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Walden University 2021

Abstract

Basic Qualitative Investigation of Teachers' Preparedness, Perceptions, and Experiences

Regarding Inquiry-Based Instruction

by

Wilhelmina Jordan

M.S., Cambridge University, 2005

B.S., St. Leo University, 2001

Research Study Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Education

Walden University

April 2021

Abstract

At an urban high school in Georgia, test scores of incoming ninth graders were especially low. The purpose of this basic qualitative research study was to explore language art teachers' preparedness for, perceptions of, and experiences with inquiry-based teaching at that school to determine if inclusion of such methods could improve student learning. Identifying means of improving students' English language arts proficiency is important to not only academic success but also to success in the workplace later in life. The conceptual framework for this study was based on the discovery learning theory of Bruner. Research questions guiding this study focused on language art teacher's preparedness, perceptions, and experiences regarding inquiry-based learning (IBL). The research study was a basic qualitative research study; the methodology included a purposeful sample of eight language art teachers who provided reading instruction to ninth grade language students and who participated in semistructured interviews. Teachers responded to 14 interview questions related to the three research questions and were allowed to follow up to clarify their responses if they wished. Interview data were open coded and thematically analyzed; using topograhical analysi, I coded responses into eight themes that emerged from the data. The findings allowed me to identify issues such as misunderstandings as to what IBL is, perceived training deficiencies, and time constraints in using IBL, as well as the general perception that the methodology, properly applied, does result in improved student engagement and skill development. This has implications not only for education, but for society, as students develop critical thinking, communication, problem solving, and other vital skills.

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Dedication

Earning a doctoral degree has been one of the greatest achievements of my life, yet one of my greatest challenges. I have worked over 10 years to achieve one of my personal goals. I have spent many years reading, writing, and researching. These hours that I devoted to my studies were possible due to the understanding of my family and friends. This achievement would not have been possible without God and the love and support of my beautiful family: my husband, Robert, and my three children, Tiffany, Calvin, and Derante. I started this journey many years ago, and there were many times when I started to throw in the towel, but my husband of over 30 years would not allow me to quit. I started this program in 2008, and one year later, in 2009, my husband was diagnosed with Amyotrophic Lateral Sclerosis (ALS). I realize that many days, I took time from my family duties to study and to complete assignments, but they understood and they always tried to keep me encouraged. I am incredibly grateful for all three of my children, who, I am glad to say, all have college degrees. I would like to thank them for being so helpful and dedicated to their father since he has been ill. I know they will all make great contributions to the world. I know what our family has is very rare in the world we live in today, but I am thankful that all three have remained grounded in their Christian beliefs throughout this journey. To my church family, I would like to thank them for being my champions and never allowing me to quit. Showing your unconditional love and support has meant the world to me; I hope that I have made you proud. To my siblings, Clarence, Sandrian, and Reggie, your support over these past

years has meant the world to me. As I watch my children learn and grow into amazing adults; I dedicate this work to them. May you never stop learning!

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First, I would like to thank God and my family. I also want to thank my friends and my peers who have walked this path before me and refused to allow me to give up.

I want to thank my committee, Dr. Richard Penny and Dr. Joanne Hinrichs, as well as Dr. Michele Brown, my committee member representing the URR. Finally, I would like to thank my editor, Ms. Patricia Morris, who has made my life much easier, as well as her professional support and for the questions that she asked me that pushed my thinking.

I especially want to thank Dr. Penny. Without his support, I would not have been able to complete this degree, he will never admit this, but it is true. Dr. Penny is hard; nevertheless, he has always been fair. He did not give up on me when I was ready to give up on myself, due to the many challenges that I faced in my life during the latter part of this journey. I am thankful and forever grateful to Dr. Penny and Dr. Hinrichs for their commitment to my work.

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Introduction

The implementation of high-stakes testing in language arts began with the 2001 No Child Left Behind Act (NCLB), which was a reauthorization of and update to the Elementary and Secondary Education Act (ESEA) of 1965. Also known as Public Law PL 107-110, the ESEA formally established a clear role for the federal government in K-12 education. Recently, its standards and requirements were revised under more forgiving terms with the Every Student Succeeds Act (ESSA; U.S. Gov't Publishing Office, 2012).

An effective reading program was used to help increase test scores. The Association for Curriculum and Development in 2015 produced a thorough summary of the benefits, drawbacks, and dynamics of both legislative acts, which became a driving force for educators to look for options assessments (Glatthorn et al., 2018). An effective reading curriculum, along with equally effective teaching strategies, can have a very positive impact on students (Kennedy, 2014). An inherent goal of such an effort was to prompt students to formulate their own inquiry-based and problem-solving approaches, which can be accomplished through a collaborative, inquiry-based curriculum.

Background of the Problem

The local educational problem addressed in this study was poor academic performances in ninth grade classes. In the subject school, many of the teachers blamed the curriculum for their lack of preparedness (teacher, personal communication, April 15, 2018). A lead teacher at the school reported that there was not enough time to prepare for and implement the inquiry-based instruction process properly, given the other things that

were required of them (personal communication, school administrator, April 15, 2018). At the same time, the school's administrators repeatedly stated that many of their students lacked test-taking skills and that teachers were not effectively teaching those skills (school administrator, personal communication, April 15, 2018). Communication gaps between teachers and administrators resulted in the lower achievement metrics for these students (see Table 1; school administrator, personal communication, April 15, 2018). In fact, the subject school was added to the governor's list of schools in need of improvement for not meeting adequate yearly progress (AYP) standards for the 2013-2014 school year; this continued through 2015-2016, according to the College and Career Ready Performance Index (CCRPI; GDE, 2016).

In recent years, the mean ninth grade scores on language arts assessments for students at the subject school were significantly lower than the statewide average, according to the 2016 CCRPI (GDE, 2016). As Table 1 indicates, many students at urban schools in Georgia read below grade level, according to the scores from the 2016 CCRPI. The table illustrates that 73.4% of students in the subject school district passed the statemandated achievement test for reading. It also shows that only 56.7% of students at the subject school met that threshold. Although 79.6% of the district's students were considered economically disadvantaged, the subject school is a Title I school and 100% of the students were classified as economically disadvantaged. Wetzel et al. (2019) explored the importance of instructors connecting with, and overcoming barriers to, socioeconomic and other factors when teaching literacy skills. They concluded that

effectiveness in instruction is improved when teachers are attuned to such factors as their students' lives and resources, racial identity, and multilingualism.

Table 1Georgia's Student Performance Comparison

Year	Does Not Meet	Meets	Exceeds
White			
2013-14	1.8%	37.5	60.7
2012-13	2.2%	41.4	56.4
2011-12	2.6%	46.5	50.9
Black			
2013-14	6.4%	60.9	32.7
2012-13	7.2%	63.1	29.7
2011-12	8.6%	66.1	25.2
Hispanic			
2013-14	4.6%	58.0	37.4
2012-13	5.4%	60.9	33.7
2011-12	6.1%	64.1	29.8

From "An ROI comparison of initiatives designed to attract diverse students to technology careers," by T. W. Dillon, H. L. Reif, and D. S. Thomas. 2016, *Journal of Information Systems Education*, 27(2), pp. 105-118.

As a result of its performance, the school was added to the governor's list of schools that need improvement for not meeting AYP standards from the 2013-2014

school year continuing through 2015-2016, according to the most recently available public records (ASCD, 2015). To address these challenges, teachers at the school were charged with implementing an inquiry-based reading program in 2013 (personal communication, school administrator, April 15, 2018). This effort continued up to the time of this study (personal communication, school administration, April 15, 2018). It is possible, however, that the teachers were not actually using the required instructional approach or were not using it effectively (personal communication, school administrator, April 15, 2018). Teaching is a complex endeavor that demands a lot of time for classroom management, lesson preparation, and organization of teaching and learning activities. Unless teachers have enough time to prepare sufficiently, it is challenging for them to adequately and properly implement inquiry-based instruction.

Nature of the Study

This study was based on the qualitative research paradigm. It comprised applied research in a natural field setting. Eight ninth grade language arts teachers were chosen as participants to investigate the effect of IBL. Interviews with audiotapes were used, and teachers were surveyed at specific times to observe the effectiveness of applying inquiry-based methods.

As such, this study is characterized as a basic qualitative research study.

According to Merriam and Grenier (2019), a basic qualitative research study is derived philosophically from constructionism. The data were logged, coded, and recorded within the research-question topics. The means of data analysis were thematic development and direct interpretation. The research method identified patterns of experiences to qualify

matching perspectives. This study sought to answer three research questions: (a) What are language arts teachers' perceptions of their own preparedness to use inquiry-based teaching methods? (b) What are language arts teachers' perceptions of inquiry-based teaching methods? (c) What experiences with inquiry-based teaching methods do language arts teachers have?

Purpose of the Study

The purpose of this study was to explore ninth grade language arts teachers' preparedness for, perceptions of, and experiences with inquiry-based teaching at the subject school in order to determine whether inclusion of such methods could improve student learning. This research was intended to provide insights into the effective practices and strategies of IBL in the classroom. The benefit of this study was to offer insight and understanding about how tachers might better prepare for successful teaching of language arts and literacy.

Conceptual Framework

The conceptual framework for this study was based on the discovery learning theory of Bruner (1966). The theory provides a framework for both students and teachers to make reading more enjoyable and to foster lifelong readers. It uses IBL and contends that students should always be active participants in their learning endeavors.

Bruner (1966) believed that students should not accept teachers' explanations at face value but rather should learn to explore and identify the key principles of learning to find solutions for themselves. Bruner argued that results are best achieved through inquiry-based learning, which builds on past experiences and focuses on learning through

self-motivated exploration. The foundation principles of the theory were that learning takes place with action—such as touching, feeling, and manipulatives—rather than just memorization of facts and test taking. Students are encouraged to interact with their environment, be inquisitive, and even perform experiments.

Bruner (1966) also endorsed constructivism theory, as discussed in the next section. According to Bruner, growing evidence demonstrated that IBL can enhance student engagement and academic achievement, and that it can result in higher-order learning outcomes. Benefits to teachers can also be achieved by integrating teaching and research; these include increased enjoyment and interaction with students and the rewards gained from enhanced learning outcomes for students. Critics of the theory believed that IBL requires resources that are often unavailable in the traditional classroom and that it takes control of the classroom out of the hands of the teacher. Tawfik et al. (2020) recently found that different approaches to IBL resulted in different results across a spectrum of skills.

Definition of Terms

Constructivism: The process of questioning, exploring, and reflecting, as developed by Lev Vygotsky and Jean Piaget. It explores how learners should construct their own understanding and knowledge of the world through varied experiences (Gurses et al., 2015).

Highly qualified teacher: Any teacher who possesses full certification, having passed the state certification test in the area in which he or she teaches (Lune & Berg, 2016).

Inquiry-based curriculum: This marker is defined as activities and skills that focus on students' problem-solving skills and that prompt or motivate students to initiate their own inquiries (Dana & Yendol-Hoppey, 2014).

Ninth grade: Also often referred to as the freshman year of high school; the grade entered by students who have completed eight years of post-kindergarten education.

Problem-based learning (PBL): Problem-based learning is a methodology in which students are tasked, usually in groups, with devising their own solutions to problems that are posed by the teacher. The emphasis of the activity is on the process more than on the solution; i.e., students must develop and use critical thinking, logic, communication, teamwork and other valuable skills that are not only essential for learning but also for employment and life skills in their adult lives. The PBL process was developed for medical education, and it has since been broadened in applications for other programs of learning. The process allows for learners to develop skills used for their future practice. It enhances critical appraisal and literature retrieval, and encourages ongoing learning within a team environment (Savery, 2015). More recently, Espinoza and Resnikova (2020) posited that in a post-COVID-19 world, in which much work is accomplished from home, those with lower-level literacy skills are less likely to find such employment.

Standardized tests: These tests employ established guidelines and methods to measure for achievement and deficiencies (Johnson et al., 2014).

Assumptions, Limitations, Scope, and Delimitations

This study was predicated on the following three assumptions:

- 1. Teachers used the self-reporting forms to furnish honest and accurate data.
- 2. Metrics for inquiry-based instruction in language arts were accurately assessed from subject interviews and other qualitative measures.
- 3. Student language arts performance was accurately assessed and measured.

This study, conducted in a small school district in Georgia, was limited to eight ninth grade language arts classes with 15 students per class. Because the sample size did not accurately represent the average profile of ninth grade students and teachers in urban schools in Georgia, it may not be entirely applicable to other school districts. In this study, the participating teachers were grouped together based on their collaborative planning from the past 2 years. A consideration was that, prior to instruction, the teachers had prior knowledge of the students and may have had predetermined opinions about the students' intelligence and attitudes toward language arts.

Significance of the Study

A qualitative study of teachers' preparedness, perceptions, and experiences regarding inquiry-based instruction is important for three? reasons. Insights from the study might be able to provide language arts teachers with new information about the value of one instructional method and contribute to the literature on inquiry-based instruction. It might give a voice to teachers about not having enough time to properly implement inquiry-based learning. It also could provide the necessary evidence to make a positive and lasting impact on the classes and students.

Many states have passed mandates for their schools to include inquiry-based instruction. Gurses et al. (2015) believed schools would help them to become better

analysts and be able to use this research for future studies. They believed schools should be engaged in inquiry-based teaching programs to develop a framework of yearlong and short-term goals. This would help them improve their learning skills, provide active participation, and connect with the knowledge they already have. Using the findings from this study would enable the study school to provide an environment of learning in which the students are able use a form of active learning that starts by posing questions, problems, or scenarios rather than simply presenting established facts or portraying a smooth path to knowledge. The students might be allowed to act as facilitators in the classroom.

Summary

The purpose of this study was to explore ninth grade language arts teachers' preparedness for, perceptions of, and experiences with inquiry-based teaching at the subject school in order to determine if inclusion of such methods can improve student learning. It was based on the qualitative research paradigm, founded in the concept of constructionism. The conceptual framework was based on the learning theory of Bruner (1966), which illustrated the effectiveness of inquiry-based learning.

The study focused on three research questions:

- 1. What are language arts teachers' perceptions of their preparedness to use inquiry-based teaching methods?
- 2. What are the language arts teachers' perceptions of the efficacy of inquiry-based teaching methods?

3. What are language arts teachers' experiences when using inquiry-based teaching methods?

Section 1 of this study presents the background of the problem in the study school in order to examine the poor academic performances in ninth grade classes. This study could be used to ensure that future experiences of IBL are positive and suggest ways the administrators could improve the specific services received by students. In Section 2, the literature review, I explore teachers' preparedness, perceptions, and experiences with inquiry-based instruction. In Section 3, I discuss the research design, instrumentation, setting. In Section 4, I present the results of the study, with teachers' reponses coded according to common themes that emerged related to the three basic research questions.

Section 5 offers a discussion of the results, conclusions I obtained from the analyzing the data, the study's implications for social change, and recommendations for future exploration of this issue.

Section 2: Literature Review

This section begins with an outline of inquiry-based learning, followed by background information about how legislators will hold educators accountable for low test scores. I discuss the theoretical framework for inquiry-based instruction and the historical background of teacher-directed learning as well as the causes of poor achievement in ninth grade students. I explore the prerequisites for engaging students with an inquiry-based teaching model, with an emphasis on reading enhancement and scientific engagement. Because reading is a fundamental building block for establishing real-world perceptions, this section emphasizes the inquiry-based instruction model as a premium, which seeks to optimize the student's natural curiosity and enthusiasm.

The review of the literature in this section used resources from the planning practices provided by the statewide professional learning community (PLC), a group of educators who work collaboratively to improve teaching methods and student performance. Other resources included the following databases: Embase, MEDLINE, and Google Scholar. Key terms included *inquiry-based learning*, *inquiry-based curriculum*, *constructivism*, *ninth grade*, and *problem-based learning*.

Inquiry-Based Instruction

Inquiry-based instruction is a teaching technique by which students learn how to answer questions and solve problems (Savery, 2015). The goal is to help students develop self-motivated inquiry habits and initiate their own efforts to seek out other sources to fulfill a sense of thoroughness. The qualitative nature of the Savery study (2015) inferred

that success cannot always be measured by metrics alone, but also involves subjective elements that cannot be quantified. According to Lune and Berg (2016), the development of inquiry-based science programs was a central tenet of the National Science Education Standards. IBL challenges students to think critically and deeply (Marshall & Alston, 2014). Lessons are designed to allow students to make connections to previous learning, bring in their own thinking, and design their own ways of solving a problem. The benefits of inquiry-based instruction are multiplied when students are able to process complicated or advanced material and understand its applications in a real-world setting. This enhances their enjoyment and comprehension (Meniado, 2016) and has value for students with learning disabilities (Ary et al., 2018). Its value is so noted that preservice teachers were educated and assessed according to their perceptions of the inquiry-based instruction strategy (Uçar, 2015). Inquiry-based curriculum projects have been successfully implemented as a means of improving learning (Arends, 2014).

Inquiry-based instruction is effective in a variety of teaching environments, including language arts and science. Given the difficulty and complexity of science, the effectiveness of inquiry-based instructional strategies serves to measure the effectiveness of this strategy in an alternative, equally complex, and difficult academic subject.

Instruction that emphasized active thinking and drawing conclusions from data were particularly beneficial. When students express dissatisfaction with the way they are being taught science, often they report that lessons are lacking in interest, are fact oriented, and are often driven by the teacher (Savery, 2015). Student-centered approaches to teaching are superior in the context of science classrooms because they improve the level of

articulation of student responses, in addition to challenging students by promoting a higher-level thought process (Oliveira et al., 2014).

Reading and science are also linked in a manner that empowers students to work in a collaborative manner, drawing from critical-thinking skills. Neugebaur and Gilmour (2019) noted that student motivations related to reading affected their academic and social interactions regardless of the content area they were being instructed in. This dynamic has beneficial results extending far beyond the classroom. Critical thinking is a formula for creating a society of well-informed citizens who can contribute to the betterment of the populace. As noted by Mihas (2019), development of a scientifically literate citizenry has been tied to the future of the democratic society. Evidence supports the use of inquiry-based instruction to alleviate student dependence on their teachers for information, which had undermined the learning process (Mihas, 2019). Mihas concluded that the use of teaching strategies to actively engage students in the learning process through scientific investigation is better able to increase conceptual understanding than is using teaching strategies that rely only on lectures and rote exercises, which are more passive. Cervetti (2019) noted that presenters at a literacy symposium overall "called for renewed efforts to link comprehension instruction to students' roles as agents and actors...and to foreground teachers' roles in their own learning about comprehension and in instructional reform efforts" (p.121).

Preparedness

According to Nilson (2016), IBL situations might in fact mirror situations that students are likely to encounter in future careers. This validates the long-term benefits of

the inquiry-based instructional strategy, as it facilitates learning not only in school but in the student's career as well. To determine where and how inquiry-based instruction might be implemented, it is first necessary to consider the content areas that are being taught within a given program. Upon having done so, a learner-centered approach to instruction must be adopted (Dana & Yendol-Hoppey, 2014).

Inquiry-based instruction depends on students' participation as they are in the process of learning. To provide students with adequate opportunity to participate, it is necessary for teachers to yield some of the control and power of classroom dynamics to the students. Such an effort would require the teacher to have a general plan while simultaneously allowing the direction of the lesson to flow in a more organic manner. Throughout the process, the teacher must ascertain that learning objectives are being met using the IBL method (Dana & Yendol-Hoppey, 2014). Smagorinsky (2018) emphasized the importance of effective teacher-training strategies that take into account the settings and contexts in which literacy will be taught.

The establishment of IBL requires the participation of students in the achievement of their own learning objectives. According to the National Science Teachers' Association (Matthews, 2014), it is beneficial for teachers to encourage their students to investigate the world surrounding them by asking questions, answering questions through the appropriate methods, and, finally, by communicating the conclusions they have reached throughout this process. Keeping students engaged in a positive classroom environment is essential to maintaining interest (Good & Lavigne, 2017). Measures to increase student engagement improve the achievement scores of children, highlighting

the value of this method (Grossman et al., 2014). The incorporation of this strategy is possible only when the content of areas studied have been assessed to the point of identifying how they must be altered, in order to incorporate the inquiry-based method (Yeh et al., 2017).

Effective training methods and professional development are vital for teachers to be able to use an inquiry-based approach to instruction. The scholars Lee et al. examined the importance of professional development for creating effective programs. They concluded that when professional development training is periodically implemented in instructional settings, teachers are more effective in their areas of study (Metzler, 2017).

The importance of inquiry-based instruction is recognized nationally and is often an element of both national and state assessment standards. Considering its perceived value, finding the means through which inquiry-based instruction may be quantified and tested to determine its efficacy is vital. There are several instruments through which this might be accomplished. Many of them have been proven to be invalid or too generalized in nature, however (Boss & Krauss, 2014). According to the Common Core State Standards (Boudreaux-Johnson et al., 2017), the goal of reading instruction is to deliver lessons so that students can master grade-level achievement skills.

Teachers at inner-city schools work with students who are disadvantaged by their challenging life experiences, and they often don't receive the training they need to establish effective learning environments for their students. Lazonder (2014) stated that unlicensed reading teachers and uncertified reading courses at the middle school level are a primary reason for low student achievement in reading. By analyzing seven years of

test-score data for 4,400 students, Goldhaber (2015) showed the positive impact that occurs when instructors complete some teacher-preparation program.

Many school districts are not addressing the needs of ninth graders' reading deficiencies in urban schools, nor are the students making adequate yearly progress. Champ's evidence shows that the theoretical framework of reading programs implemented in high schools and analyzing data regarding student reading scores and standardized test scores helped administrators design, implement, and institute better educational programs.

Numerous social and economic factors have impeded implementation of IBL and slowed development of teacher preparedness. One factor is that students have few incentives to remain in large urban public schools, which are often socioeconomically disadvantaged, because they must contend with the distractions of gangs, high mobility, and families with high rates of unemployment (Cammarata & Larson, 2018). Efforts have been made to identify other factors that place young people at risk for failure, including alcohol and substance abuse. Bäckman (2017) noted a high correlation between lack of education and poverty, crime, and student dropout rates. These issues prevent students from having the prior preparation and requisite factors necessary to take advantage of elevated reading programs. When young people are focused on survival, establishing beneficial learning practices loses priority. As such, these factors contribute to low achievement, lack of retention, and failure to meet basic educational goals (Bäckman, 2017).

Many learning environments are less than ideal for students. Many have become comfortable answering multiple-choice questions because traditional teaching has discouraged students from asking questions. Merely listening and then answering "yes" or "no," for example, is ineffective, because students do not engage their critical-thinking and processing skills, and the practice does nothing to help them develop learning skills. Barrel (2012) illustrated how effective learning requires much more than just asking questions; it requires probing students for information and challenging their thought processes. When students begin to ask probing questions and collect data, another level of learning is cultivated.

Student level of interest also impacts their comprehension (Ghazali, 2016). When teachers adapted their reading programs to their students' needs, the students demonstrated faster comprehension of the subject matter and reported that not having to take any notes or tests made the reading experience more pleasurable. A meta-analysis of the findings for seven studies suggested statistical evidence supporting the hypothesis that inquiry-based instruction positively affected students' attitude toward reading (Ghazali, 2016).

Perceptions

When it comes to teacher roles, teachers generally perceive their roles as consisting of motivating students, shaping personalities, and transmitting values. For beginning teachers, controlling students is a high priority with inquiry-based learning. Teaching and evaluation become lower priorities. As a result, teachers often perceive themselves as educators more than facilitators. Maintaining order and discipline is

perceived as being more important in traditional instruction environments than with IBL (Nayir & Cinkir, 2013).

Student involvement in the evaluating progress and choosing the methods used for assessment factor in significantly. Some assessment methods include self- and peer evaluation, which many researchers would suggest are two excellent methods of increasing students' confidence. Habók and Nagy (2016) argued for the strategic use of assessment tools to improve learner achievement and the importance of learner perceptions for the interpretation of learning outcomes and various assessments.

IBL is applicable to all disciplines, according to Savery (2015). It includes the application of certain ground rules and various ways to view them (Savery, 2015). All students need a perspective for viewing the world. Inquiry should yield useful knowledge that can be applied to their lives and perspective of the world. How people's worlds are organized, change, and interrelate to one another will play a major part in the questions and issues we face in life, according to Savery (2015). These factors can also help better organize the content taught in the school curriculum, offer a different way of looking at the world, and impart the coping skills needed for facing future problems. While questioning and searching for answers is a vital part of inquiry-based learning, effectively searching for and generating knowledge are equally important. Well-designed activities and interactions should always be a priority in ninth grade language arts classes. These activities will allow students to increase their knowledge from one grade to the next. Inquiry in education gives an effective, well rounded, and interrelated view of the world (Savery, 2015).

Unfortunately, traditional educational systems have discouraged students from participating in a more natural process of inquiry (Eisner, 2017). Students are often discouraged from asking questions and ordered to simply sit, listen, and repeat the correct answer (Barrel, 2012). But simply memorizing facts and information is often not beneficial to students after they complete the required tests (Suskie, 2018). Students memorize only long enough to pass a test, and they quickly forget the information they have learned. And although facts change from day to day, and information is readily available, having skill sets to gather and interpret information from the data is essential. The use of targeted questioning has been found to improve not only student responses but also student-teacher relationships and student thinking in general (Oliveira et al., 2014). More participatory instruction strategies can result in a wider knowledge base that can be applied well beyond the end of the class (Savery, 2015).

Through implementation of inquiry-based reading curricula, students communicate and record their experiences with journal writing, oral presentations, drawings, graphing, and other forms of expression. The use of dialogic journals improves the accuracy of lesson planning and reduces assumptions applied by teachers (Farrell, 2015). The use of journals is an act of self-reflection and may provide numerous benefits to the academic environment (Zepeda, 2019). In fact, inquiry is a central concept within many national and state standards, highlighting the fact that it may be present within any classroom (Waldo, 2017). Waldo also found inquiry-based instruction improved the conceptual understanding of students who were engaged in this teaching method.

Although many teachers believe that inquiry-based instruction is a more current form of

instruction, there are others who still believe that teacher-directed learning has always been the most effective way of teaching. Students are encouraged to maintain journals to record thoughts and experiences regardless of writing level. This exercise prompts self-examination and compels students to give thought to the dynamics of composition. It also serves as a historical marker for a student's academic and social growth processes.

Lochmiller and Chesnut (2017) noted that writing in journals can be a powerful strategy for students to respond to literature, gain writing fluency, dialogue in writing with another student or the teacher, or write in the content areas. While journaling is a form of writing, students can also freely generate ideas for other types of writing as they journal.

Experiences

Chichekian et al. (2016) posit that beginning teachers often have idealist expectations for their first experiences teaching without supervision and close monitoring. When these prove unrealistic, they can become discouraged and sink into "survival mode" while they try to get their footing, learn all the new rules and procedures in their new environment, and meet goals. By their second year, however, most begin recovering their self-efficacy and they retain their belief that they will have an impact on students' lives. Their situation can be complicated when mandates such as the use of IBL are implemented (Kaur et al., 2018). While IBL helps students develop critical skills, Chichekian et al., 2016), it also presents additional demands in terms of time allotment, teachers acting as facilitators, teacher training and more. As a result, few teachers and fewer new teachers use IBL as a regular method of teaching.

Literature Related to Methods of the Study

Qualitative research is used for exploratory purposes rather than numerical purposes. Unlike quantitative research, which gathers data from large samples and often takes the form of surveys, qualitative researchers uses in-depth interviews in order to understand the context in which subjects formulate their responses (Lindlof & Taylor, 2017). Qualitative research develops ideas or hypotheses for potential quantitative research. Qualitative research is also used to explore thoughts and opinions. Qualitative data is collected in less structured methods than those used in quantitative research. These can include focus groups and one-on-one interviews. Sample sizes are typically smaller than in quantitative research, with subjects carefully chosen for their appropriateness for the study.

Data derived from quantitative research is most often used to generate statistics. (Brannen, 2017). I chose to use qualitative research for this study in order to explore teachers' preparedness for, perceptions of, and experiences with IBL in the context of their individual training and experiences acquired during years of teaching ELA at the high school level.

A basic qualitative study method was used in carrying out this qualitative study. It was important to examine the quality of data collected, which was dependent on the mode of data collection used (Tracy, 2019). The interview is one of the data-collection techniques for qualitative researchers. Interviews are much different from other techniques used in studies; they have unique features that make them superior. This process is fundamental since is the main source for qualitative data collection. This

process required a significant amount of time and commitment from the researcher. Significant resource allocation also was required. Technology was helpful in expediting this process by the use of audio equipment. There were some challenges and ethical dilemmas linked to interviews. In order to implement a good qualitative research study, the researcher had several professional issues that were dealt with throughout the process (Tracy, 2019).

Conducting interviews is a qualitative-research technique that involves intensive individual interviews with a small group of individuals to explore their perspectives about an idea, program, or situation. For example, individuals conducting a program might be asked about their preparedness, their perceptions, and their experiences related to the program; the thoughts they have concerning program operations, processes, and outcomes; and any changes they perceive in themselves as a result of their involvement in the program.

Interviews are valuable when collecting information about a person's opinions and behaviors. Interviews are often used to paint a more complete picture of what happened in the program and why (Brinkman, 2013). For example, a researcher might have measured an increase in teachers' visits to a media center, and through indepth interviews you find out that a teacher noted that she went to the media center because that is the only place in the school that has a working copier.

Interviews can be used in place of focus groups if the potential participants are not comfortable talking openly in a group (Malterud et al., 2016). That is, the value of interviewing is not only because it builds a holistic glimpse, analyzes words, and gives a

full report of detailed views of informants, but also because it allows the interviewees to speak their own words from their own thoughts and feelings (Castillo-Montoya, 2016). Moreover, interviewing, as well as other qualitative approaches to social science research, differs from quantitative methods in the sense that it allows researchers to analyze the resulting data making an allowance for participants' social lives.

Summary

Inquiry-based instruction as a classroom practice is supported by both social cognitive and engagement theory, and teachers in schools across the United States have used IBL since Piaget first developed the idea in the 1960s (Starko, 2017). These instructions provide the framework for teacher modeling and the motivational factors that contribute to successful implementation of inquiry-based teaching (Starko, 2017). Piaget introduces "constructivism" as a marker not for how lessons are taught, but rather for how they are learned. Moore's discussion on sequencing (2014) is rooted in Piaget's theory and application (Starko, 2017).

Although numerous studies reported the efficacy of inquiry-based instruction, most failed to meet the strict research requirements established by the National Reading Panel (Hempenstall & Buckingham, 2016). Rather, the panel considered inquiry-based instruction to be an element of learning, although reading is essential as well (Athanases et al., 2015). Consequently, there was substantial criticism of the panel's methodology and elevated concern for the future of inquiry-based instruction programs. The findings highlight important points for cultivating engaged, thoughtful students by encouraging real-world changes and revealing key problem factors in the education process. Further

investigation into what is required to help low-achieving students succeed in evaluating complex historical and societal questions is forthcoming. Suggesting collaborative efforts and blending teacher craft knowledge with researcher knowledge increases the likelihood that novice teachers will take risks to engage students in exploring complex societal questions. A secondary goal may be to recognize broader design principles in order to build toward successes in subsequent lessons (Hempenstall & Buckingham, 2016).

In the following section, I describe the research methods I used, including the rationale for using qualitative research; selection of, protection of, and methods of collecting data from the participants; the three basic research questions that guided the study; and the scope of my role as the researcher.

Section 3: Research Methods

The purpose of this study was to explore ninth grade language arts teachers' preparedness for, perceptions of, and experiences with inquiry-based teaching at the subject school in order to determine if inclusion of such methods can improve student learning. In this study, the data came from personal interviews conducted with eight ninth grade language art teachers. Creswell (2013) stated that researchers need a wide range of information about the case to provide an in-depth picture of it. I gathered data about the case and factors involved in a single school setting, which enabled me to provide a clear description and picture of the case.

Research Design and Approach

This study used a basic qualitative research methodology. According to Merriam and Grenier (2019), a basic qualitative research study is philosophically derived from constructionism. I examined teacher preparedness for, perceptions of, and experiences with inquiry-based instruction, and the potential impact that inquiry-based instruction might or might not have on classroom instruction and student achievement. I collected interview data at the beginning of the study from eight high school teachers and examined the preparedness, perceptions, and experiences of these teachers through recorded interviews. The findings from the interview responses provided an understanding of the teachers' experiences and attitudes toward inquiry-based instruction.

Research Questions

The purpose of this study was to explore ninth grade language arts teachers' preparedness for, perceptions of, and experiences with inquiry-based teaching. The study focused on three research questions:

- 1. What are language arts teachers' perceptions of their preparedness to use inquiry-based teaching methods?
- 2. What are the language arts teachers' perceptions of the efficacy of inquiry-based teaching methods?
- 3. What are language arts teachers' experiences when using inquiry-based teaching methods?

Context

I gathered data for this study from face-to-face interviews with eight ninth grade language arts teachers whose students were performing below grade level. Each interview lasted about 60 minutes. Interviews were to be conducted in a natural setting to provide a true description of the participants' experiences (see Creswell, 2013), but because of COVID-19 restrictions, they were conducted via Zoom. The interviews were audio recorded and transcribed. Kenna et al. (2018) recommended using semistructured interviews in order to fully understand the setting.

The questions asked for this study were limited in number and open-ended.

Research questions on which this basic qualitative research study were focused, and designed so that timely and informed answers could be directly developed based on an analysis of the data that was collected. The questions were written in order to be easily

understood, make sense, and be answerable; Appendix A contains the interview protocol. The questions focused on what would count as evidence in relation to the question, and it was possible to acquire such evidence in the course of the study (see Rubin & Babbie, 2016).

Participants

The location of this basic qualitative study was an urban high school in a Southeastern state. The school selected was a high school consisting of approximately 1,200 students. Eight teachers participated in the study: Four had three to six years of teaching experience and four had seven to 15 years of teaching experience. The participants in this study were purposively selected, as I selected only language arts teachers who were highly qualified teachers and who instructed reading. Purposive sampling guaranteed that I selected participants who fulfilled a certain criterion (Creswell, 2013). The criteria for this study were (a) teachers who had a language arts certificate, (b) teachers who offered reading to students at a Southeastern urban high school, and (c) teachers who had more than three years teaching experience. A purposive sampling technique was used because it allowed me to use key informants who had some knowledge of the subject being studied (Creswell, 2013). Language arts teachers were appropriate as participants for this study because their jobs required them to work with students who exhibited difficulties with reading. By choosing the purposive sampling, I was able to explicitly make connections to my study.

My choice of eight participants in this basic qualitative study reflected the recommendations of Creswell (2013), who recommended 5 to 25 participants. I was able

to get a sampling of faculty perceptions across the entire school. I asked each participant the length of time (in years) each had been teaching at the study school. Asking teachers for this information helped me to identify any who did not meet the required criteria for the study.

Ethical Protections

Before I initiated the study, I got approval from the Walden University

Institutional Review Board (Approval Number 03-30-20-0057462) and the superintendent of my district. I informed the superintendent that the purpose of this study was to gather data about the implementation of inquiry-based instruction within the subject school and that the only participants in this study would be certified ninth grade language art teachers.

Once permission was granted by the superintendent, I selected participants according to the criteria previously stated. I collected email addresses from the principal and drafted an informal consent form within my email. The principal would have no direct access to any of the information gathered, nor would the principal know the identity of the study's participants. I then sent a group email to all language arts teachers, asking each teacher who was willing to participate in the study to initial ("I agree") on the consent form, Appendix B. The information consent form provided important information including: the purpose and procedures of the study, the right to refuse or withdraw from the study at any time, any consequences they would experience for withdrawing from the study, any foreseeable risks while participating in the study, the

benefits from the research, issues of confidentiality, and the people whom participants could contact if they had questions about the study.

Role of the Researcher

As the author of this study, I conducted qualitative interviews before analyzing and reporting the findings. I have been employed within the school district with all the educators involved in the study for more than 10 years. During data collection, I worked as the reading specialist at the study school. I had no administrative control over the teachers and educators surveyed and/or observed; therefore, they were able to speak freely without feeling intimidated.

Data Collection

This study included procedures created to answer the research questions and accomplish the purpose of the research. Merriam and Grenier (2019) stated that the researcher is the key instrument for data collection and data analysis when conducting a qualitative study. The interviews took place over Zoom because of COVID-19 restrictions.

Appendix A contains the interview protocol and questions. Individual semistructured interviews were used to collect data from the participants. Semistructured interviews consist of self-made questions that allowed me to ask more probing questions that gave me more thorough answers (Merriam & Grenier, 2019). The initial interview consisted of 20 open-ended questions that were asked of the participants during the interview process in order to allow the participants to tell their experiences and perceptions about teaching reading to language arts students. The interview questions

were structured to answer the research questions. I conducted follow-up interviews, as needed, to gather additional data. The approximate time for each follow-up interview varied depending on the number of questions. Follow-up interviews took place within 5 days of the previous interview to allow the participants enough time to reflect on the previous interview and prepare for the next one, as suggested by Castillo-Montoya (2016; see Appendix B). For reliability and cross-checking, each interview was recorded using the digital recorder feature of Zoom.

Justification of Data Chosen for Collection

I asked each teacher 14 open-ended questions (Appendix A), designed to help explore their personal thoughts and discuss their beliefs concerning their preparedness for, perceptions of, and experiences with IBL. They were also asked to explain how IBL influences their students' academic achievement As I gathered data during the study, I confirmed that I was receiving a sufficient amount of information from the participants to demonstrate their different perspectives. The educators also provided their opinions about whether inquiry-based could improve students' reading achievement.

At the conclusion of the interviews, I obtained verbatim transcriptions of each audio-recorded interview session within 10 days. I reviewed each document and also connected them to specific study components and specific codes that I had previously determined based on survey data. The use of carefully constructed questions, attentive listening to answers and clarification and elaboration, by interviewer or respondent, resulted in the emergence of eight themes related to the overall subject of the research: the extent to which ELA instructors are familiar with and utilize IBL, and their

assessment of its efficacy, or non-efficacy, in improving the reading abilities and scores of underachieving students. Each theme related to one of the three research questions:

- RQ1: What are language arts teachers' experiences when using inquiry-based teaching methods?
- RQ2: What are the language arts teachers' perceptions of the efficacy of inquiry-based teaching methods?
- RQ3: What are language arts teachers' experiences when using inquiry-based teaching methods?

Data Analysis

I obtained data for this study by conducting in-depth, one-on-one interviews with eight ninth grade language arts teachers, over Zoom because of COVID-19 restrictions. I also conducted follow-up interviews to ensure that both the questions and the responses were understood clearly. Each interview was transcribed verbatim. I conducted typological analysis by coding the data according to eight related themes that emerged from teachers' responses (see Kaur et al., 2018), which revealed a preponderance of commonalities in some areas and more diverse beliefs in othrs. The eight themes were categorized as relating to one of the three research questions., as shown in Table 2 on p. 37.

Summary

The methodology chosen for this study was basic qualitative study research.

Merriam and Tisdell (2015) stated that a qualitative study is a research methodology typically seen in social and life sciences, and there is no one definition of qualitative

study research. A basic qualitative study can be defined as an intensive study about a person, a group of people, or a unit that is intended to generalize over several subjects. A basic qualitative study has also been described as an intensive, systematic investigation of a single individual, group, community, or some other unit in which the researcher collects and examines data relating to several variables. Section 4 features the results of the study and an analysis of the data.

Section 4: Results

The purpose of this study was to explore teachers' preparation for, perceptions of, and experience with instruction-based learning to determine if inclusion of that methodology could improve student literacy and overall learning. In this section, I present the results of the study, and an analysis of the data collected, which was coded into eight emergent themes related to the three research questions. For data gathering for my qualitative research, I used Zoom with video as well as audio-recorded interviews with eight English language arts (ELA) teachers. I limited this study to a region in the southern part of a state in the Southeast accomplished through purposeful sampling (see

Data Analysis

In this study, qualitative data were collected to frame this information more effectively. Typological analysis, development of related but specific categories within a phenomenon that divided across the phenomenon were used for the analysis of the data collected in this study (see Kaur et al., 2018). Creswell (2013) stated that the typological analysis can be structured to collect vital statements and themes that described the phenomenon's meaning of language arts teachers' experiences with, preparedness for, and perceptions of teaching language arts students using the inquiry-based instructional model. The perspectives of both students and teachers were collected to assess the effectiveness of the inquiry-based reading curriculum. The perspectives were also used to identify themes, which helped to better determine the value of the inquiry-based reading curriculum, while also identifying areas where teachers believed the programming could

be improved. I identified common themes and synthesized meaning among the data to gather findings and natural generalizations.

Findings

I reviewed and coded the transcripts of each interview. Then I organized the resulting codes into eight themes, based on similarities in their natureI organized each theme under a research question: Preparedness, knowledge, and strategies related to RQI; attitudes, challenges, and outcomes related to RQ2; and training and experience related to RQ3.

As I coded the data, I discovered a preponderance of certain beliefs among the teachers interviewed: Male teachers believed (a) they were somewhat prepared to use IBL but that more training is needed at the local and district levels. Many teachers (b) believed that the final outcome of using inquiry-based instruction would allow their students to analyze questions and increase their critical-thinking skills; (c) believed that they were prepared to be able to increase the knowledge of their students; (d) demonstrated that their pedagogical attitudes play a role in motivating faculty to engage in IBL; (e) stated that they have various levels of experience using inquiry-based instruction; (f) had a misunderstanding of what inquiry-based instruction really is; (g) believed trainings offered at the local and district level had not prepared them to apply inquiry-based instruction; and (h) erected perceived barriers to changing their instructional strategies. Table 2 provides a summary of how the codes and statements that were organized and used to develop the themes.

Table 2Codes, Themes, and Commonalities in Responses

Codes	Themes	Commonalities
I am very prepared Somewhat prepared I need more training	Preparedness	Teachers believed they are somewhat prepared but there is more need for training at the local and district level.
Knowledge base and critical thinking More active engagement from students	Outcomes	Teachers believed that using IBL instruction would allow their students to analyze questions and increase their critical thinking skills.
Asking questions Organization or grouping Hands-on approach	Knowledge	Many of the teachers had a misunderstanding of what IBL instruction really is.
I think it would help I think it will slow some students down I think learning takes place when students are in discussion.	Attitudes	Teachers' pedagogical attitudes played a role in motivating them to engage in IBL instruction.
Several years of experience Some experience Experience from using in my classroom	Experience	Teachers stated that they have various levels of experience using inquiry-based instruction.
Teacher facilitates Student leads Programs that help student progress	Strategies	Teachers believed that they are prepared to be able to increase the knowledge of their students.
Yes, I have had several trainings focused on IBL I have had some trainings on IBL instruction I have had no training focused on IBL	Training	Teachers believed that trainings offered at the local and district level have not prepared the teachers to be able to apply IBL.
Difficulties with time Difficulties with student behavior Difficulties with student participation.	Challenges	Teachers erected perceived barriers to changing their instructional strategies.

To present the data from this study, I organized and framed the narrative that follows by the research questions. I am presenting these data through a summary of the participant demographics, quotes from the interviews with the participants, narratives to

explore the themes that emerged as the data were coded, and tables to summarize the findings. There were eight participants in this study.

Research Question 1

The first research question asked: What are language arts teachers' perceptions of their preparedness to use inquiry-based teaching methods? Exploring teachers' perceptions of their preparedness to implement inquiry-based instruction would offer insight and understanding about how to better prepare for successful teaching of language arts and literacy.

Preparedness

I coded each teacher's beliefs about the extent to which their training prepared them to adequately address any challenges they may face, and attached the codes to the theme preparedness. P1, P3, P6, P7, and P8 indicated that they believed they are very prepared to use IBL instruction. The other participants indicated they felt either moderately or somewhat well prepared for most classroom activities (See Table 2), and of those, some indicated that despite their level of preparation, they believed they could benefit from more training. For example, P4 indicated that at one time, he believed, he was more prepared to use IBL than he is today, because, in his opinion, training offerings have not kept pace with teacher needs:

I've had training prior to now, and how to use project-based learning with my students years ago. I've found that to be very effective. I lean on that. However, I feel that in the current years, and that has been more than 10 years ago and the current construct, I feel that if you had to ask me, am I

prepared to deal with the challenges of project-based learning as needed today? I would say no.

P8 stated that he was "very prepared," and that his preparation had come mostly from classroom experience. I enjoy teaching ninth grade students, and they enjoy doing project-based learning," this teacher said. "I feel that I have prepared myself through the lessons I teach in class daily. I try to incorporate these lessons to help my students think for themselves."

Similarly, P1 described herself as incorporating IBL methods in her daily lessons. P5 said that she has used the method in the past. She added she was "prepared to say that I have innovative ideas to add."

With the exception of P4, who as noted above believed that he is not adequately prepared to implement IBL in the context of current pedagogical challenges, all of the interviewees responded "yes" when asked "Do you believe you are prepared to use inquiry-based teaching methods?" As I will discuss later under the themes of experience and training, criteria the teachers used to evaluate their own preparedness varied, ranging from having some formal training in the method to having adapted classroom strategies on their own. A commonality that emerged, however, was that although teachers considered themselves very or somewhat prepared to implement IBL in their classrooms, they also believed that there is more need for training in the method at the local and district levels.

Knowledge

The theme knowledge, essentially, familiarity with the curriculum, also related to RQ1. Responses indicated that although teachers believed they were knowledgeable about IBL, many had a misunderstanding about what IBL really is. The teachers interviewed for this study presented various levels of understanding of this process. All recognized it as differing from traditional methods of teachers imparting knowledge that students passively absorb, but to varying degrees. Several teachers indicated that they considered project-based learning and learning in groups to be IBL.

P3 stated, "I would describe it as a hands-on learning approach where educators use their own facts or information about a particular topic and present it through scenarios or hands-on-based activities that are not like traditional education." To both P1 and P8, IBL involved teachers posing questions and facilitating, with students leading the discussions." P2 stated, "I think it deals with doing projects and research...based on project-based learning."

For P5, "Students are being able to do or research [the] topic, and are more involved, starting with something as simple as a building diagram or up to a full research paper." P6 said that in her advanced placement (AP) and regular classes she incorporated IBL into almost all her lessons, which meant:

I do construct the learning around project-based learning. So, any time we enter a new content or new text, [there] is always some project-based learning activity connected to it...I would teach the definition by providing them with the opportunity to do some research, to inquire by asking the questions, and get them

on a path of asking questions and finding [answers.]...All you're doing is asking questions and looking for answers.

Strategies

The development and use of instructional strategies is the third theme that emerged in relation to RQ1. Overall, the teachers who participated in this research believed that they are prepared to increase the knowledge of their students through strategic use of IBL methods. They varied, however, in the extent to which they report using such strategies in the classroom. When describing the instructional strategies they routinely used when teaching language arts, most teachers indicated using mostly methods other than IB. This use of other methods was especially prevalent among teachers who believed that their students needed more instruction in basic skills. For example, P2 said, "Vocabulary is the essential ingredient to students being able to read on grade level," and she cited Reading Plus as a good program to use in her classroom. Pl similarly stated her classroom techniques as "reading practices, key vocabulary lessons given. Highlight key words in sentences and allow them to come up with the word." P5 also said she did not incorporate IBL because, "One of the things I felt really focused on is vocabulary. I think if you can increase vocabulary rating, you've got to understand the texts. So that's what I focus on more."

P3 mentioned progress monitoring as her key instructional strategy, using the COMB program, "a digital platform where everything's on the computer," and students' progress through various levels after achieving minimum scores. P6 focused on teacher-

led reading and questioning of students. P7 described using project-based learning, with students in small groups, as one of her core teaching strategies.

In contrast, P4 described an instructional strategy similar to IBL: "Taking a concept or a problem raising the essential question of how to solve that problem. What are the research questions needed to support the thesis? How do you perceive it? And what are all the facts?"

Research Question 2

Three themes that emerged through this qualitative research relate to RQ2: attitudes, challenges and outcomes. Teachers' attitudes included any preconceptions they had about IBL as well as reactions from those who had training and/or experience in the method. The theme of challenges includes data teachers reported about their own perceived and experienced challenges in integrating IBL into their classes as well as challenges faced by students such as non-readers. Outcomes perceived by teachers were both measurable, such as scores, and empirical, particularly regarding observed enthusiasm of and increased participation by students.

Attitudes

In regard to this study's participants' attitudes toward IBL, the research sample was slightly skewed toward those who view IBL as a definite positive. P1, P3, P5, P6, and P8 all indicated belief that such instruction can be a tool used to help struggling readers. P2 and P4 expressed the belief that learning best takes place when students are most often actively involved in discussions but did not indicate whether those discussions would be teacher led or teacher-facilitated, student led. One interviewee, P4, was

concerned that the approach could lead to the lowest-performing students slowing down the learning process of their less-struggling peers. Overall, however, qualitative analysis of teacher responses indicates that less-than-positive attitudes toward IBL may reflect confusion about what the method entails rather than an outright rejection that would prevent them from attempting to implement IBL in their classrooms. For example, a teacher who professed a positive attitude toward using IBL could be basing that attitude on her belief that students learn best when they are included in discussions, which she misunderstands as the implementation of inquiry-based learning.

Several teachers indicated that in their view, IBL was developed in order to improve students' skills, including one essential to all learning, reading. "I definitely think [IBL] is designed to improve their [students'] reading," stated P3. "It's not more of them having to just be in front of a book reading; they'll be able to use other learning styles." P6 concurred with P3. She said she "most definitely" believed IBL was designed to improve students' achievements. She indicated a positive attitude toward IBL:

because I just can't imagine a silent reading class. Because if you're not hearing any reading going on, it may not be going on. But I think that this [IBL] process, forcing them to ask questions or just even [the teacher] asking questions, forces them to be more comprehensive of what they're reading and discussing.

Overall, the qualitative data indicated that the subject teachers were either predisposed to approve of IBL or at least open-minded about learning more. This positive attitude was expressed by teachers who reported being trained in IBL, those who said they had little or no training, and those who said they did not currently use IBL in the

classroom. Some participants indicated that they believed IBL was intended to improve students' learning and achievement, but they were skeptical about it. "I think that's what it's designed to do, but I think ... the pull card is still out, whether it will achieve that or not," said P5. "I'm not totally buying the package, but I'm not totally against it. I don't know what the data is saying," this teacher added.

Challenges

The teachers in this study reported facing challenges that many perceive as an obstacle to changing their instructional strategies. These were focused mainly on issues related to students with behavioral or discipline issues, students who simply were not interested, and non-readers. Participants also indicated, however, that teaching using IBL placed additional demands upon teachers as well as students.

When asked, "What difficulties do you routinely face when teaching students using the inquiry-based learning curriculum?" P2 responded, "Students are reluctant to do things asked. Sometimes negative behaviors and non-readers are usually the problem." P5, similarly, referred to "kids that are apathetic toward anything. They're reluctant." She noted, however, that these children can be reached, and the challenges overcome:

Once you get over that, I think what happens more times than they would like to think, that they'll get into it. If you can get your children to become interested in any topic, become interested in a project, you basically don't have a lot of problems.

P3 and P4 mentioned allocation of a scarce resource, time, as a challenge to implementing IBL methods, which by definition involve student self-motivation.

"Projects typically take more time," said P3. So it is a challenge "to provide the directions and delivery models in a timely fashion and give them enough time to actually get the project done."

P4 included timing among other challenges. Others he reported were the result of students working cooperatively and managing their own learning. He said, "When you're dealing with project-based learning...understanding individual responsibility, group responsibility, deadlines—those are some of the challenges that can limit inquiry-based instruction." But he continued:

As a teacher, you have to just drill it, get parents to understand and engage, to support and help you in that process, to appreciate and push students as well. With a sense of pride and accomplishment to get it done, and do it right, and do it effectively. So those are kind of some of the constructs and those are some of the ways you can leverage individuals and assistance to have a positive outcome.

Outcomes

Participants in this study relied to different extents on standardized testing to measure student achievement. Some relied on frequent testing, as often as every month, to measure student progress. Others reported less frequent testing. Most reported that some outcomes of using IBL, such as changes in students' attitudes, were observable although not measurable.

P4 indicated that testing presented her with a challenge in attempting to use IBL. She said that while she recognized the importance of testing, she also measured student outcomes by observing their behavior. She noted:

I'm not a proponent of a lot of testing, but I know it's needed to...gauge where students are...If I'm not testing, I [cannot] with data show that the Lexile level has improved...are more engaged when you're having discussions. I find that students would prefer to read...and discuss than for them to sit at a computer and read on their own and answer some questions.

Several participants reported that when they used IBL techniques in their classrooms, they found that their students were likely to be interested in and participate in their lessons. P1 responded, "They are more engaged when they are included in the process, and they respond positively." P3 indicated she:

definitely would say that [students] enjoy it better than the traditional style of learning. They seem to respond to it better...being able to have a project they're able to excel at because most of them are better at applying their knowledge through activities and hands-on projects versus through a written test or just being lectured to.

P2 said that by having students work together to approach problems, struggling students often became better performers. "Grouping high achievers together and those students collaborating with some low-achieving students where most topics are interest-based topics will sometimes help students do better on projects," she responded. P5 also reported that lower-achieving students "will feel a spark...They feel like they are part of the group."

The main positive result of using IBL in the classroom reported by most teachers was its potential to allow, or even force, students following their interests and generating

their own responses to problems and approach to projects. P4 noted, "I had some students that I think, for the most part, [the response was] very positive." P6 concurred, stating, "I think that students are more positive, and they are more apt to get up and actually do the work once they feel comfortable." P7 responded, "I believe they are more engaged when they are included in the process. And they respond positively to it." P8 similarly noted more positive student attitudes and participation when IBL was used, stating, "[Students] are more engaged when included in the process, and they respond positively." Thus, the qualitative data suggest that teachers believed that in at least some aspects, such as involving students in approaching problems critically and developing their own approaches to solving them, IBL would have a positive outcome in terms of learning.

Research Question 3

The themes of training and experience that emerged during interviews with the subject teachers are linked to each other, and both relate to Research Question 3.

Participants were more precise about their training, which can be measured in the number of classes or workshops attended, and more subjective in evaluating their own experiences using IBL in the classroom. Some teachers' responses overall reflected some confusion or misunderstanding about exactly what IBL is, however. Thus, their responses might reflect their perceptions and beliefs about their training and experience with IBL rather than quantifiable levels of training or years of experience implementing the method.

Training

As seen earlier, the research sample involved teachers who have both real and perceived differences in their beliefs about how well-trained and how experienced they are in utilizing IBL. Specific training and experience themes that emerged as related to RQ3 demonstrate those beliefs, as well as, again, a certain amount of flexibility in their definitions of those terms. Teachers also varied in what they reported as training, from stand-alone workshops to more comprehensive instruction. Overall, the teachers interviewed suggested they believed that trainings offered at the local and district levels range from nonexistent to sporadic and inadequate, and most indicated that they did not believe they took part in as much training, or as much current training, in IBL methods as they would like.

As seen earlier, the research sample involved teachers who have both real and perceived differences in their beliefs about how well-trained and how experienced they are in utilizing IBL. Specific training and experience themes that emerged as related to RQ3 demonstrate that, as well as, again, a certain amount of flexibility in their definitions of those terms.

Overall, the teachers interviewed suggested they believed that trainings offered at the local and district levels range from nonexistent to sporadic and inadequate. Most indicated that they did not believe they took part in as much training, or as much current training, in IBL methods as they would like. Those who reported more extensive training had received it outside their current district and school.

Four respondents, P1, P3, P6, and P8, indicated receiving enough training in IBL that they were able to teach with instructional coaches. They considered themselves very familiar with the methodology, although none reported being currently engaged in any IBL training. P1 said she could not recall being offered any IBL training at her local school, and the district had offered a few trainings "during schoolwide professional developments, but none ongoing."

P2, however, did report receiving trainings at the school level. In addition, she said, "We are an international baccalaureate program school, and we have been offered some inquiry-based instructional training from our IBL coordinator." P3 said that professional trainings in the school and district do not focus on project-based instruction, and P4 said that his district had offered limited training.

At the school level, P4 said, "It's referenced, but total training? Very minimal." He indicated he would like to see more specific instruction: "How do you do it, and how do you unpack it in the lesson? How do you facilitate and benefit the students? I think we are lacking there and need to focus more on that."

P5 reported "some group training" at the district level. The first day was the introduction to IBL, what it was like, the objectives and what the accomplishments mean. We broke into groups and discussed." She responded to a question about training at the school level that it was not addressed there particularly.

P6 indicated that at the district level the only related trainings she had been offered were connected with AP and gifted programs. At her school, she recalled an IBL training that took place over one summer 4 to 6 years ago, but nothing since. P7 said she

was not aware of any IBL training, but that she "would like clarification on the procedures and the grading, how to assess the children." P8 responded that he had in the past few years attended trainings that were "somewhat informative," but the district did offer not many of them. Some teachers did report receiving training at National Professional Developments or other areas outside of their district and school.

Experience

Teachers reported various levels of formal training in IBL and no systematic introduction of the methodology into the curriculum by the district or the school. Therefore, it is not surprising that the teachers in this study also reported various degrees of experience. These ranged from using IBL in their classrooms, to incorporating it into most lessons over a period of years, to injecting it into lessons sometimes, to having used it only with AP or gifted classes.

When questioned about experience using IBL, some participants reported their use of project-based instruction in the classroom. "I have over 15 years of experience teaching and using project-based instruction," was the response of P2. P3 described using project-based activities as part of an SEL (social emotional learning) homeroom advisory, with elementary and middle school students, and with special education students, including in teaching ELA, but she did not mention any experience using IBL at her current high school.

P3 reported expensive experience with more specific IBL. "As an educator, I have a lot of experience using those techniques...if it's research-based questions or inquiry, for them to get that information and knowledge and to be able to apply it," she said. On the

other hand, P5 said she had used IBL in the past, "especially in social studies classes and particularly in English class," but in her current classrooms she only used "some of it, to some degree."

P6 reported using IBL "quite a bit" in gifted and AP classes, and added that she also uses IBL in regular classes, where she constructs learning around project-based learning: "Anytime we enter a new content or new text, [there is] always some project-based learning activity connected to it. I do [incorporate project-based learning] in almost all of my lessons." According to P8: "I do have a lot of experience in allowing students to use their creative abilities in the area of critical thinking and letting them solve problems on their own." P7 did not answer this question.

Evidence of Quality of the Data

For the findings presented in the results section of this study, it was important that methods were put in place that would ensure credibility of the data. I collected data from teachers who had the credentials to teach ELA, had years of experience teaching ELA, and were at the time of the interview teaching ELA to ninth grade students. A total of 14 open-ended questions were designed to encourage teachers to discuss their perceptions of, training for, and experience with IBL. Individual interviews with the researcher s. I deliberate asked probing questions, using phrases, such as, "Is there anything else you would like to add?" This form of questioning allowed the participant to freely answer the open-ended questions and to give more in depth information.

I interviewed, via Zoom, eight language arts teachers who agreed to sign a consent form for the interview. Next, I had each interview transcribed verbatim. I read

through each transcript carefully in order to make the evidence of my theme stronger. Then I reviewed and coded the transcripts of each interview. In qualitative analysis, coding is the process of perusing data for categories and meanings (themes, ideas, etc.) and then systematically marking similar strings of text with a code label. This allows for systematic retrieval at a later stage for further comparison and analysis. Coding the data makes it easier to identify any patterns that require further investigation.

In reviewing and coding the data, eight commonalities among some participants emerged. I used these common beliefs to develop my themes. I organized the data into eight themes, based on similarities in their nature. As data from the transcripts were coded, they were assigned to one of the eight themes, themselves categorized under one of the three research questions: preparedness, knowledge, and strategies relate to RQ1; attitudes, challenges, and outcomes relate to RQ2, and training and experience relate to RQ3.

There are many accepted methods of assuring that data are credible and consistent. I used the established means of verbatim transcriptions of each interview and member checking. I met with team members weekly throughout the course of this study to ensure peer review was in place. I reviewed all of the transcripts against the recordings to assure accuracy, and followed up with teachers I interviewed to make sure I was interpreting their words correctly.

Section 5: Discussion, Conclusions, and Recommendations

The purpose of this study was to explore ninth grade language arts teachers' preparedness for, perceptions of, and experiences with inquiry-based learning. In order to determine the teachers' real and perceived preparedness, perceptions, and experienced, I developed three research questions:

- 1. What are language arts teachers' perceptions of their preparedness to use inquiry-based teaching methods?
- 2. What are the language arts teachers' perceptions of the efficacy of inquiry-based teaching methods?
- 3. What are language arts teachers' experiences when using inquiry-based teaching?

As data were coded, I discovered many teachers (a) believed they were somewhat prepared but also that there is more need for training at the local and district levels; (b) believed that the final outcome of using inquiry-based learning would allow their students to analyze questions and increase their critical-thinking skills; (c) believed that they were prepared to be able to increase the knowledge of their students; (d) demonstrated that their pedagogical attitudes play a role in motivating faculty to engage in IBL; (e) stated that they have various levels of experience using inquiry-based learning; (f) had a misunderstanding of what inquiry-based learning really is; (g) believed that trainings offered at the local and district level had not prepared the teachers to apply inquiry-based learning; and (h) erect perceived barriers to changing their instructional strategies.

Interpretation of Findings

I designed this study to explore language art teachers' preparedness for, perceptions of, and experiences with inquiry-based leasrning at a small urban high school in the southeastern United States; the goal was to determine if inclusion of such methods could improve student learning. The subject school was experiencing low performance on state annual reading tests, and recent test scores of incoming ninth graders were especially low. Consequently, the high school was not meeting the reading academic targets that were set by the U.S. Department of Education. As reading and literacy skills are the crucial basis of all subject learning, the low reading performance affected total academic performance.

Originally developed for use in education in the sciences, IBL has spread to other disciplines, where students use processes similar to those of scientists—identifying problems, envisioning possible solutions, and devising methods of testing their potential solutions and arriving at a conclusion (Keselman, 2003, as quoted in Pedaste et al., 2015). It can be applied to all disciplines (Savery, 2015).

The conceptual framework for this study was based on the discovery learning theory of Bruner (1966). The theory provides a framework for both students and teachers to make reading more enjoyable and to foster lifelong readers. It uses IBL and contends that students should always be active participants in their learning endeavors.

To conduct the study, a qualitative research protocol was chosen, partially because there is a lack of qualitative studies regarding the preparedness, perception, and experiences of IBL in reading in the public schools as a gap in the body of literature.

Qualitative research was chosen for this research rather than quantitative also because this research deals with attitudes and opinions rather than numerical data.

This study was predicated on the assumptions that:

- 1. Teachers would self-reporting to furnish honest and accurate data.
- 2. Metrics for inquiry-based learning in language arts were accurately assessed from subject interviews and other qualitative measures.
- 3. Student language arts performance was accurately assessed and measured.

I decided to interview eight teachers of ninth grade English language arts (ELA) at the subject school. The researcher was given a list of such teachers by the school principal (who had no further knowledge of who would be participating in the study). I emailed teachers who met the criteria of being qualified to teach and were currently teaching ninth grade ELA, and eight were chosen from among those who volunteered. I informed them about the purpose of the study, how I would conduct the research, what measures I would take to ensure their confidentiality and the security of their data, and that they could discontinue at any time. I assured them that although I worked at the same school, I had no supervisory authority over them or input into any decisions about their employment, and I would identify them by number in order that none of their responses could be linked to any identifying information. All of the participants signed informed consents before being interviewed.

I developed a total of 14 interview questions in consultation with mentors and team members. I interviewed the teachers via Zoom because of COVID-19 protocols, and during the interview I gave them ample opportunity to ask for clarification and to clarify

their own responses. I followed up with participants to ensure that their responses were interpreted as intended.

I had the interviews transcribed verbatim and used those transcriptions as the basis for coding data. The coding process resulted in the emergence of eight themes that related to the three research questions:

- 1. QI: What are language arts teachers' perceptions of their preparedness to use inquiry-based teaching methods?
- 2. QI: What are the language arts teachers' perceptions of the efficacy of inquiry-based teaching methods?
- 3. QI: What are language arts teachers' experiences when using inquiry-based teaching methods?

The emergent themes were preparedness, knowledge, and strategies (RQ1); attitudes, challenges, and outcomes (RQ2) and training and experience (RQ3).

Summary of Teacher Comments

In relation to their preparedness to use IBL in their classrooms, the teachers believed they were very or somewhat prepared, with only one reporting that he did not feel prepared to use IBL in the current learning environment, although he had in the past.

By analyzing seven years of test-score data for 4,400 students, Goldhaber (2015) showed the positive impact that occurs when instructors complete some teacher-preparation program. Participants in this study reported their belief that there is more need for training at the local and district levels. Those who reported receiving some training in IBL described it as often occurring prior to their employment in the subject

school. Those who reported receiving training while working for their current district referred to professional development (PD) programs. Overall, teachers considered themselves prepared to work as facilitators of student-led projects as well as educators, which is an integral component of implementing IBL. In the area of knowledge, it emerged that many of the teachers had a mis"understanding of what IBL really is.

Pedaste et al. (2015, p. 48) noted IBL can be defined as "a process of discovering new causal relations, with the learner formulating hypotheses and testing them by conducting experiments and/or making observations." The authors, however, described project-based learning, along with discovery learning, game-based learning, and problem-based learning, as related to, but not the same as, inquiry-based learning. Some teachers interviewed for this study used the terms interchangeably.

Participants in the study, however, largely defined IBL as project-based learning, or even any learning methods in which students work in groups to research a topic or complete a project. Such phrases as "hands-on" learning, "teacher asks a question and then the students lead the discussion," and "students being able to research a topic" indicate a lack of understanding of what differentiates IBL from other forms of instruction that differ from the simple model of a teacher imparting information that students are expected to retain. These misunderstandings both validate teachers' belief that more formal instruction in IBL is needed and make it more problematic to assess the efficacy of IBL as a tool for increasing students' literacy skills.

In regard to the third theme related to RQ1, strategies, teachers believed that they were prepared to use various strategies to increase their students' knowledge, but many of

those they reported using were not congruent with IBL. This was particularly prevalent among teachers who believed that their students needed more instruction, and even drill, on basic components of literacy such as vocabulary building. Techniques such as highlighting words in sentences and having students define them, and using programs such as Reading Plus were seen as ways for students to improve their skill levels.

Teachers also cited both reading aloud to students and having students read out loud as classroom strategies used routinely. Frequent monitoring of progress, through testing or using digital programs that allow students to progress through increasing levels of competence were also considered important by some participants. One teacher reported that she used IBL in her AP and gifted classes, and a few described using IBL strategies, such as "taking a concept or a problem and raising the essential question of how to solve that problem," routinely or nearly every day in the classroom. Thus, the data revealed no systematic implementation of inquiry-based learning in the subject high school.

Teacher's pedagogical attitudes play a role in motivating faculty to learn new methodologies, work with colleagues and administration to implement them, and successfully use them in the classroom. Kennedy and Kennedy (1996) noted that, "Change is a complex process, and one part of that complexity is the role of teachers' attitudes in the implementation of change." In this study, participants were asked questions designed to determine their perceived and/or experience-based attitudes toward IBL and its potential to effect improvement in student performance.

Penn et al. (2018) found in their study of high school teachers that sampled teachers had generally positive attitudes toward IBL and recognized the advantages of

inquiry, such as supporting the development of critical thinking and increasing the motivation of learners. At the same time, however, the teachers were reluctant to implement IBL in their classrooms because of perceived obstacles such as lack of resources, including time.

The teachers sampled in this study similarly indicated belief that using IBL would allow their students to analyze questions and improve their critical thinking skills, and yet they erected perceived barriers to changing their instructional strategies. They indicated beliefs that they lacked sufficient time, that the district and the school had not provided adequate training, and that struggling students needed more instruction in basic skills, such as vocabulary building, before tackling more complicated projects. Some teachers also believed that the composition of their classes—those that contained struggling students, non-readers, and students with behavioral issues or who were indifferent to education—presented challenges in implementing IBL, which demands students take more responsibility for the education process. Others, however, stated that they believed IBL could in fact help such students by including them in groups and decision-making, and engaging them in projects based on their own interests. The latter teachers were more likely to report using, or wanting to use, IBL in their ELA classrooms. They were also more likely to report that using IBL resulted in greater student enthusiasm and participation in projects.

According to Bruner (1966), growing evidence demonstrates that IBL can enhance student engagement and academic achievement, and that it can result in higher-order learning outcomes. Because the use of IBL at this school is the choice of individual

teachers, who report using it not at all, somewhat, or routinely, student outcomes remain subjective. In fact, a few of the sampled teachers cited the need to be continually measuring outcomes on standardized scales as a challenge to implementing IBL.

Teachers did not provide any instances in which they believed that inquiry-based teaching resulted in higher or lower scores on standardized measuring instruments. It should also be noted that all the teachers participating in this study taught ninth grade ELA, and thus were not in a position to notice or report on any long-term benefits that ELA might have on student achievement after the use of IBL at the freshman level.

Themes that emerged in relation to RQ3 were teachers' self-assessments of their training for and experiences teaching IBL. Although most of the teachers reported feeling prepared to use IBL in the classroom (only one, who had in fact received training, reported believing that his training was not current enough to leave him prepared to each it currently), they also said that trainings offered at the local and district level had no prepared them to be able to apply IBL. While this might seem contradictory, teachers reported receiving training in IBL as part of professional development (PD) days or workshops, through instructional coaches and IB (international baccalaureate) instructors, but little to no systematic training through their schools.

Similarly, teachers reported their experience in teaching IBL, whether not at all, somewhat, or extensive, as a personal choice and not as a matter of schoolwide curriculum. As noted above, participants' self-reporting on their experience using IBL in their ELA classes was skewed by their perceptions of what IBL actually is. Thus, a teacher might believe she is using IBL daily in the classroom when she is in fact talking

about project-based learning, allowing students to work on projects in small groups, or even just allowing students some choice in, for example, reading material. Thus, the data indicate that making teachers more familiar with the realities of IBL, along with overcoming their perceived challenges in using the method, could facilitate closing any gaps between their perceptions of IBL in their classrooms and evaluating the actual efficacy of IBL instruction.

Implications for Positive Social Change

The higher paying jobs that students will need in the future do and will, for the most part, demand that the people who hold them have a high level of proficiency and literacy in English. Students are expected to be able to speak and write effectively after leaving high schoo. (Wagner, 2010). Yet often, students who are struggling the most and in most need of strong ELA instruction in school face obstacles such as that in many cases, the most proficient teachers receive promotions or are assigned elsewhere than to students who are at high risk (Reese et al., 2000). To open doors to the some of the highest paying jobs, students need teachers who are prepared and experienced, and who have high goals and aspirations for the students. All students need quality instruction in language arts.

Recommendation for Action

The call for action of this study is for high school level teachers, administrators, and other school leaders who will be assigned to provide instruction in language arts. The themes that were created in this school-based study could grow the content knowledge in other language art teachers. "Inquiry" application refers to the diverse ways in which

students grasp knowledge and the methods by which that knowledge is produced. This study explains how to help understand whether teacher's preparedness, experience, or perception have an impact on the outcome of the effectiveness of this curriculum being implemented.

To share the results of this study and disseminate information within the local district, perhaps the greatest resource I have is working with my professional colleagues. Sharing ideas, questions, resources, and experiences with them can be beneficial to instructional and assessment practices. Joining my colleagues or helping to establish a solid professional development can bring about great changes in the classroom and the way we all view learning.

Directions for Future Research

Building upon the hypothesis that was present in this study, a possible direction for future research would be to address the connection between the specific depths of content knowledge in language arts and the teaching background of the teachers and school principal compared with student achievement in language arts. Research questions that could be explored would include:

- Do school leaders with a deeper content knowledge in language arts assign teacher with deeper content knowledge in inquiry-based learning to provide instruction in language arts in their schools?
- What is the relationship between school principal content knowledge and educational background in language arts with student achievement?

- What is the relationship between teachers training in inquiry-based learning and student achievement?
- Is there a relationship between teachers' teaching experiences in language arts and instructional quality in language arts?

Appendix A: Protocol and Questions

Study Topic: A Basic Qualitative Investigation of Teachers' Preparedness, Perceptions, and Experiences Regarding Inquiry-Based Instruction

Introduction

You have been asked to participate in this interview based on you volunteering to take part in this study. Furthermore, it is believed that you have a great deal to share about teaching and implementing the inquiry-based instruction in ninth grade language art classes. The objective of this research study is to help educators improve the reading instruction of students by implementing the IBL curriculum, and to increase the performance on standardized tests as a metric of that success. This basic qualitative study will aim not to evaluate your pedagogy, but rather to examine the preparedness, perceptions, and experiences about providing reading to ninth grade students using the inquiry-based instruction curriculum and, hopefully, to learn about pedagogy that will help improve students' reading achievement.

Interview Questions

- 1. Do you believe you are prepared to use inquiry-based teaching methods?
- 2. What do you perceive as the efficacy of inquiry-based teaching methods?
- 3. Do you have any experience using inquiry-based teaching methods? If so, briefly describe.
- 4. What was the focus of the trainings or professional developments you attended during the last three years? Have you had one or more trainings in inquiry-based teaching methods?

- 5. Describe trainings offered by the school district. Are any of them focused on inquiry-based teaching methods?
- 6. Describe the trainings offered within your school. Are any of them focused on inquiry-based teaching methods?
- 7. Please describe any trainings or professional developments that improved your instructional practices. Have any of them focused on inquiry-based teaching methods? If so, describe how the improved instructional practices look in your class.
- 8. What is your definition of inquiry-based learning?
- 9. Please describe how students in your class have respond to the inquiry-based instruction approach.
- 10. What instructional reading strategies do you routinely use? Do they include IBL methods?
- 11. Do you think the inquiry-based curriculum is designed to improve your students' reading achievement?
- 12. How often do you assess the reading level of your students? If you have integrated any IBL methods, have you noticed they make a difference?
- 13. What difficulties do you routinely face when teaching students using the IBL curriculum?
- 14. Do you think the use of IBL methods would help students who struggle with reading skills to read on a proficient or advanced level? Please explain.