experience of teachers, and previous related training, etc.
State assessment data and comparable district data	Data will support interview responses and provide insight into outcomes based on the schools' instructional models.

APPENDIX C: Data Collection/Data Collection Method

Research Questions and Data Collection Matrix

<p>Question</p> <p>Convergent Parallel Design</p>	<p>Open-Ended Interview</p>	<p>Survey Closed and Open-Ended (Survey Monkey)</p>	<p>Data Mining (Archived State Data)</p> <p>District GOLD Report</p>
<p>What are elementary school teachers' perceptions of Project-Based Learning as an approach to enhance literacy outcomes for third-grade students through cross-content integration of targeted English Language Arts standards?</p>	<p>✓</p>	<p>✓</p>	
<p>How can Project-Based Learning target reading and writing literacy goals across content areas?</p>	<p>✓</p>	<p>✓</p>	
<p>Is there a correlation between Project-Based Learning implementation and reading achievement of third-grade students within a large urban school district?</p>		<p>✓</p>	<p>✓</p>

APPENDIX D – Approval for Research – University



Institutional Review Board
3601 North Military Trail
Boca Raton, FL 33433
T: 561-237-7012
561-237-7000|lynn.edu
Melissa Knight, MA, IRB Chair

DATE: 3/14/2022

TO: Syndie White

FROM: Melissa Knight

PROJECT NUMBER: 21.12

PROTOCOL TITLE: Project-Based Learning to Support Literacy: Teacher Perceptions on Viability of Implementation for Content Area Instruction

PROJECT TYPE: New

REVIEW TYPE: Expedited Review

ACTION: Approved

APPROVAL DATE: 3/14/2022

EXPIRATION DATE: 3/14/2023

Thank you for your submission for this research study. The Lynn University IRB has APPROVED your NEW Project. This approval is in accordance with 45 CFR §46.111 Criteria for IRB approval of research. All research must be conducted in accordance with this approved submission.

It is important that you retain this letter for your records and present upon request to necessary parties.

- This approval is valid for one year. **IRB Form 4: Application to Continue (Renew) a Previously Approved Project** will be required prior to the expiration date if this project will continue beyond one year.
- Please note that any revision to previously approved materials or procedures must be approved by the IRB before it is initiated. Please submit **IRB Form 5 Application for Procedural Revisions of or Changes in Research Protocol and/or Informed Consent Form 1 of a Previously Approved Project** for this procedure.
- All serious and unexpected adverse events must be reported to the IRB. Please use **IRB Form 6 Report of Unexpected Adverse Event, Serious Injury or Death** for this procedure.
- At the completion of your data collection, please submit **IRB Form 8 IRB Report of Termination of Project**.

If you have any questions or comments about this correspondence, please contact the chair of the Lynn University IRB, Melissa Knight (mknight@lynn.edu).

Melissa Knight, Institutional Review Board Chair

Institutional Review Board
Lynn University
3601 North Military Trail
Boca Raton, FL 33433
T: 561-237-77012

APPENDIX E – Approval for Research = School Board

July 18, 2022

Syndie White
swhite@email.lynn.edu

Dear Syndie White,

On behalf of The School District of Palm Beach County, the Superintendent's Research Review Committee has approved your request to conduct research entitled, "Project-Based Learning to Support Literacy: Teacher Perceptions on Viability of Implementation for Content Area Instruction."

As this study is conducted, please be governed by all guidelines as outlined in [District's Policy 2.142](#); including the following items:

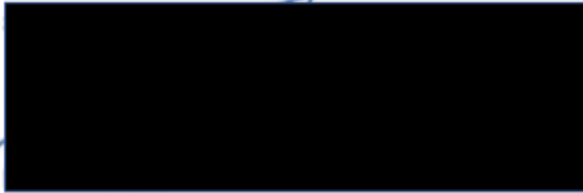
- Section 7 – Document, Character, and Other Requirements, Item E – *Research Subjects*. Researchers must use independent research subjects in their studies. Researchers must not have a position of authority over proposed research subjects or have conflict of interest with proposed research subjects.
- Section 7 – Document, Character, and Other Requirements, Item F – *Data Requests*: Researchers may not request data directly from schools or departments. All data requests must be submitted to the Department of Research and Evaluation for handling.
- Any researcher who is not a school district employee and who is provided direct access to one or more student(s) must undergo background screening and fingerprinting. Please go to the [School Police website](#) for information or contact them directly at (561) 434-8300. Please forward copy of vendor badge to the Department of Research and Evaluation when received.
- Contact **NO** school or department other than approved by the Department. District policy provides that no one has the right to access students, staff or data, and prohibits researchers from requesting data directly from schools or departments.
- When contacting school administrators, either by email or in person, to obtain permission, please provide a copy of this approval letter.
 - Please ensure that you provide a copy of the approval from school principal received through email or school letterhead to the Department of Research and Evaluation - research@palmbeachschools.org.
- Research activities at schools must not occur during the testing window of the Florida Standards Assessments and End-of-Course Assessments – February 20 – May 26, 2023.

PROJECT-BASED LEARNING AND THIRD GRADE

- Summarize findings for reports prepared from this study and do not associate responses with a specific school or individual. Information that identifies the District, schools, or individual responses will not be provided to anyone except as required by law.
- Research study shall be concluded at the time your IRB expires.
- If the study requires the use of additional resources or change in participants in the future, a written request must be submitted to this office. Please wait for an approval before proceeding.

Please submit one copy of the study results to the Department of Research and Evaluation no later than one month after completion of the research.

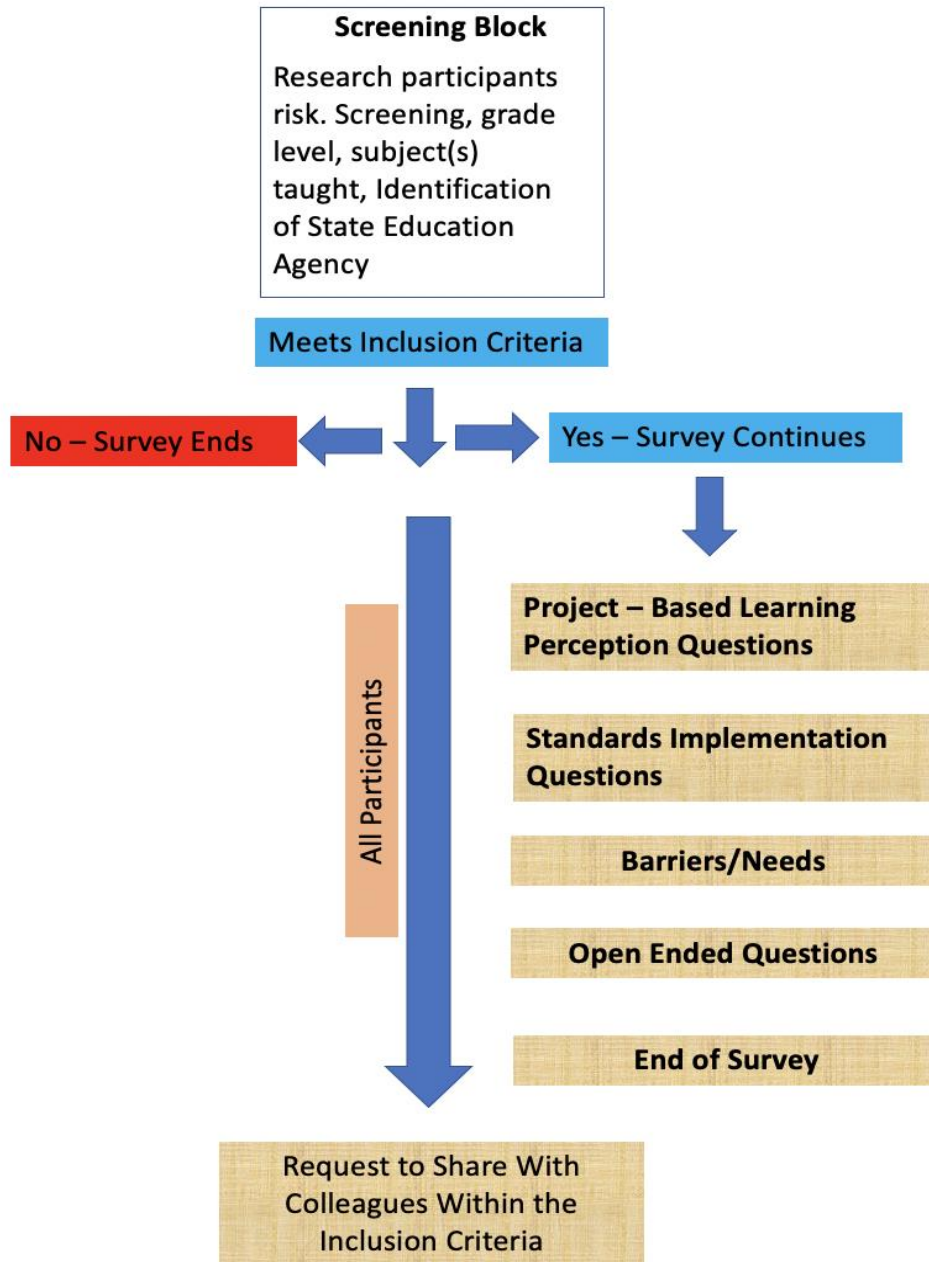
Thank you for your interest in our District.



Director

PH/ik

APPENDIX F: Survey Instrument Design



APPENDIX G: Teacher Survey

Survey Monkey Survey Questionnaire

Participant Informed Consent/Risk and Benefits

Research description: The purpose of this study will be to examine teacher perceptions of Project-Based Learning to support reading and writing literacy

Explanation of risk and benefits: There are minimal anticipated risks to participants in this study. Participants will have an opportunity to add to the body of research and further expand research in this area.

Privacy: No personally identifiable information will be made public and will remain anonymous. Coding will ensure anonymity, and codes will not be published or shared. Online data will be housed on the Survey Monkey website. The coded information will be downloaded to a password-protected computer and used solely for this research and each participant will remain anonymous with no individuals' names of participants stored. Additionally,

- You and the school will not be identified
- You have the **RIGHT TO WITHDRAW** at any point in the study. There will be no penalty for withdrawing at any point
- You will be asked to sign a consent form

No payment will be rendered for participation in this study

Contact Information:

If you have any questions about this research project, you can contact the researcher, Syndie White directly via email at swhite@email.lynn.edu or you can contact the research chair, Dr.

Brittany E. Kiser (Phone: 561- 237-7003, Email: BKiser@lynn.edu). For any questions regarding

your rights, you may contact Melissa Knight, Chair of the Lynn University Institutional Review Board for the Protection of Human Subjects, at (561) 237-7012 or mknight@lynn.edu.

Documentation of Informed Consent:

I have had the opportunity to read this consent form and read the research explanation. I have had the opportunity to ask questions about the research project and my questions have been answered. I am prepared to participate in the research project described above. I will receive email confirmation and a digital copy of this consent form.

This form serves as a digital consent to participant or decline participation in the study

- Yes, I consent to participate in the study
- No, I do not consent to participate in the study

Checking the box above provides your consent and confirms you understand your rights as a participant.

Survey Questions

DEMOGRAPIC INFORMATION

I currently hold a teaching position in Palm Beach County (Public School)

Yes ____

No ____

Identify your most current teaching assignments by selecting one of the following below:

Primary K-2nd __ Intermediate 3rd ____ Intermediate 4th - __ Intermediate 5th Middle/High 6th -
12th ____

I hold a teaching certificate issued by the Florida Department of Education

Yes ____

No ____

PROJECT-BASED LEARNING AND THIRD GRADE

Certificate Type

Professional _____

Temporary _____

Teaching Experience (Years)

Subject Area(s) Taught (within the last three years)

Self-Contained (all) _____ Math _____ Science _____ Language-Arts _____

Social Studies _____ STEM (Any related course) _____ Fine Arts (P.E, Music, Art, Media) _____

Other _____

Are you reading endorsed? Yes _____ No _____

Are you a National Board-Certified Educator Yes _____ No _____

Is the school you currently work for Title 1 eligible: Yes _____ No _____

Definition of Project-Based Learning for participants: [PBL Video Embedded into Survey](#)

Project-Based Learning: Model of instruction consisting of complex tasks based on problems or questions that involve a student design, decision making, problem-solving investigative activities, with autonomy given to students over an extended period culminating in realistic artifacts or products (Dias & Brantley-Dias, 2017).

Years of Experience with Project Based Learning _____

	SA: Strongly Agree	A: Agree	N: Neutral	D: Disagree	SD: Strongly Disagree
Project-Based Learning aligns with the educational needs of 3 rd Grade students at my site?					
Project-Based Learning is an effective way to enhance literacy outcomes for third-grade students?					
Cross-content integration of targeted English Language Arts standards should be seen throughout all subject areas for third grade students, even in departmentalized settings. Examples, science and social studies teachers supporting reading and writing standards.					

Content area teachers should assess and monitor targeted reading, writing and communication standards to support third-grade literacy goals?					
Content areas outside of Language-Art provide the space and time to support literacy standards for third-grade students.					
Content areas outside of Language-Arts should assess literacy standards informally or formally (ELA standards) https://www.fldoe.org/core/fileparse.php/18736/urlt/ELASStandards.PDF					
A standard reading block provides enough support for third-grade students to master expected reading and writing skills.					
Project-Based Learning can be implemented with efficacy in a departmentalized setting to support third grade reading and writing standards.					
Students' performance on district and state tests has increased as a result of Project-Based Learning implementation in my classroom or school site?					

Open Ended Questions

1. Are there any barriers to implementing a Project-Based Learning Framework in 3rd grade classrooms? (List any/all challenges or barriers)
2. Do you think the framework (from video) is an effective way to teach Language-Arts standards outside or the reading class, why or why not?
3. What is necessary to support content area teachers in using a Project-Based Learning framework to support targeted Language-Arts standards?

Current Teaching Assignment

Region

Central __ Glades __ North __ South __

School – Elementary public schools listed - SCHOOL INFORMATION WILL BE CODED AND WILL NOT BE DISCLOSED

Select from the drop-down menu
Interview Interest

I am willing to participate in a one-on-one semi-structured interview

Yes ____ (contact information will be requested)

No ____ (No contact information will be requested)

If, “YES” was selected please contact swhite@email.lynn.edu

Please consider sharing the survey link with educators who meet the following inclusion criteria

- 3rd - 5th grade reading teachers, or content area teachers working in public schools in Palm Beach County

APPENDIX H: Participant Email

Good afternoon,

My name is Syndie White, I am a third-grade teacher and doctoral candidate in Lynn University's Educational Leadership program. I am kindly requesting your participation in a doctoral research study that I am conducting, in which I'm seeking to gain a better insight into teachers' perceptions of Project-Based Learning and third grade literacy outcomes entitled: Project-Based Learning to Support Literacy: Teacher Perceptions on Viability of Implementation for Content Area Instruction.

Participation would involve completing this survey (link to be inserted) after thoroughly reading this email. The survey will require your completion of demographic information, followed by no more than ten Likert questions relating to the research questions if you meet the inclusion requirements. Your participation is voluntary, and the option to withdraw will be made available to you at any point in the study, and all the data collected will be deleted. Participants are all asked to read the informed consent parameters embedded into the survey to proceed. The survey will take no longer than ten to fifteen minutes to complete.

Your participation in this research will add to the body of research relating to this topic and expand the available literature available to the educational community. I can be reached at swhite@email.lynn.edu with any questions. Access the survey **HERE**, or by clicking the survey located in the letter above.

Sincerely,

Syndie White,
Doctoral Student, Lynn University

Contact Information:

If you have any questions about this research project, you can contact the researcher, Syndie White directly via email at swhite@email.lynn.edu or you can contact the research chair, Dr. Brittany E. Kiser (Phone: 561- 237-7003, Email: BKiser@lynn.edu). For any questions regarding your rights, you may contact Melissa Knight, Chair of the Lynn University Institutional Review Board for the Protection of Human Subjects, at (561) 237-7012 or mknight@lynn.edu.

APPENDIX I: Interview Consent

Good afternoon,

My name is Syndie White, I am a 3rd grade teacher and doctoral candidate in Lynn University's Educational Leadership program. I am kindly requesting your participation in a doctoral research study that I am conducting, in which I am seeking to gain a better insight into **teachers' perceptions of Project-Based Learning and 3rd grade literacy outcomes** entitled: *Project-Based Learning to Support Literacy: Teacher Perceptions on Viability of Implementation for Content Area Instruction.*

Interview participants are asked to review and sign the consent form after reviewing the information below. Your participation in this research will add to the body of research relating to this topic and expand the available literature available to the educational community. I can be reached at swhite@email.lynn.edu with any questions you may have regarding the survey or the research itself.

Interview Research Participant Consent

Research description: The purpose of this study will be to examine teacher perceptions of Project-Based Learning to support reading and writing literacy

Explanation of risk and benefits: Risks to participants of this study are minimal

Privacy/Confidentiality:

- No personally identifiable information will be made public and participant information will remain anonymous
- Your name and school will not be identified
- You can withdraw at any point in the study
- You will be asked to sign a consent form (Google Form)
- You will be given copies of the transcribed interviews and any identifying information from the transcripts will be removed
- All research data and materials will be kept in a secure location
- At the conclusion of the study, any record of interviews will be deleted after three years

Participation: Participation in the study is completely voluntary and you may choose to answer only the questions you feel comfortable answering.

Withdrawing from the Study: You may choose to withdraw from participation at any time.

No payment will be rendered for participation in this study

Documentation of Informed Consent:

I have had the opportunity to read this consent form and read the research explanation. I have had the opportunity to ask questions about the research project and my questions have been answered. I am prepared to participate in the research project described above. I will receive email confirmation and a digital copy of this consent form.

This form serves as a digital consent to participant or decline participation in the study

- Yes, I consent to participate in the study
- No, I do not consent to participate in the study

Checking the box above provides your consent and confirms you understand your rights as a participant.

Participants Name: _____

Contact Information:

If you have any questions about this research project, you can contact the researcher, Syndie White directly via email at swhite@email.lynn.edu or you can contact the research chair, Dr. Brittany E. Kiser (Phone: 561- 237-7003, Email: BKiser@lynn.edu). For any questions regarding your rights, you may contact Melissa Knight, Chair of the Lynn University Institutional Review Board for the Protection of Human Subjects, at (561) 237-7012 or mknight@lynn.edu.

APPENDIX J – Interview Online Google Form Consent

1. Participants Name:

2. Interview Research Participant Consent

Research Description: The purpose of this study will be to examine teacher perceptions of Project-Based Learning to support reading and writing literacy

Explanation of Risk and Benefits: Risks to participants of this study are minimal

Privacy/Confidentiality:

No personally identifiable information will be made public and participant information will remain anonymous

Your name and school will not be identified

You can withdraw at any point in the study

You will be asked to sign a consent form (This Google Form)

You will be given copies of the transcribed interviews and any identifying information from the transcripts will be removed

All research data and materials will be kept in a secure location

At the conclusion of the study, any record of interviews will be deleted after three years

Participation: Participation in the study is completely voluntary and you may choose to answer only the questions you feel comfortable answering.

Withdrawing from the Study: You may choose to withdraw from participation at any time.

No payment will be rendered for participation in this study

Documentation of Informed Consent:

I have had the opportunity to read this consent form and read the research explanation. I have had the opportunity to ask questions about the research project and my questions have been answered. I am prepared to participate in the research project described above. I will receive email confirmation and a digital copy of this consent form.

Checking the box above provides your consent and confirms you understand your rights as a participant.

Contact Information:

If you have any questions about this research project, you can contact the researcher, Syndie White directly via email at swbsite@gmail.com or you can contact the research chair, Dr. Brittany E. Kiser (Phone: 561- 237-7003, Email: BKiser@lynn.edu). For any questions regarding your rights, you may contact Melissa Knight, Chair of the Lynn University Institutional Review Board for the Protection of Human Subjects, at (561) 237-7012 or mknight@lynn.edu.

Mark only one oval.

Yes, I consent to participate in the study

No, I do not consent to participate in the study

Skip to section 3 (THANK YOU FOR YOUR RESPONSE)

PROJECT-BASED LEARNING AND THIRD GRADE

	3:30pm	4:30pm	5:30pm	6:00pm	7:00pm	8:00pm	Saturday/Sunday Morning 9:00am	Saturday/Sunday Morning 10:00am
December 12, 2022 (Monday)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
December 13, 2022 (Tuesday)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
December 14, 2022 (Wednesday)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
December 15, 2022 (Thursday)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
December 16, 2022 (Friday)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
December 17, 2022 (Saturday)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
December 18, 2022 (Sunday)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
December 19, 2022 (Monday)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
December 20, 2022 (Tuesday)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

THANK YOU FOR YOUR RESPONSE

This content is neither created nor endorsed by Google.

Google Forms

APPENDIX K

Semi-Structured One-on-One Interview Questions

1. Can you provide some background information about yourself, your experience, and current subject(s) taught?
2. What is your experience with Project-Based Learning?
3. How do you think this approach impacts literacy outcomes for third-grade students?
4. What are your thoughts on a cross-content integration of targeted English Language Arts standards? Science teachers etc., supporting targeted reading and writing goals
5. How do you think Project-Based Learning could target reading and writing literacy goals across content areas?
6. What are your perceived thoughts on the impact of Project-Based Learning on the reading achievement of third-grade students within your school, classroom, district?
7. Do you believe Project-Based Learning can support all learners?
8. What are some advantages and challenges to Project-Based Learning from your experience? (Primarily with a focus on 3rd grade)
9. Is there anything that you would like to add or comment on in reference to the research topic?

APPENDIX L - Public Records Request

Good afternoon Mr. Williams,

I am a doctoral student at Lynn University and a classroom teacher at Diamond View Elementary. I have been approved to conduct research in the district for my study, "**Project-Based Learning to Support Literacy: Teacher Perceptions on Viability of Implementation for Content Area Instruction.**" Within my approved research application (attached), I outlined that I would be making a public records request for 3rd-5th grade teachers' district email addresses to complete the survey portion, excluding those schools where research is prohibited. Please let me know what I need to do to request this information.

How will teacher participants be recruited? The survey portion will rely on emailed survey responses utilizing an email list obtained from the State and Local Education Agency after submitting a request through listserv and the districts' Public Records Request department. The district request will follow school board policy 2.041; a request will be made to publicrecords@palmbeachschools.org for the email addresses of 3rd - 5th-grade teachers, excluding schools where research is prohibited. The researcher will also widen the response net through professional networks within the school district.

Syndie White

APPENDIX M: Descriptive Statistics of Research Participants**Survey Participants Demographic Data**

Current Teaching Assignment		
Grade Level	Number of Participants	Percent
3rd Grade	44	51.2%
4th Grade	16	18.6%
5th Grade	26	30.2%
Current District Employee		
	Number of Participants	Percent
Selected Districted for Research	86	100.0%
I Hold a Teaching Certificate		
	Number of Participants	Percent
Consented	86	100%
Are you a National Board-Certified Educator		
	Number of Participants	Percent
No	79	91.9%
Yes	7	8.1%
Reading Indorsed		
	Number of Participants	Percent
No	33	38.4%
Yes	53	61.6%
Title I Status		
	Number of Participants	Percent
No	53	61.6%
Yes	33	38.4%
Teaching Experience (Range)		
	Number of Participants	Percent
(0-3) Years	10	11.6%
(4-6) Years	12	14.0%
(7-10) Years	16	18.6%
(11-15) Years	20	23.3%
(16-20) Years	17	19.8%
(20+) Years	11	12.8%
Survey Participant Regions		

PROJECT-BASED LEARNING AND THIRD GRADE

Region	Frequency	Percent
Region 12JU	19	22.1
Region 12OP	31	36.0
Region 12TY	36	41.9
Total	86	100.0

Survey Participant School Data

School Identification Number	Frequency	Percent
10023	1	1.2
10024	4	4.7
10293	1	1.2
10926	1	1.2
11199	2	2.3
19367	4	4.7
22930	4	4.7
39230	3	3.5
43299	1	1.2
49271	2	2.3
51923	14	16.3
54454	9	10.5
71332	3	3.5
71638	6	7.0
72801	3	3.5
78234	2	2.3
81777	1	1.2
84261	1	1.2
87002	2	2.3
87322	2	2.3
91112	1	1.2
91113	2	2.3
91761	2	2.3
91800	2	2.3
92102	3	3.5
92810	2	2.3
92837	1	1.2
98001	1	1.2
98270	2	2.3
98300	4	4.7
Total Number of Participants	86	100.0

Interview Participants Demographic Data						
Participant Identification Number	Title I School	Grade	PBL Experience	Overall Experience	Departmentalized (1) Self-Contained (2)	Economically Disadvantaged Rate
192837462	Yes	Third Grade	8	8	1	94
192837464	No	Fourth Grade	3	14	1	52
192837465	Yes	Third Grade	14	30	2	84
192837461	Yes	Third Grade	3	11	2	84
192837463	No	Fourth Grade	7	14	1	43

APPENDIX N: Likert Data Results Frequency Tables

Cross-content integration of targeted English Language Arts standards should be seen throughout all subject areas for third grade students, even in departmentalized settings. Examples, science and social studies teachers supporting reading and writing standards.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	1.2	1.2	1.2
	Neutral	10	11.6	11.6	12.8
	Agree	33	38.4	38.4	51.2
	Strongly Agree	42	48.8	48.8	100.0
	Total	86	100.0	100.0	

Project-Based Learning is an effective way to enhance literacy outcomes for third-grade students?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	1.2	1.2	1.2
	Neutral	17	19.8	19.8	20.9
	Agree	39	45.3	45.3	66.3
	Strongly Agree	29	33.7	33.7	100.0
	Total	86	100.0	100.0	

Content area teachers should assess and monitor targeted reading, writing and communication standards to support third-grade literacy goals?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	8	9.3	9.3	9.3
	Neutral	9	10.5	10.5	19.8
	Agree	34	39.5	39.5	59.3
	Strongly Agree	35	40.7	40.7	100.0
	Total	86	100.0	100.0	

Content areas outside of Language–Arts should assess literacy standards informally or formally.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	14	16.3	16.3	16.3
	Neutral	23	26.7	26.7	43.0
	Agree	28	32.6	32.6	75.6
	Strongly Agree	21	24.4	24.4	100.0
	Total	86	100.0	100.0	

Content areas outside of Language–Art provide the space and time to support literacy standards for third–grade students.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.2	1.2	1.2
	Disagree	11	12.8	12.8	14.0
	Neutral	18	20.9	20.9	34.9
	Agree	34	39.5	39.5	74.4
	Strongly Agree	22	25.6	25.6	100.0
	Total	86	100.0	100.0	

A standard reading block provides enough support for third–grade students to master expected reading and writing skills.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	8.1	8.1	8.1
	Disagree	38	44.2	44.2	52.3
	Neutral	16	18.6	18.6	70.9
	Agree	14	16.3	16.3	87.2
	Strongly Agree	11	12.8	12.8	100.0
	Total	86	100.0	100.0	

Project-Based Learning can be implemented with efficacy in a departmentalized setting to support third grade reading and writing standards.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	8	9.3	9.3	9.3
	Neutral	25	29.1	29.1	38.4
	Agree	41	47.7	47.7	86.0
	Strongly Agree	12	14.0	14.0	100.0
	Total	86	100.0	100.0	

Students' performance on district and state tests has increased as a result of Project-Based Learning implementation in my classroom or school site?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.2	1.2	1.2
	Disagree	7	8.1	8.1	9.3
	Neutral	44	51.2	51.2	60.5
	Agree	19	22.1	22.1	82.6
	Strongly Agree	15	17.4	17.4	100.0
	Total	86	100.0	100.0	

