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High School Language Arts Teachers' Perceptions of Students' Motivation to Learn in a Project-Based Learning Class

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This is to certify that the doctoral dissertation by

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has been found to be complete and satisfactory in all respects,
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Walden University
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Abstract

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By

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MFA, National University, 2006

BA, Roberts Wesleyan College, 1989

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of Doctor of Philosophy

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Abstract

Project-based learning (PBL) is a widely used methodology in the sciences for grades K-12. Forward-thinking instructors are also implementing PBL by creating student-led learning opportunities in other subjects. There is, however, a lack of research on teacher perceptions of PBL as a motivational factor in high school. The purpose of this basic qualitative study was to explore high school language arts teachers' perceptions of student motivation in a PBL class. Keller's model of motivation focusing on attention, relevance, confidence, and satisfaction (ARCS) was the conceptual framework for this study. Nine language arts teachers participated in interviews, which were coded and analyzed to better understand student motivation in a PBL language arts class. Four themes emerged from this study: (a) attention/engagement – students became active participants in a community of believers and took ownership of their learning; (b) relevance – students found personal meaning in assignments and felt they were doing something important, often related to current social issues and local community needs; (c) confidence – students developed a sense of pride in their accomplishments and abilities and enjoyed increased autonomy in the learning experience; and (d) satisfaction - students felt a greater sense of self-worth and were inspired to believe their actions could have a positive impact on the community. Using PBL as a classroom design may promote positive social change through greater student engagement with student-led projects.

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Dedication

I dedicate this study to my children Matt, Todd, Ben, Amber, Joey, Jessamyn, Isaiah, Faith, and Trea, and to my grandchildren Kingston, Jude, Declan, Barrett, Easton, Lennox, Cecilia, Eden, and Hollyn. Your love and unfailing support have always been a constant source of encouragement. I also dedicate this study to Wallace, whose stalwart belief in me continues to give me strength to press on, even though he is no longer present on this earth. Finally, I offer heartfelt praise and a prayer of thanksgiving to Jesus Christ, my Lord and Savior, Who made all the difference in my life.

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Chapter 1: Introduction to the Study

Educational reform continues to be the primary focus of educators, politicians, and concerned citizens, but also continues to be a source of confusion and contention as to what constitutes effective change (Verger et al., 2018). The recent COVID-19 pandemic has brought to light not only a greater appreciation for schools and teachers, but opportunities to improve focus and methodologies (Vegas & Winthrop, 2020). Research indicates that centuries of lecture-based instruction must give way to alternative methods of preparing students for ongoing 21st century expectations in a global market. "If we teach today's students as we taught yesterday's, we rob them of tomorrow" (Dewey, 1916, p. 167).

One way to incorporate 21st century skills is project-based learning (PBL), an instructional strategy that moves students to the forefront of their own learning and moves teachers into the role of facilitators and guides (Weiss & Belland, 2016). PBL has been in documented existence since the early 1900s when students were assigned the creation of home projects (Allison, 2018). In today's PBL classrooms, students work collaboratively in groups to solve problems, brainstorm potential topics, and employ technology to construct and present appropriate projects (Dinis-Carvalho et al., 2017). Students become active participants in their own learning and contribute to the learning of team members and classmates (Avsec & Jagiello-Kowalczyk, 2021).

According to Mishra and Mehta (2017), students born since 2000 are a new breed of learners, the first of their kind, due to their exposure to technology. The authors stated that digital information and communication technology are prioritized by students

(Mishra & Mehta, 2017). Researchers are continuing to study the implementation and effectiveness of PBL in remedial and basic academic skills classrooms in all grade levels (Hooshyar et al., 2018), particularly within the context of technology use in learning. In this study, I intend to explore teacher perceptions and perspectives regarding PBL as a motivational tool to teach language arts.

Chapter 1 includes a summary of the literature related to this study, a discussion of the research problem, and research questions The conceptual framework is discussed along with the nature of the study. Additionally, in this chapter, I introduce the research method, definition of key terms, assumptions, limitations, significance of the study, and social implications for this study.

Background

While PBL has been identified as a global teaching methodology for over a century (Habok, 2016), the practice remains limited in many areas of higher education (Guo et al., 2020). Research in the K-12 arena indicates PBL is more typically used in the sciences (Aldabbus, 2018). Other research provides guidelines for classroom projects and materials to support learning (Hooshyar et al., 2018). Researchers investigated PBL in a different discipline, exploring the effects of a PBL environment for an intermediate composition class. The authors make the claim that students, once fully engaged, tend to look forward to additional opportunities to apply their learning and reflective skills (Kumar & Refaei, 2018). This research is foundational for the implementation of additional PBL strategies in writing and composition classes. A major portion of this PBL

study is understanding teachers' perceptions of student motivation within the classroom, addressing the gap specifically regarding motivation in a language arts classroom.

Virtue and Hinnant-Crawford (2019) demonstrated the efficacy of PBL across disciplines, which provides an avenue to open PBL strategies in a variety of curricula. The authors specifically focused on writing classes for one discipline, which makes their application of PBL highly relevant to the research topic of this dissertation study. As an integral part of the PBL curriculum, Curseu and Schruijer's (2018) study of increased cognitive benefits of collaborative work demonstrated the power of the group projects. The authors encourage educators to share their expectations of student progress and to design classroom strategies that create opportunities for students to interact. Other collaborative work, primarily involving technology, informs Aarthi's (2020) study on students and social networking. Using PBL as a classroom learning pedagogy allows students greater autonomy, and Guo et al. (2020) explored the use of PBL as a design to motivate students in self-direction, as well as life skills, by providing opportunities to problem solve, execute time management, and improve communication.

While some instructors and some institutions are making the move to PBL as a preferred teaching methodology, this study will address the need for more research on PBL as a motivational classroom design in high school English or language arts classes (Irawati, 2015). Strategies and motivation for PBL implementation are often lacking in the higher grades (Boardman et al., 2021). The proposed study is needed to further explore high school teachers' perceptions of students' motivation to learn in a PBL language arts class.

Problem Statement

The problem is the lack of research on teacher perceptions of PBL as a motivational factor for students in a high school language arts class. Students require relevant instruction for better academic preparation, and at least a modicum of success to motivate them to move forward in their academic careers (Keller, 2010). When considering appropriate means of teaching and motivating composition students, educators should look to PBL as one option. When actively engaged in PBL, students take charge of their own learning and apply acquired knowledge to a project of personal relevance. Using research could aid in understanding the effect that PBL has on students' motivation (Guo et al., 2020). The problem this study will address is high school teachers' perceptions of students' motivation to learn in a PBL language arts class.

The move from such teacher-centered methodology to student-centered practices like PBL has the potential to increase student motivation and performance (Hooshyar et al., 2018). Henderson et al. (2018) indicated that finding an optimal teaching pedagogy in composition classes is both relevant and meaningful to the field of education. Many students who enroll in a composition class can be classified as "at risk" students, and PBL is one method of helping students learn required grammar and composition skills while also promoting students' need to become aware of their potential impact as writers (Kumar & Refaei, 2018) in personal and professional realms. PBL is often a teacher-guided pedagogy for collaborative assignments where instructor attitude sets the tone for learning (Hooshyar et al., 2018). With PBL, students learn not only from the teacher, but also their peers.

By applying Keller's macro model of motivation and performance with components known as ARCS (attention, relevance, confidence, and satisfaction; Keller, 2010), classroom instruction becomes a deliberate plan for reaching students and providing a springboard for the development of their own learning. Wu et al. (2022) found that instructors who apply all four components of the Keller's model noted improved student motivation and learning outcomes. Therefore, there is a need for increased understanding about how teachers perceive their students' responses to PBL as a motivational strategy, as well as how they view academic lessons as relevant for real world implementation. Although evidence exists demonstrating a shift from lecture-based teaching to more student-led learning strategies such as PBL, significant, widespread changes in education remain underdeveloped and elusive (Dinis-Carvalho et al., 2017). Stahnke and Blomeke (2021) noted the growth that occurs in teachers as they progress from novice to expert teachers because of varied experiences. Thus, teacher perceptions of students' motivation can be seen as both valid and trustworthy (Brandmiller et al., 2020; Tadesse, 2022). For this study specifically, there is a gap in the research related to high school language arts teachers' perceptions of the effects of PBL on student motivation in language arts classes.

Purpose of Study

The purpose of this qualitative study was to explore high school language arts teachers' perceptions of student motivation in a PBL class. The phenomenon being focused on in this study is high school teachers' perceptions of students' motivation to learn in a PBL language arts course.

Research Question

What are teachers' perceptions of student motivation in a high school PBL language arts class?

Conceptual Framework

Keller's (1987) ARCS model of motivational design is the conceptual framework used to provide insight into specific areas of the learning process. Motivation is important because it provides the impetus for students to desire to learn or succeed (Keller, 1979). These criteria points of attention, relevance, confidence, and satisfaction allow students to reflect on the multi-layered influence of PBL as an effective classroom design for high school language arts and the impact of such a class on future academic and career endeavors.

Writing from a perspectivist viewpoint, Keller (1987) outlined his components as ARCS: attention, relevance, confidence, and satisfaction. These provide a framework not only for assessing teacher perceptions of PBL in a language arts class, but also the means to address student needs to encourage their success (Keller, 1987). A more thorough explanation of these components will be addressed in Chapter 2. This motivational design model provides a framework by which to organize interview questions, code interviews, email prompts, and research documents. Additionally, these components provide the foundation for research analysis of teacher descriptions of their PBL experience.

Nature of the Study

This study used a basic qualitative approach and focused on high school language arts teachers' perceptions of PBL and its influence on their students' learning and

motivation. A common thread throughout qualitative studies is that “knowledge is constructed” as people go about their daily lives and create significance and value for their experiences (Merriam & Tisdell, 2016, p. 23). For this study, nine high school language arts teachers communicated their perceptions of student motivation via interviews. A major portion of this PBL study was exploring and understanding the teachers’ perceptions of student motivation within the classroom, addressing the gap specifically regarding motivation in a language arts classroom. Merriam (2009) states that a basic qualitative research study is derived from constructionism, phenomenology, and symbolic interaction, and used by researchers who want to learn more about “how people interpret their experiences, how they construct their worlds, and what meaning they ascribe to these events. The overall purpose of a basic qualitative study is to understand how people make sense of their lives and their experiences” (p. 23).

Data Sources

The source and analysis of data are based on the requirements for a basic qualitative study. Data will be collected from researcher-designed, open-ended, semi structured interviews. Participants will be sent an invitation to participate (Appendix A), as well as the protocol for interviews (Appendix B). Sample questions will be emailed before the initial interview to allow participants to reflect more deeply on their PBL experience, along with their intrinsic and extrinsic motivation in a PBL language arts class. Interviews are tied to current research. Data will then be transcribed and summarized and sent to participants for review.

Definitions

Project-based learning (PBL): A pedagogical approach that guides students to create a project that addresses an ill-structured problem (Fischer, 2015). The instructor takes on the role of facilitator, and learning is student-centered and collaborative.

Motivation: Motivation is defined as the impetus that drives an action (Keller, 1987a). Such impetus may be intrinsic or extrinsic or both and can vary depending on the situation. The action in this study is the willingness to participate in classroom PBL activities and share in personal and group assignments.

Traditional learning: A pedagogical approach that is primarily teacher-centered with a focus on the impartation of knowledge through lecture and group discussion in a typical classroom environment (Al Said et al., 2019).

Assumptions

An assumption is the acceptance of unexamined views or theories. There are a few assumptions about the teacher population for this study. First, it is assumed that teachers in these language arts classes who participate in this study have consistent experiences with PBL throughout the course. This means that teachers provide students with a detailed description of PBL and the expectations for their particular class. This is important because this study focuses on teachers' perceptions of their lived experiences in a language arts class with PBL as the instructional approach. Second, it is assumed that teachers will be able to recognize distinct differences between the PBL methodology and traditional lecture methodology, and they will be able to describe the effects of PBL on

their students' motivation. Third, this study assumes that participants will be honest and contemplative throughout the interviews and written portions of data collection.

Scope and Delimitations

Scope and delimitations refer to boundaries and rationales for those boundaries regarding a specific study. The scope of this study is limited to the unique experiences of high school language arts teachers with the specific phenomenon of PBL in their classrooms. The study is bound by the limited number of high school language arts teachers who teach a PBL composition course. The understanding of PBL and student motivation may be extended to other environments.

Limitations

Limitations refer to design or methodology choices that may affect this study (Simon & Goes, 2013). Limitations may occur because I am the sole researcher collecting and analyzing data. As a proponent of PBL as a classroom design, I will minimize potential bias by implementing bracketing and epoché strategies outlined in Chapter 3 that address the issue of researcher bias. The instructor's teaching style and other factors may limit student responses in any number of ways.

Significance

The significance of this study was determined in relation to (a) its original contribution to research, (b) improving practice in the field, (c) furthering innovative learning and instruction, and (d) contributing to positive social change. As an original contribution to research, motivational models and PBL strategies are to be explored as they influence and relate to composition students and instruction. Although motivation

and PBL components have been individually explored in depth, they have not been studied together in high school language arts classrooms, which is how this study may advance knowledge in the field. A better understanding of high school language arts teachers' perceptions related to motivational factors in a PBL course can provide a foundation for future research that may, in turn, provide instruction that increases student motivation (Hooshyar et al., 2018) related to learning grammar and writing skills. In relation to improving practice in the field, a greater understanding of the efficacy of PBL in writing classes via the documentation of increased motivation to learn may influence educators to adapt some or all PBL strategies to enhance student motivation and learning and make composition more relevant for real world use. In relation to furthering innovative learning and instruction, this study seeks to bridge the gap between traditional composition instruction and the need for a collaborative, technology-based focus that will continue to positively inform students as 21st century learners and leaders. Finally, this study will provide a workable framework for positive social change directly as a result of increased student engagement in PBL.

Summary

This chapter introduced the study of high school language arts teachers' perceptions of PBL on their students' motivation to learn. The background section includes a summary of the research literature related to this study. The problem statement and purpose of the study focus on the need to explore and understand high school Language Arts teachers' perceptions of PBL on their students' motivation to learn. The research questions provided a guide for inquiry and the conceptual framework provided

an introduction to Keller's (1987) ARCS model of motivational design, which will be examined in detail in Chapter 2. Definitions included a basic understanding of the most significant terms. Assumptions, scope and delimitations, and limitation all noted boundaries for the research. The significance of this study is that it may contribute to increased knowledge of PBL in a high school education setting, specifically in composition classes. It is also significant because it may promote greater student engagement, and student-led projects that will have a positive social impact.

Chapter 2 includes a review of relevant literature on PBL. It includes a brief description of PBL as it pertains to high school language arts classes. The conceptual framework used for this study is Keller's (1987) ARCS model of motivational design. Chapter 2 provides a thorough review of current literature related to the key PBL concepts for this study.

Chapter 2: Literature Review

This study explored high school language arts teachers' perceptions of students' experiences in a PBL class. This study also addresses the gap in the literature concerning PBL as a motivational class design for college composition students. Specifically, for this study, there is a gap in the research related to high school English teachers' perceptions of the effects of PBL on student motivation in Language Arts classes. Instructors and administrators at the secondary school level need to consider how to best present basic language arts classes to ensure student success. The purpose of this basic qualitative study was to explore high school language arts teachers' perceptions of student motivation in a PBL class. The phenomenon being focused on in this study is student engagement with PBL.

Teacher perceptions about their students' experiences in a PBL composition classroom provide greater understanding for instructors and administrators regarding curriculum design. This literature review encompasses both traditional and non-traditional methods of teaching writing, current trends in PBL, and student motivation. The central theme of this study also lends itself to the recent literature on constructivism, collaboration, and 21st century learning skills. In this chapter, I will discuss the conceptual framework for my study, an overview of PBL, teacher perceptions of student motivation, and a final summary.

Literature Search Strategy

A thorough search of databases provided literature for the broader topics of grammar, motivation, and PBL. Additional search terms included *higher education*,

attention, relevance, confidence, satisfaction, problem-based learning, innovation, writing, and other synonyms of these terms. As literature was gathered, reference lists were generated in Evernote™, Papers™, and Scrivener™ and analyzed for consistency. Databases used included Education Source, Education Search Complete, ERIC, PsycINFO, and multidisciplinary databases, including Sage Premier and ProQuest. The literature search encompassed a plethora of research journals, as well as additional readings from other academic sources.

Conceptual Framework

In this study, I used Keller's (1979, 1987) ARCS model of motivational design as a conceptual framework to study the phenomenon of students' motivation in a PBL high school language arts course. It must first be understood that PBL is an inherently constructivist pedagogy, which means students create their own knowledge with varying degrees of depth based on their engagement while in the process of determining, planning for, and executing a final project that is their solution to a proposed problem (Dinis-Carvalho et al., 2017; Shadiev et al., 2020). While engagement and its role in attention will be discussed in a later section, it is important to note here that many students have become accustomed to passive learning rather than the active, participatory behavior as required by PBL (Avsec & Jagiello-Kowalczyk, 2021). In the classroom, constructivism is a mutual responsibility for students, as well as the teachers who act as facilitators in this process (Cheng et al., 2021; Dinis-Carvalho et al., 2017; Lozano et al., 2017).

While students benefit from formal education that provides facts and theories, there is also benefit from the informal, which allows students to practice, reflect on, and

develop their own understanding (Swart, 2018). Some of these informal practices assist in making students' thinking visible (Stehle & Peters-Burton, 2019). Group discussions, journaling, and board activities such as mind mapping are all methods that encourage students to see their thought processes. Practiced PBL instructors learn to identify student struggles and create a constructivist atmosphere by facilitating any or all these strategies (Allison, 2018). By developing their skills as critical thinkers, asking important questions, and exploring multiple solutions, students are better able to obtain and organize data for the construction of new information and the completion of an appropriate project.

Keller's (1987) approach evolved from his macro model of motivation, which is grounded in expectancy-value theory and based on the works of Tolman (1932) and Lewin (1938). As Keller continued to adapt the ARCS model to today's learners and a technology-driven society, more theoretical underpinnings emerged such as cognitive load theory (Sepp et al., 2019), basic principles of instruction (Merrill, 2002), multiple intrinsic and extrinsic motivational studies, and volition (Kuhl, 1987), which became an additional component of the ARCS model, but will not be a primary focus of this study. This broad theoretical base led Keller to develop a model of motivation that bridged the gap between the study of motivation and its implementation in the classroom as an adaptable design for all learning environments (Keller, 1987a, 1987b).

Prior to Keller's contributions, motivational theory primarily focused on aspects of motivation and outcomes such as successes associated with job performance (Keller, 1987a). Both in the work force and the educational arena, motivational strategies tend to

focus on moving the workers or learners forward by stressing that greater effort equals greater output (Keller, 1987a). Such strategies fail to assess personal needs, existing intrinsic motivation, and attractiveness of extrinsic rewards (Keller, 1987a, 1987b). Thus, the ARCS model was derived from Keller's original macro model of motivation (Keller, 1979) and broken down into four components: attention, relevance, confidence, and satisfaction. It is important to note that this is not behavior modification strategy, and the design was originally intended for any typical classroom (Keller, 1987a). The model can be adapted for a plethora of situations and learning environments, but this study will focus on student-led learning classrooms.

Keller's theory encompasses four components that contribute to student potential for success, which refer to achievement and personal feelings of accomplishment. Attention, relevance, and confidence are the individual components that speak to how information is received and perceived. The final component completing the ARCS model is satisfaction, which is the sum of the success, or lack thereof, of the first three components, as perceived by an individual (Keller, 1987a, 2000, 2010a). Taken together, the components assist in understanding what motivation is and how each component can be implemented to maximize motivation (Keller, 1987b; Keller, 2010c).

The first component, attention, refers to student responsiveness. Keller (1999) stressed that variety is key in not only gaining attention, but in sustaining it (Keller, 1999, 2010a). Instructors should have a repertoire of strategies that keep students attentive and curious. Such strategies may include using various forms of technology or engaging in presentations, role-playing, and games (Keller, 1987a, 2008, 2016). Students'

expectations are kept off balance, which sustains attention at optimum levels and speaks to individuals' needs for sensation (Zuckerman, 1971).

Relevance is the second ARCS component and is linked directly to learners' goals. Some students are normally high achievers with strong intrinsic motivation and adaptable learning styles (Keller, 2010a, 2010b). Those attributes, coupled with the desire for the extrinsic reward of high grades, attach relevance simply because of that desired outcome. Relevance is the area where teaching strategies that encompass real world or simulated real world experiences enhance personal interest in a subject are often referred to as authentic learning (Keller, 2010a). Such authentic learning opportunities have their root in constructivist literature (Duffy et al., 1993). Participation in apprenticeships or project-based activities may enhance relevance for students who do not normally have a strong intrinsic motivation. In today's competitive world, students want to know that what they are learning has real-world application.

The third component of the ARCS model is confidence and is perhaps the most complex component. This motivational area draws from Bandura (1977), self-determination theory, attribution theory (Weiner, 1974), and goal-orientation theory (Dweck & Leggett, 1988). Confidence comes from students believing that they are capable of success; however, confidence does not increase if tasks are too simple or if they are so difficult that no amount of effort will achieve success (Keller, 2010a, 2010b). For example, cognitive load theorists (Fleming & Levie, 1978) stated that intrinsic motivation expands the load capacity, but when students have personal, academic, or other stressors happening simultaneously, their capacity is significantly decreased.

Keller's (1987a, 1987b) ten-step analysis plan and simplified analysis plan (Keller, 2000) provide tools to assess student strengths and weaknesses in each component area. The confidence component of analysis is the area most likely to delve into non-academic aspects of students' lives (Keller, 2000). While instructors cannot be expected to solve personal and social problems, strategies may be modified to better ensure students' belief in their ability to succeed. A preliminary, author-involved study (Keller, 1987a) of the ARCS model in practice revealed that teachers who focused on personal motivational issues of students experienced more instructor frustration and little improvement in student confidence. However, instructors who concentrated on learning projects had greater success with student demonstration of confidence (Keller, 1987a).

The final component is satisfaction, which describes student attitudes about their learning experience, thus encouraging greater motivation for moving forward academically or professionally. The adage, "success breeds success" is the focus of the satisfaction component; however, it is not enough to simply create a "feel good" atmosphere. There must be a balance between extrinsic rewards and the maintaining of intrinsic motivation (Keller, 2010a). Akin to the perception of relevance, real-world application creates an opportunity to show what students know, which can create deep feelings of satisfaction. Additionally, positive student assessment of the actual course work required means they felt the workload was appropriate, they were treated respectfully and fairly in the class, and that the instructor showed professional impartiality when grading assignments (Keller, 2010a).

The four components of the ARCS model are distinct and purposeful; however, each one is essential to elicit motivation from students. Keller's (1987a) design model details steps to implement motivational strategies for each of the four components. Huett et al. (2008) found that focusing on a single ARCS component is not as effective as using the entire model in tandem. Keller leaves exact actions to the instructors, stating that they are the ones who best know what strategies will most likely produce positive results in the classrooms. This heuristic approach gives instructors flexibility when creating lesson plans (Keller, 1987a) and can be adapted to almost any environment, whether it is a traditional face-to-face classroom or any kind of online learning.

ARCS Used in Previous Research

Numerous studies have been conducted using Keller's (1987a, 1987b) approach as both a model for designing classroom instruction, as well as a model for studying motivation. Keller described the unique results as perspectivism (2010c), which conveys the idea that the phenomenon being studied or considered has a great deal of validity within the context of the explicit research, but findings are often difficult to replicate outside the given study. In an interview with Keller, he stated that there is no lack of research on motivation, but very little on the synthesis of motivation and classroom design, noting, "motivation is a fundamental and necessary component of the learning process" (Simsek, 2014, p. 91). Thus, the current research reflects diverse examples of the ARCS model implementation and effectiveness.

Problem-based learning has been studied in several ways, but student motivational experiences in PBL courses have not been well documented (Guo et al.,

2020; Lozano et al., 2017). PBL is typically studied as either an innovative pedagogy or from the viewpoint of instructor implementation (Guo et al., 2020). Other PBL studies focus more on components of the pedagogy such as collaborative learning and student-led learning (Chen & Chang, 2016; Johri, 2015). Examining motivation is important for this study because PBL is not as prevalent in secondary and higher education, and thus may be a factor in reducing attrition, especially for students who lack some of the skills necessary for future college success (Lozano et al., 2017). Of the many ways that motivation can be studied, the ARCS model is the best choice for several reasons. First, ARCS as a design model has been shown to improve student motivation (Cheng et al., 2021; McMahon et al., 2019). Therefore, using the model to study a phenomenon, even if the ARCS model was not overtly used to design the PBL experience, will help determine which elements of motivation students experienced, as perceived by their teachers. A second reason the ARCS model is a good fit for this study is that the four elements are well defined and will provide structure for both data collection and data analysis.

The lecture is the traditional mode of instruction for high school and college (Cheng et al., 2021; McMahon et al., 2019). Instructors typically focus on the quality of lesson content and expect students to be responsible for their own motivation; however, in his meta-analysis of ARCS studies, McMahon (2019) reported that roughly 30% of students who are highly motivated achieve greater success than their peers. Study results have led researchers to promote professional development and other faculty learning opportunities to focus on honing appropriate skills in classroom motivation, contending that teachers should be responsible for student motivation (McMahon et al., 2019).

High school teaching requires instructors to create a class design to meet the needs of students coming from diverse backgrounds, have a broad range of academic prowess, and have differing levels of intrinsic motivation. Keller advised instructors to conduct knowledge surveys including his own or one based on Gagne's taxonomy to assist in the class design and implementation of the ARCS components. Diverse skill levels in the classroom are an area that require further study, but the lack of research highlights the necessity of catching and sustaining student attention, thus preparing them for relevance (Zimmer & Matthews, 2022). The ARCS model requires instructors to ask how they will capture and sustain attention, how to make content relevant, how to boost student confidence, and how to leave students with a satisfying academic experience.

Researchers and instructors have implemented the ARCS model and confirmed both its adaptability as a classroom design and positive effects on student performance. Aşiksoy and Özdamli's (2016) mixed methods study in a flipped classroom revealed improved student self-sufficiency and higher grades than the control group. In KunLi et al.'s (2018) quantitative study, students were observed in a math class where a video was used to capture attention and create relevance and confidence, which was significant due to the established assessment that many students enter required college math classes with poor attitudes.

Recently, role-playing games have become more popular in today's classrooms. Instructors used the ARCS model to create and implement such games as part of their lessons (Aldemir et al., 2018; Wan-Chen et al., 2021). The ARCS framework was used to study motivation in classrooms using virtual teaching strategy, gamification, role-playing,

or the use of video or in Second Life (Weiling et al., 2018). Additionally, Wahyudi et al. (2017) noted that instructors could use ARCS as a constructivist framework to encourage students to move from emphasis on extrinsic motivations, such as grades based on performance, to intrinsic motivation based on increased confidence in their own learning and satisfaction derived from using their academic experiences in real world situations. These studies show the ARCS model as a flexible framework that returns focus to student needs and creates a plan to meet those needs in a variety of classroom settings.

In other research, the ARCS model has been shown to be effective in studies focused on distance learning when implemented as the framework for the classroom design (Malik, 2014). The model worked synergistically with scaffolding to engage online nursing students (Gormley et al., 2012) as part of a well thought out classroom design. However, unless learners have strong intrinsic motivation, they often have greater challenges with online classes, due primarily to an increased sense of isolation (Malik, 2014). Such challenges typically appear as low marks in the confidence category of the ARCS model when students are assessed prior to and during their online learning experience. Left unaddressed, this phenomenon often leads to a high rate of attrition (Boatman et al., 2017). Keller (1987a) stressed the need for instructors to assess the strengths and weaknesses of students to best meet their needs, including those who are statistically more likely to drop out of school. Even when time or curriculum demands limit such assessments, the ARCS model can still enable meaningful learning and structure by addressing each crucial component.

Although the positive effects of the ARCS model classroom design on student motivation are well demonstrated (Cheng et al., 2021; McMahon et al., 2019), quite a few researchers found that instructor feedback was equally motivating (Malik, 2014; Wan-Chen et al., 2021; Weiling et al., 2021). Researchers stressed the need for faculty training to recognize and understand student motivational needs and how to best implement the ARCS model for optimum effectiveness (Wu et al., 2022). It should be noted that there is little qualitative research on using the ARCS model to explore student attitudes about motivation. A careful search of the databases revealed a few mixed methods studies that favored quantitative analysis, but also used interviews to explain or expand student reactions to a study's specific learning environment (Aşiksoy & Özdamli, 2016; Huang et al., 2014). Wu et al. (2022) and Huett et al. (2008) found that research is lacking in the area of student motivational needs, particularly in some areas of higher education. Broadening the search to motivation and phenomenological studies in higher education revealed only a few current articles (since 2012) that focus on student motivation (Brand, & Millard, 2019; King & Boyatt, 2015). A recurring theme of current research is teaching methodologies that show some success in the area of student motivation; however, that focus is broadening to include studies on teaching strategies that emphasize 21st century skills and student-led learning. PBL is an innovative, 21st century pedagogy that deserves a closer look to explore student attitudes towards classroom design and motivation.

PBL and Student Motivation

Keller (2010) defines motivation as "that which explains the direction and magnitude of behavior" or "the goals people choose to pursue and how actively or

intensely they pursue them" (p. 4). Motivation, in general, can be loosely assessed by the levels of student engagement and dedication to pursuing a task or solution. Such engagement requires a challenge. Instructors should seek to find a balance between the demands of the challenge and the ability of the students to locate and synthesize pertinent information. These challenges and successes create an impetus for continued engagement, thus completing the circle of learning (Hanney, 2018).

Studies of successful implementation of PBL revealed that instructors described PBL as appealing and inspirational (Dinis-Carvalho et al., 2017). In general, Shadiev et al. (2020) found that students were motivated by the process of self-directed learning and the ability to make their own choices when it came to creating projects. Working in groups to develop meaningful projects heightened student motivation, increased a unified sense of belonging, and allowed students to apply what they learned in a relevant fashion both academically and professionally (Dinis-Carvalho et al., 2017). While these findings support PBL as an effective classroom design, Manganelli et al. (2019) posited that students performed at higher levels when they were motivated, whether intrinsically or extrinsically. Understanding what triggers motivation in students is crucial to creating positive outcomes in PBL classrooms. Keller's (1979) model of motivation breaks these triggers down into four synergistic categories – attention, relevance, confidence, and satisfaction.

Attention

Attention is defined by Keller (1999, 2010a) as not only capturing students' active interest, but also sustaining it over the necessary time period. Dinis-Carvalho et al., 2017

noted the relationship between active learning and student engagement and the authors recommended the concept of "imagining" projects of engaged students when focusing on improving 21st century skills. Indeed, PBL as a constructivist-based, active learning design, is expected and proven to promote increased and improved critical thinking skills and willing student participation in lessons and activities (Shadiev et al., (2020). Students responded positively to PBL because the curriculum was engaging, provided them autonomy, and motivated them to actively participate (Guo et al., 2020).

Relevance

Relevance, specific to PBL, refers to the connections students make between classroom learning and their goals and interests (Keller, 2010a). Highly motivated students may enjoy learning for the sake of learning, but a majority of students do not see lessons as relevant unless they relate to real-world application (Galvan & Greenhow, 2019). On a very basic level, PBL provides an environment for students to grow as individuals and relate their project development and completion to personal and professional goals, both directly and indirectly (Dinis-Carvalho et al., 2017). Further, the reflection aspect of PBL gives students the opportunity to explore and interpret their experiences to deepen their learning and give it a broader application (Du, 2020; Husserl, 2017). PBL allowed students to make the leap from "novices to experts in the domain of knowledge" (Al Said et al., 2019 p. 73). Students put forth greater effort when projects involving community partners depended on them going beyond the mere learning of facts to interpreting and applying the knowledge to create meaningful projects (Guo et al., 2020).

Confidence

Student confidence relies not only on the belief that success is possible, but also on some aspect of overcoming challenges in the attainment of that success (Keller, 2010a) and it usually applies to both the student's personal and academic traits and beliefs (Keller, 2000). Teachers who sympathize with students who have personal challenges found that student confidence increased overall when they engaged in the creation of meaningful projects (Keller, 1987a). The complexity of confidence is related to student motivation and eagerness to make real-world connections while enjoying reduced stress due to increased autonomy in a PBL classroom (Du et al., 2020). Indeed, exit surveys showed students had greater confidence in their critical thinking skills, problem-solving skills, and the ability to complete a project (Henri et al., 2017). PBL, when done well, provides the opportunity for all students to enjoy success, see an increase in intrinsic motivation, and move forward with greater self-esteem and confidence in their newfound or recently honed personal and academic skills (Al Said et al., 2019).

Satisfaction

According to Keller (2010a), students need to experience satisfaction or a feeling of fulfillment based on their pleasure with the class outcomes and their increased sense of motivation and commitment towards accomplishing future goals. While students may be pleased with their progress during the learning process, it is the reflection that takes place after completion of the project that allows students to ascribe satisfaction to the learning experience, collaborative work, appropriateness of assignments and grading, and the

feeling of success (Al Said et al., 2019; Dinis-Carvalho et al., 2017). Encouraging students to engage in a written reflection of their PBL journey can be empowering as they consider not only what they learned, but how to make that information relevant and meaningful in all quadrants of their lives (Du et al., 2020).

ARCS and PBL in a High School Language Arts Classroom

My proposed study will benefit from the ARCS model in several ways. First, the conceptual framework will be used to organize how data are collected in this study and will serve as the framework from which research questions are generated. Second, this study will use Keller's (1979, 1987a, 1987b) ARCS model of motivational design to provide an organized way to study high school teachers' perceptions of their students' motivation in a PBL language arts class. In preparation for data collection, interview questions aligned with the research questions will focus on the four elements of the ARCS model.

The conceptual framework will also be used during the data analysis phase of my study. The ARCS model will serve as a framework to categorize student responses to interview questions. The research questions separate each of the components into individual motivational sections elements where students can address each component on its own merits and share their perceptions of the effectiveness of PBL as a motivational strategy in a language arts class. These responses will form the basis for the coding process, provide a thorough analysis of teacher perceptions of student attitudes regarding each component, explore their overall perceptions of PBL as a motivational strategy in their classroom, and consider its potential for effective use in other disciplines. Keller

(2010a) stressed that the adaptable design of the ARCS model is ideal for any teaching situation. Researchers noted the need for further study of PBL as a classroom design in higher education (Johri, 2015; Lozano et al., 2017) and the ARCS model, as a flexible framework, would allow further and much needed exploration in this area of study.

Literature Review of Key Variables and Concepts

The following sections of Chapter 2 provide a more in-depth analysis of PBL key variables and related concepts. These include an overview of PBL, defining PBL, differentiating between project versus problem-based learning, the history of PBL, PBL as an innovative instructional strategy for 21st century learning, PBL and technology, PBL and student outcomes, PBL and student motivation, and implementation of PBL in writing classes, as well as a brief discussion of teachers as experts in their classrooms, which pertains to my study of teachers' perceptions of student motivation in PBL classrooms.

Overview of PBL

Innovation is a key word in educational programs throughout the world. Helping students of all ages achieve academic success that translates into real-world professional, social, and life-competence skills is an admirable, albeit daunting, goal. PBL is one innovation that has the capacity as a teaching and learning strategy to address 21st century learning needs for today's students (Avsec & Jagiello-Kowalczyk, 2021).

Learners are looking for practical and applicable knowledge that comes from collaborative efforts and the solving of real - world problems (Wiek, 2014). Such an innovation requires a shift from well-established practices such as dependence on lecture

methods and teacher-led instruction (Johri, 2015). This shift, even in local or isolated classrooms, still benefits students, teachers, and communities. In this era of educational flux, with controversial issues such as standardized testing and increased governmental controls over curriculum, PBL stands out as one innovation that has been shown to positively affect student learning (Chen et al., 2019). In order to explore the benefits of PBL, a general definition is required as well as a discussion of its history, roots in constructivism, and its modern application to 21st century skills.

Defining Project-Based Learning

There are multiple definitions of PBL, but most share common elements. PBL falls under the broader umbrella of inquiry-based learning (IBL), which includes self-directed learning (SDL), self-regulated learning (SRL), active learning, and problem-based learning (PmBL), which will be discussed in a later section. It is not uncommon for PBL to have slightly different meanings in other countries or be used in unique ways depending on the discipline (Fischer, 2015; Hanney, 2018). Many researchers, however, agree that PBL should encompass elements of collaborative learning, student-led instruction, critical thinking skills, problem-solving, decision-making, and the construction and presentation of a significant project that typically involves real-world application (Allison, 2018). This broad definition of PBL lends itself to multiple classroom scenarios and makes it clear that traditional teacher-led instruction must be re-thought. Hou (2014) argued that PBL might be a better choice for students who have already completed basic classes where the information is presented to the students, but Johri (2015) stated that traditional teachers with their customary classroom strategies

need to reassess their effectiveness and practicality in a world that is craving innovation. Alrajeh (2021) used a phenomenological approach to explore the perceptions of teacher candidates regarding their training in and practice of PBL and reveal a deeper understanding of their lived experiences. PBL encourages students to own their work on their projects and encourages them to look beyond the classroom (Chen et al., 2019). The flexibility of PBL means that there is the potential for more and deeper discussions about areas of interest or even areas where students need instructor guidance (Stehle, & Peters-Burton, 2019). The broad definition of PBL allows instructors autonomy when designing lessons while still providing a framework of the basic components.

In an attempt to define PBL, it is important to understand the multiple ways PBL can be used in the classroom. One purpose of PBL is to involve students in their own learning and teach a variety of 21st century skills (Avsec & Jagiello-Kowalczyk, 2021). Chief among these skills are creativity, problem solving, technology proficiency, collaboration, communication, and critical thinking (Avsec & Jagiello-Kowalczyk, 2021; Dinis-Carvalho et al., 2017). PBL allows students to build on what they know through meaningful activities (Al Said et al., 2019; Dinis-Carvalho et al., 2017), or use existing knowledge in new ways, "reconstructing their intellectual knowledge" (Chen et al., 2019, p. 470). PBL has been shown to flourish best with dynamic teachers who provide continual feedback and formative assessments throughout the project process (Dinis-Carvalho et al., 2017). Researchers Chen et al. (2019) found that students who experienced the constructivist environment of PBL demonstrated greater self-efficacy, improved collaborative skills, and improved test scores when compared to students in

traditional (lecture-based) classrooms. However, the ultimate success of PBL depends on learners' cooperation (Swart, 2018). The construction of new knowledge is a collaborative process, but it is up to students to adapt to the changes of this inquiry – based pedagogy.

Another purpose of PBL focuses specifically on higher education practices, although current implementation of PBL at the college or university level is far behind K-12 education (Guo et al., 2020; Manganelli et al., 2019). Many instructors in higher education employ some form of lecture in their classrooms; however, lecture-based teaching has been called into question for its effectiveness (Aşiksoy & Özdamli, 2016; Konrad et al., 2020). Traditional teacher-led instruction does not allow most students the means to recognize their own learning needs or address their learning styles (Swart, 2018). One purpose of PBL is to shift classroom designs that are conducive to involvement in new and relevant experiences, making it a valuable methodology to encourage student engagement. Despite the general lack of PBL in colleges and universities, (Dinis-Carvalho et al., 2017) found that PBL in college engineering programs offered students an opportunity to expand their problem-solving skills by creating real-world projects such as oil collection inventions for deep water oil spills or improved water collection and purification devices. Such studies reinforce the effectiveness of PBL in higher education, which has lagged behind the K-12 arena, both in practice and in research (Guo et al 2020; Lozano et al., 2017; Manganelli et al., 2019). Moving away from lecture-based learning is a shift for many college faculty; however, students who participated in PBL generally rose to the challenges of putting forth more

effort, thinking more creatively, and focusing more on the quality of their work (Al Said et al., 2019). Thus, instructors and students often define PBL by describing its objectives and results in actual classroom experiences.

Project-based Learning versus Problem-based Learning

In order to further define PBL, it is useful to understand the closely related problem-based learning (PmBL). Both PBL and PmBL share attributes that lend themselves to self-directed learning, collaboration, deep critical thinking skills, improved communication, focus on real world problems, and self-regulation skills (Du et al., 2020; Konrad et al., 2020; Stehle, & Peters -Burton, 2019). Researchers Kalkan et al. (2013) and Johri (2015) combined the strategies and considered them two sides of the same pedagogical coin. (Meral et al., 2016) stated that researchers do not agree on any specific difference between the two, although they admit there are differences.

The primary dissimilarity between the two strategies is that PmBL focuses on solving an ill-structured or complex problem, ideally with more than one solution, dealing with real-world situations (Allison, 2018). Students work cooperatively to solve the problem, which may span more than one discipline (Hanney 2018). PBL, however, focuses on the creation of a clear project or product that is developed in response to a problem (Allison, 2018). Meral et al. (2016) clarified the differences in the strategies, stating PmBL focuses on obtaining and analyzing knowledge, while PBL focuses on the application of that knowledge. Because of the complementary nature of these pedagogies, several researchers have suggested that they be combined for a richer learning experience (Allison, 2018). Discerning the key attributes of PmBL and PBL is important because the

differences in the two pedagogies' structure informs specific curriculum design and leads to completely different outcomes. While both PBL and PmBL share common design attributes, they are best understood as separate pedagogies that can complement each other, or as stand-alone strategies used for specific purposes within a given classroom.

History of PBL

Understanding PBL in a historical context provides evidence that the educational scenery is shifting from lecture-based instruction to student-led learning. PBL is a student-centered approach that has been employed in various forms by American schools for over a century (Fischer, 2015). The concept of PBL is a broad one and is highly adaptable to a variety of educational scenarios. While PBL has enjoyed a long history in the K-12 arena, particularly in the sciences (Guo et al 2020; Konrad et al 2020), higher education has a much lower incidence of PBL, and traditional teaching methods remain a strong constant (Guo et al 2020). The focus now is on helping students develop 21st century skills and acquire a firm grasp of applicable technology (Allison, 2018). Allison (2018) noted that PBL transforms learning from passive to active, providing students with opportunities for collaborative learning, improved critical thinking skills, and a greater sense of autonomy and ownership of the learning process and results. Indeed, immersion in projects may cause students to become experts in a particular area (Fischer, 2015). Thus, it is important to more fully explore PBL as an innovative 21st century instructional strategy and its relationship with technology.

PBL as an Innovative Instructional Strategy

A crucial component of current curriculum goals is the acquisition of what is known as 21st century learning skills. These skills are comprised of critical thinking, problem-solving, collaborative learning, research abilities, and self-directed learning (Henri et al., 2017; Shadiev et al., 2020). PBL is an inherently collaborative learning strategy (Hou, 2014) where students engage in group discussions, conflict-resolution, and communal problem-solving (Husserl, 2017). Students typically begin with a project as an end goal and then work toward its completion by participating in these collaborative activities (Lozano et al., 2017), which have additional positive effects such as deeper understanding of subject matter and improved communication skills (Chang & Chen, 2016; Dinis-Carvalho et al., 2017). Researchers noted that not all students have positive collaborative experiences (Chang & Chen, 2016), so faculty oversight and guidance is essential for student success in a PBL curriculum (Chang & Chen, 2016).

PBL and Technology

The inclusion and advancements of technology in the workforce means students need to be provided educational opportunities that will give them the necessary skills to succeed in the 21st century. As technology expands and more of the workforce becomes global, PBL helps education to move from a formal theoretical base to practical training for success in real-world work experiences. Cheng et al. (2021) stated that the primary purpose of schools in the last century focused on the "what," but today's schools that focus students' attention on the "how" will be pivotal as those students navigate the sweeping changes in the workplace created by technology. In addition to networking and

collaborative activities, technology expertise must be an integral component of today's curriculum (Cheng et al., 2021; Hou, 2014) and PBL is recognized as an effective learning strategy to achieve that goal (Al Said et al., 2019; Henderson et al., 2018).

Allison (2018) found that PBL provided the framework for students to create videos and use their experiences to become media-literate. While not every student is computer literate, the collaborative nature of PBL allows students to learn and improve their technology skills at the peer level (Allison, 2018). Hou's (2014) research revealed that students in a PBL digital storytelling class used technology to create, store, organize, and present data. Such use of technology expands the capacity for topical research, greater understanding about how to use technology, and offers experience integrating technology into presentations (Shadiev et al., 2020) This practical knowledge may be part of actual technology instruction or a byproduct of researching and presenting meaningful projects. Navigating the information age is crucial for success, and researchers declared, that because of its adaptability to almost any instructional need, PBL is "one of the best teaching methods in the 21st century" (Allison, 2018). Such an endorsement encourages educators to implement a learning strategy that enables and empowers students to become highly skilled in technology.

PBL Benefits and Challenges

With the focus on 21st century skills, PBL is a learning strategy that bridges the gap between education and experience (Cheng et al., 2021). However, as with any strategy, there exist both benefits and challenges. Effort and planning are required for PBL to create an environment conducive to exploration, learning, and creating. Equally,

overcoming obstacles is vital and oftentimes exceptionally challenging for instructors and students.

Benefits

One benefit of PBL is that it is an adaptable strategy that allows instructors to create a class framework where students build on their own existing and new knowledge and the knowledge of their classmates in order to discover and create meaningful projects. Such projects may provide real-world and/or service-related experiences. Tasks that would not ordinarily be considered part of traditional assignments and may include interdisciplinary learning, as well as project ownership and increased motivation, can provide students with real-world experiences (Guo et al., 2020; Lozano et al., 2017). This also provides the opportunity to develop and enhance creative thinking and inquiry-based learning skills that will offer foundational expertise for future employment (Stehle, & Peters-Burton, 2019; Brew et al., 2017). Another benefit is that instructors who facilitate collaborative learning environments found that their students "achieved better performance on transfer skills with less investment of mental effort than individual learners" (Chen, 2016, p. 459). Learning is acquired by undergoing the process of creating a project. In the case of real-world work-related projects, students have the opportunity to interact with live clients and develop projects that bring understanding, awareness, or solutions (Hanney, 2018). A final benefit is that project-based learners, either in real-world or service-related situations, become doers in the community and are provided networking avenues, career knowledge, and positive social change opportunities. Lancaster et al. (2022) found that students felt rewarded by their

community involvement and learned to hone written communication skills through the practice of creating and responding to documents required for their particular project.

In summary, such practical learning is oft referred to as a journey (Cheng et al., 2021) and the beneficial examples discussed here demonstrate the multitude of skills students must develop and draw upon to complete their projects. The diversity and flexibility of PBL means that students can create projects for almost any academic discipline. Collaborative learning enhances this process and encourages deep thinking, creativity, and problem-solving (Deveci, 2018).

Challenges

PBL is not without challenges. In general, students conditioned to taking notes and focusing on test answers, objected to the PBL environment; specifically, students from all grades and subject disciplines resisted collaborative efforts and struggled to make sense of the requirements and responsibilities of the PBL classroom (Guo, et al., 2020). Lozano et al. (2017) found that, while PBL is becoming more widespread in academia, to date it is primarily the purview of science and engineering students, many of whom are high performing students. Some of these students stated that projects did not create new knowledge. A further challenge is that more thought is needed when developing appropriate curricula that allow students to increase their learning, but even well thought-out plans are difficult to implement in the face of student opposition (Hanney, 2018; Lee et al., 2014). Such requirements put additional stress on instructors unless they are given adequate training and support. Additionally, PBL requires advance instructor planning, student training, and potentially challenging tasks such as developing

appropriate assessments. PBL teachers may have to use a variety of grading approaches (Fischer, 2015). There are also discipline-specific challenges as Hanney (2018) noted for students in a media class where assigned projects exceeded student capabilities. Learners in such specialized classes may be expected to have more knowledge or skills than is practical. Hanney (2018) stated that students need better preparation for such tasks or the tasks need to be modified to encourage student success.

Despite the challenges of PBL, researchers urge instructors to praise all successes and encourage self-regulated learning (Stehle, & Peters-Burton, 2019). Hanney (2018) stated that the focus of education needs to shift to emphasize the process of learning as much as the outcome. Meaningful projects have the power to affect and impact more than just the students who work on them. Teachers, administrators, and communities also have the opportunity to intersect and create significant connections that serve to broaden and enhance learning opportunities (Lancaster et al., 2022). Hanney (2018) referred to such learning experiences as transcendent and intuitive, "where creative play [is] celebrated (p. 9) with potentially endless innovative possibilities.

Implementation of PBL in Writing Classes

Studies about using PBL in high school or college writing classes are scarce. This study looks at the language and writing environment, as did Hanney (2018) who promoted the idea that students become storytellers in the process of creating and presenting their projects. In a composition class, this allows students to speak and write within presentations demonstrating higher level syntax and correct use of punctuation. Provenzano (2019) found that PBL encouraged students to write with a purpose, for both

their project material and for reflection essays. By keeping journals during the project process, students were able to write informally and allowed them to concentrate on content rather than grammar rules. Boardman et al. (2021) integrated projects with novel reading and documented increased engagement with subject matter as well as with group members. This study will provide discussion from teachers about students' motivation to grow as the result of collaboration with their peers. Johri (2015) stressed that the community developed in the classroom led to improved teamwork skills and increased confidence in their own interpersonal and leadership abilities. Al Said et al., (2019) found that students had increased prospects for succeeding in a PBL classroom, specifically if they were poor test takers. PBL was used to complement the existing curriculum and added a technology component to enhance engagement and motivation. These examples support the use of PBL in writing classes, although there is still a great deal unexplored.

How Teachers Perceive Student Motivation

Teachers' perceptions, knowledge, and beliefs are the foundation for student learning, and their involvement with student plays a pivotal role in affecting students' willingness and ability to learn (Tadesse et al., 2022). A primary expectation for teachers is that they will consistently observe and assess student engagement during daily lessons and activities (Seidel et al., 2020). Teachers are considered the experts in their classrooms, although levels of expertise often depend on length or variety of experiences (Stahnke & Blomeke, 2021). Such expertise allows for teachers to accurately assess the effectiveness of various teaching strategies on student performance, which includes motivation (Stahnke & Blomeke, 2021).

It is worth noting that teachers often make assumptions about students based on the students' academic skills, compliance, apparent interest in a lesson or task, and reliability in doing homework. Brandmiller et al. (2020) studied those assumptions and included teacher assessment of student motivation. Interestingly, student motivation is often closely tied to teacher expectation and vice-versa. Learner-centered pedagogy focuses on students' willingness to work collaboratively, engage in critical and creative thinking, and be actively involved in their own learning process (Tadesse et al., 2022). Inquiry-based learning programs such as PBL invite students to be pro-active in the classroom, which can be perceived by the teacher as motivation and that perception may be viewed by the student as an expectation (Tadesse et al., 2022). This symbiotic behavior is often initiated by teacher expectation, but is fulfilled by student performance, which is often closely related to their motivation.

Summary and Conclusions

In summary, this chapter included a review of research related to higher education composition classes, multiple facets of PBL, and student motivation. Keller's (1979) ARCS model of motivational design provided a framework for a detailed literature review. Specific topics addressed in this literature review included these: (a) PBL versus problem-based learning, (b) PBL and constructivism, (c) history of PBL, (d) PBL as a 21st century instructional strategy, (e) PBL and technology, (f) PBL benefits and challenges, (g) student perceptions of PBL strategies, (h) PBL and student motivation, (i) perceptions of PBL in writing classes, and (j) teacher perceptions of student motivation.

Researchers strongly suggest that PBL needs to be considered an integral part of any school's curriculum and students should be provided opportunities to interact with community partners (Konrad et al 2020). PBL is a curriculum design that can bridge the gap between secondary education students and the community workforce (Cheng et al., 2021). Current literature addresses the lack of research on PBL effectiveness and the need to study both long and short-term value (Dinis-Carvalho et al., 2017). In his study of collaborative learning, Cheng et al. (2021) noted that only a third of people surveyed felt confident that their learning would provide them with the skills for a career. Cheng et al. (2021) stressed that PBL is one learning design that can address this dilemma and provide a way for students to acquire such skills. One final note of summation, education has remained constant in the way it is structured for well over two centuries. Innovation is the outcome of shifting emphasis from instructing to learning. PBL is one such innovation and with each teacher or school system that uses it, more is learned and improved to give students the best possible educational experience (Johri, 2015).

In this chapter, I described my literature search strategy, discussed the conceptual framework of this study, and provided a literature review of composition, PBL, teachers as classroom experts, and student motivation. In the next chapter, I will discuss the research methodology for this basic qualitative study. I will explain the research design and rationale and the role of the researcher. I will also address issues of trustworthiness related to credibility, transferability, dependability, and confirmability, as well as describe ethical procedures.

Chapter 3: Research Method

The purpose of this basic qualitative study was to explore high language arts teachers' perceptions of student motivation in a PBL class. I used Keller's (1987) ARCS model of motivational design as my conceptual framework. The perceptions being focused on in this study relate to how high school language arts teachers perceive student motivation from their experiences with PBL. Through open-ended interviews and conversation, high school teachers of different grade levels and varied degrees of teaching experience shared their lived experiences of assessing student motivation in a PBL language arts class. In this chapter, I describe the research design and rationale for a basic qualitative approach, along with my role as the researcher. I discuss the methodology in relation to participants, instrumentation, and data collection and data analysis. Additionally, I discuss trustworthiness and ethical consideration related to qualitative research.

Research Design and Rationale

A basic qualitative research design was chosen for this study. The purpose of this qualitative study was to explore high school language arts teachers' perceptions of student motivation in a PBL class.

The following research question framed the study:

RQ: What are teachers' perceptions of student motivation in a high school PBL language arts class?

Much care must be exercised when deciding what approaches can be best used to ensure a relevant and rigorous study that meets the needs for academic study. All

methods have advantages and disadvantages that the researcher must ultimately weigh when choosing, while also recognizing that most research approaches and designs have a great number of commonalities (Creswell et al., 2018).

Quantitative approaches measure and quantify data, but Bloomberg and Volpe (2016) argued that "purely quantitative methods are unlikely to elicit the rich data necessary to address the proposed research purposes" (p. 178). The purpose of this qualitative study was to explore high school language arts teachers' perceptions of student motivation in a PBL class. Strong qualitative data provides thick, rich data "that are vivid, are nested in a real context, and have a ring of truth that has a strong impact on [readers]" (Miles et al., 2014, p. 14). Neubauer et al (2019) suggested that qualitative methodology is used to discover multiple explanations and analyses of a subject, and as such, can be used to discover heretofore unexplored potentials of PBL as teachers evaluate their perceptions of students' motivation in a high school language arts class.

A basic qualitative approach provides the means for collecting thick, rich data without specifying a specific type of qualitative study (Merriam & Tisdell, 2016). The primary goal is to understand and explore perceptions of participants and to interpret and describe the phenomenon that is being studied in their lives (Merriam & Tisdell, 2016). This nonnumerical analysis of information has its basis in constructivism, which means this is often an inductive study that uses observations, interviews, or archival data to create a detailed description of a phenomenon (Merriam & Tisdell, 2016). The real-life experiences of high school teachers and their perceptions of student motivation in their

PBL language arts classes have the potential for both "informing and improving practice (Creswell, 2015, p. 255).

Role of the Researcher

My role was to act as an interpretive researcher to discover and understand high school language arts teachers' perceptions of student motivation. I did this by asking questions, listening to, and observing responses, and providing a safe and comfortable environment for participants, as well as ensuring their confidentiality (Rudestam & Newton, 2015). I was the instrument for interpreting and coding participant responses, transcribing data, and providing participants the opportunity to approve, add to, or edit their responses. Nine teacher participants came from national English teacher organizations and PBL groups on social media. Instructors have been using PBL instruction for at least two years. A virtual conferencing platform was used for interviews.

As one of the few PBL instructors at my current institution, I recognize my bias towards using PBL as one of the most effective ways to teach; however, in a sincere and honest attempt at transparency, honesty, and integrity, I practiced bracketing and epoché where I essentially made the decision to set my thoughts and biases aside to fully accept and process participant responses (Bendall, 2006). In the Greek, bracketing means "suspending belief" (Kauffer & Chemero, 2018, p. 34). Husserl (2017) stated that phenomenological reduction, also known as bracketing and epoché, gives a more objective view of real-world meanings. To ensure the integrity of the interviewer/participant interviews, no rewards or incentives were offered for

participation, nor was there any conflict of interest as I did not personally know any of the potential participants. There were no other issues regarding work environment, conflicts of interest, or incentives that could contribute to ethical issues.

Methodology

A basic qualitative research design was chosen for this study. In this section I discuss participant selection logic, instrumentation procedures for recruitment, participation, and data collection.

Participant Selection Logic

The population for this study was high school language arts teachers in the United States who have taught a language arts class that used PBL as the classroom design. For this study, purposeful sampling was used to include participants who could contribute in-depth observations, anecdotes, and personal perceptions (Creswell et al., 2018). This sampling strategy was appropriate and effective for my research approach because participants shared a common experience (Giorgi, 2009; Patton, 2014). I looked for participants who have previously used PBL for at least one year. These participants were identified, contacted, and recruited from three sources: two professional organizations: The National Council of Teachers of English (NCTE) and the Association for Educational Communications and Technology (AECT), and from PBL social media groups and personal learning networks.

I asked organization and social media group administrators for permission to email participants details regarding the study and their roles. I enclosed a copy of the invitation letter (Appendix A). When participants indicated interest in participating, they

were asked to sign a consent form. After they consented, we agreed on a date and time to meet via a virtual conferencing platform. I had nine PBL teachers participate in this study. The small number of participants is acceptable in a qualitative study of this nature to focus on the crux of their experiences (Brew et al., 2017; Reynolds & Mayweather, 2017) and a homogenous sample can provide a more context-rich result than a completely randomized sample (Maxwell, 2013). Saturation can be inferred when multiple respondents no longer add to the discussion by repeating previous responses (Saunders et al., 2018).

Instrumentation

The instrumentation used in this study consisted of semi structured interview questions and any necessary follow-up questions (see Appendix B). I developed the instrument for the interviews based on the research question, literature review, and conceptual framework. My interview questions were purposefully designed to answer questions that relate to all components of Keller's (1987) ARCS model of motivational design. Participants were encouraged to answer questions freely and completely, while I withheld any commentary of my own to maintain objectivity. I wanted to obtain a better understanding of how PBL affects or does not affect student motivation. To confirm the validity of the interview questions, I had two peers with doctoral degrees read the interview script and questions to ensure alignment with my research question. I then made changes based on their recommendations.

Procedures for Recruitment, Participation and Data Collection

Participants were recruited using purposeful sampling from professional organizations and PBL social media sites. I sought permission from the organizations and social media sites to ask for volunteers. With their permission, I posted a brief outline of my study and asked for volunteers to participate, as explained in my invitation letter (Appendix A). I followed up any with interested parties and included my contact information so they were able to respond and supply their own email addresses or direct messaging information. Participation was voluntary, and participants were required to indicate willingness to participate by returning a consent form sent to their preferred email and replying, "I consent." Participants were also informed that they might exit the study at any time for any reason. They were also informed that they have the right to refuse to answer any questions. I was the sole researcher collecting data in the form of initial interviews and any necessary follow-up interviews.

Data were collected using interviews recorded on a laptop using a virtual conferencing program. As modeled by Rubin and Rubin (2012), I explained the purpose of interviews to the participants and ensured that they were willing to spend approximately one hour in the interview process, including scripted introductory information and concluding statements. I used semi structured, open-ended questions during the interview to explore teacher perceptions and used follow up questions for better understanding (Appendix B).

For all interviews, I included an interview protocol, script, and an audio recording of interview. While conducting interviews with PBL teachers, I used a laptop computer

with external microphone, and I emailed reflective interview protocols. I tried to keep the interview questions to a minimum number of open-ended prompts to increase opportunities for participants to give deeper, richer answers (Creswell & Creswell, 2018). The focus was on teacher perceptions of student motivation, but I was aware that revealing information might be imparted regarding teacher assessments of PBL as a learning methodology in ways other than motivation. As the researcher, I was also part of the instrumentation.

According to Archibald et al. (2019), virtual conferencing programs like Zoom are user-friendly and provide security and recording options. Zoom is also HIPPA compliant, which adds another layer of confidentiality (Archibald et al., 2019). Participants were sent instructions to access the virtual conferencing platform and were then admitted to the interview. After the interview was concluded and transcribed, I emailed participants to share my understanding of the participant's interview and provided the manuscript so that participants could confirm the accuracy of the transcript. This served as member-checking. They will be notified when the study is published if they wish to review a copy. Participants should feel appreciated for their contributions and sacrifice of time (Frankfort-Nachmia et al., 2015), so I sent thank you notes when the interviews were completed.

Data Analysis Plan

The purpose of this basic qualitative study was to explore high school language arts teachers' perceptions of student motivation in a PBL class using Keller's (1987) ARCS model of motivational design. Interview questions corresponded to Keller's

(1987) ARCS model of motivational design. My goal was to complete the interview process withing a 4-6-week span of time. When each interview was complete, I labeled each file with the participant's number that will be assigned for confidentiality. I used the Otter transcription application, as well as enabled a virtual conferencing platform to transcribe the interviews. I listened to each recording at least twice, and I reviewed the transcriptions from the Otter transcription app and Zoom to verify accuracy. Accurate and complete fieldnotes helped guard against researcher bias (Saldaña, 2016). Microsoft Word and Delve software were used for focused coding and preliminary analysis (Dalkin, et al., 2020), and information was grouped into common threads or themes. Participants received a full transcript of their interviews, as well as a summary of coded information in the process of member checking, which helped ensure accuracy (Gunawan, 2015). Member checking allowed the participants to review their statements and ascertain their accuracy as described in this study. No discrepant cases were identified. Any researcher biases or assumptions were noted in the researcher's reflective journal to help identify and remove (bracket) such biases and assumptions.

Issues of Trustworthiness

The combined components of credibility, transferability, dependability, and confirmability encompass trust issues, which deal with the way data are collected and interpreted (Merriam & Tisdale, 2016). Validity concerns were addressed using the matrix compiled by Maxwell (2013). Complete transparency and full disclosure with participants built trust and confidence (O'Leary, 2017). In using bracketing and epoché´ my goal was to approach both the gathering and analysis of information with neutrality.

Englander (2016) advocated closely adhering to the precepts of solid, scientific research throughout each of the stages of a study and continuously confirming the data and interpretations. This advice was followed to build a solid, scientific study. Following previous protocols is essential in qualitative research because although human experiences can offer illuminating descriptions (Ravitch & Carl, 2016), those same humans can be unpredictable based on the gamut of emotions (Hammarberg et al, 2016).

Credibility

Credibility is also known as internal validity and is directly related to the reality of the study. It is also one of the best ways of establishing the trustworthiness of the study. Merriam and Tisdell (2016) refer to credibility as the confidence that the study measures what it was intended to measure. To ensure personal credibility as the researcher, I practiced bracketing and epoché´. According to Husserl (2017), the acknowledgment of one's interest in a subject and the decision to set such biased interests aside, propels the researcher to greater objectivity. Sources for gathering data include open-ended, semi-structured interviews that will encourage detailed and thoughtful responses. I sent a draft to two colleagues with doctoral degrees who reviewed and analyzed the data and my analysis. These colleagues provided feedback and the opportunity for me to improve my analysis, thus adding to the credibility of this study. Using member checks and peer reviews helped confirm findings. Member checks allowed participants to review a summary of their recorded interviews and a brief analysis by the researcher to offer clarification and ensure accuracy. Completed transcript

summaries sent to participants for member checks allowed for feedback in the forms of clarification or additional pertinent information.

Transferability

Transferability is also referred to as external validity and the ability to apply the study to other environments or generalizing the information to fit other contexts (Miles et al., 2014). The methodology, participant selection and interview process, and the data explored and collected should be described in such a way that other researcher can transfer the information to their own studies (Creswell & Creswell 2018). One of the ways to inform transferability is through the use of thick, rich data and detailed descriptions to assess similarity (Merriam & Tisdell, 2016). Diverse participants who have varied experiences teaching basic, honors, AP classes, or grade levels also helped ensure that the study could be conveniently replicated in or transferred to multiple educational settings (Merriam & Tisdell, 2016). Such data and descriptions could be further explored and used for comparable research.

Dependability

Dependability indicates a qualitative study that is reliable. The results of a similar study based on this study, with different participants, should still have similar outcomes. Reliability refers to the ability to replicate the study, and details of the study's processes through researcher's written field notes and transparency through peer reviews are two ways to increase reliability. However, Merriam and Tisdell (2016) stated "researcher seek to describe and explain the world as those in the world experience it" (p. 250). Thus, while very similar studies can be conducted, absolute replication is neither possible, nor

the goal of a qualitative study. As the researcher for this study, I kept careful notes regarding each step I took to obtain, understand, and explain data in such a way that other researchers may replicate the study and reinforce the results.

Confirmability

Confirmability deals with maintaining objectivity throughout the study. This includes avoidance or explanations of bias, transparency with participants and data collection and analysis (Miles et al., 2014). It also means the ability of others to duplicate this study. Confirmability is founded on the premise that the data provided by participant's perspectives is based on their experiences with PBL and not my own (Creswell & Creswell, 2018). One way to achieve this was to purposefully withhold my comments and only ask questions to clarify understanding of what participants voice throughout the interview process. Their words will be recorded verbatim and I used direct quotes from their interviews. As a researcher, I maintained neutrality and provided details for each process of this study by making the conscious decision to set aside my own opinions and beliefs about PBL and student motivation and I kept detailed notes regarding the way in which data were collected. Members of my committee provided feedback to ensure my research is objective.

Ethical Procedures

Ethical procedures followed all guidelines outlined in the Institutional Review Board (IRB) as part of my IRB application. The IRB application was completed and submitted. Participants are over 18 and their treatment was in accordance with IRB guidelines, primarily addressing voluntary participation and confidentiality.

Transparency and informed consent are the overarching concepts of teacher participation (Holloway & Galvin, 2016). Participation was voluntary, and participants had the opportunity to withdraw from the study at any time without consequence. Each participant received a letter of consent sent via email, and their response, "I consent" was all that ass required. I saved all letters of consent electronically. Confidentiality was maintained throughout the study (Remley & Herlihy, 2014) and participants were assigned numbers so no names were attached to interview files. I kept a separate file that showed which numbers were assigned to specific participants. This file was kept on my personal computer. Interviews were conducted through virtual conferencing and were recorded and analyzed. Once analysis and interpretation were completed, data was stored and will be kept according to Walden University's guidelines and any hard copy written material will be destroyed in accordance with their instructions. Other ethical issues have been addressed as necessary, including a plan for safely storing data on an encrypted hard drive and the assurance that data files would be destroyed within five to seven years after the completion of this study.

Summary

The purpose of this study was to explore and understand how PBL affects student motivation as perceived by their instructors. In this section, I discussed my design rationale, methodology, participant selection, and ethical considerations. A qualitative study is a science-based study that uses open-ended interview questions to collect thick, rich descriptions of the participants' lived experiences (Maxwell, 2013). This careful, methodical process was designed to ensure solid, scientific research and analysis. Insights

into understanding high school language arts teachers' perceptions of student response to PBL as a motivational classroom design allowed a deeper assessment of the PBL approach. Chapter 4 describes the findings and results of this study. Teacher perceptions of student motivation are explored based on my research question. Chapter 5 includes my final interpretation of collected data, the social implications for future practice, and my recommendations for further studies.

Chapter 4: Results

The purpose of this qualitative study was to explore high school language arts teachers' perceptions of student motivation in a PBL class. The study focused on answering the following research question: What are teachers' perceptions of student motivation in a high school PBL language arts class? In this chapter, I will present the study results and an analysis of the data collected via Zoom interviews with nine PBL high school instructors. I will also describe setting and demographic information, the data collection process, and the data analysis including identified codes, categories, and themes. This chapter ends with a further discussion of issues of trustworthiness and results of the study, and a chapter summary.

Setting

Participants for this study were recruited from social media sites and participant referrals. The PBL social media site exists for anyone interested in PBL but is focused primarily on teachers sharing PBL strategies. Several interested teachers tagged their colleagues and helped cast a wider net for potential participants.

One condition that may have influenced interview responses was that three of the participants were in a start-up PBL program for at-risk students. These teachers were allowed to deviate from the traditional standards-based instruction to a broader competency-based assessment. Thus, during their initial year of teaching, there was a trial-and-error learning curve for the instructors. There are no other known personal or organizational conditions that influenced participants' accounts of their experiences and interpretation of the study results.

Demographics

Nine high school teachers participated in this study, and all the participants taught in traditional face-to face institutions during their PBL instruction. Table 1 briefly describes participant demographics. Summaries of each of the participants are given here.

Participant 1 was a high school language arts teacher with a PhD and almost thirty years of teaching experience encompassing all grade levels. Participant 2, with a master's degree in education, taught high school language arts for twenty-five years before retiring. Participant 3, with a master's degree, was part of a PBL team teaching faculty where all three teachers taught all the subjects. Participant 4 has a master's degree and has taught both middle school and high school English classes. Participant 5, with a master's in educational technology, was also part of the team-teaching faculty. Participant 5 taught English classes for nearly twenty years, and left education to work in local government. Participant 6 has a PhD in clinical psychology and was part of the team-teaching PBL faculty where she taught writing skills and social/emotional learning. After 30-plus years of teaching, Participant 6 retired to become a full-time counselor. Participant 7 has a master's degree in English and taught for fifteen years, specializing in at-risk students in both middle and high school. Participant 8, with a master's degree in English, taught in a combined middle and high school for fourteen years. Participant 9 has been teaching for twenty-eight years and has a master's degree in education. All participants used PBL as a classroom methodology for at least three years. Three participants are still actively using PBL in their classrooms. One participant is currently

teaching in a traditional classroom setting but is actively pursuing employment at an all-PBL charter school.

Table 1

Demographics

Participant	Location	Gender	Years Teaching	Degree	Levels Taught	Current Status
1	Southeastern USA	F	20+	PhD	Basic skills, AP	Active PBL
2	Southeastern USA	F	20+	Master's	Basic skills, Honors	Retired
3	Northeastern USA	F	15	Master's	PBL Academy For at -risk students	Local Government
4	Northeastern USA	M	10	Master's	PBL Academy For at -risk students	Traditional Classroom
5	Northeastern USA	F	12	Master's	PBL Academy For at -risk students	Active PBL
6	Southeastern USA	F	20+	PhD	Basic skills, Honors, AP	Counselor
7	Northeastern USA	F	15	Master's	PBL Academy For at -risk students	Retired
8	Southeastern USA	F	14	Master's	PBL Academy For at -risk students	Elementary Classroom
9	Northeastern USA	F	20+	Master's	Basic skills, Honors, AP	Active PBL

Data Collection

The following section describes the data collection process. There were no variations in data collection from the plan presented in Chapter 3. Participants for this study were recruited from PBL social media sites. I sent invitation letters to a total of 14 potential participants after they expressed interest in this study. I sent an additional inquiry to participants who said they wanted to participate, but who never responded to an interview appointment request. Ultimately, nine teachers volunteered and consented to be part of the study. As seen in Table 1, participants ranged in experience from 10 to 20+ years of teaching and taught a broad range of academic levels.

All participants were interviewed using Zoom videos. Interviews were all approximately 40-60 minutes in duration. Data were transcribed via Zoom transcription. To obtain maximum accuracy, the recordings were rewatched with captions, and any necessary corrections were made. All participants were emailed a copy of their transcripts, and no discrepancies were noted.

Data Analysis

Analysis Overview

I used the software managements system Delve in combination with Microsoft Word. Both software programs were simple to use as organizational tools. It is important to note that there were no discrepant data during data analysis. Data were broadly sorted into Keller's (1987) ARCS model of motivational design categories during the first inductive round of coding. I began with the a priori codes of attention, relevance, confidence, and satisfaction; however, I also looked for other significant emergent codes that might be revealed in the data. Using a thesaurus, appropriate synonyms for each of the categories were also included using the Find tool in Microsoft Word. Emergent themes included collaboration, control, challenges, teacher feedback on implementation and need for PBL, and stories. Table 2 shows the first round of codes and number of responses found in the interview transcripts.

Table 2

First Round Codes and Number of Responses

First Round of Codes	Total
Attention	1
Engage	23
Consideration	5
Response	4
Interest	17
Relevance	16
Significant	4
Important	24
Meaning	5
Confidence	24
Belief	4
Trust	2
Empowerment	3
Satisfaction	20
Enjoyment	17
Pride	11
Success	11
Collaboration	4
Teams	6
Group Work	60
Connect	15
Control	7
Power	9
Management	5
Direction	6
Challenges	13
Teacher Feedback on Implementation and Need for PBL	30
Stories	22

Round two of coding combined similar themes. It was in this stage that decisions needed to be made regarding the emergent themes. Collaboration was considered as a separate theme, but it seemed clear and reasonable based on participant responses that collaboration was part of the attention category. Every participant provided multiple stories as their responses to the interview questions. These stories were fondly related, and it was necessary to carefully isolate codes that were embedded in the retelling of these stories not only experienced by the students, but clearly by the teachers, as well.

These stories were full of anecdotal details regarding the set-up for PBL, emotional impact on students and communities, and effects that were observed years after the projects were completed. Ultimately, I decided the stories could be set aside as they were the vehicle used to identify student responses to PBL. Other secondary themes based on the five topics emerged and were ultimately synthesized into four single themes, one each for the four Keller categories, and thus, the aforementioned a priori codes. One significant theme that emerged separate from the primary focus of this study was the professional thoughts of teachers on a more widespread educational implementation of PBL. Ultimately, that topic was considered a recommendation for further research and not strictly related to student motivation.

Round three included a deep exploration of existing codes that included color coding to clearly delineate commonalities. There was some overlap for some of the categories, and decisions had to be made regarding the best intent of participant responses. Round four of deductive coding resulted in confirming the four primary topics: attention, relevance, confidence, and satisfaction. Blair (2015) noted that using a priori coding necessitated a thorough scrutiny of the data to ensure there is enough data to support such coding.

The final four themes became declarative sentences that captured the essence of teachers' perceptions of student motivation in PBL classes.

- Attention: Students became active participants in a community of believers and took ownership of their learning.

- Relevance: Students found personal meaning in assignments and felt they were doing something important – often related to current social issues and local community needs.
- Confidence: Students developed a sense of pride in their accomplishments and abilities and enjoyed increased autonomy in the learning experience.
- Satisfaction: Students felt a greater sense of self-worth and were inspired to believe their actions could have a positive impact on the community.

Evidence of Trustworthiness

Credibility

To ensure credibility, several strategies were used to establish a foundation for this research. All participants were emailed copies of their transcribed interviews and requested to review the interviews and correct any necessary data or add additional thoughts. None of the participants noted any discrepancies, nor did they have any additional information. I continually made sure that the information reported was aligned with the problem statement and purpose of this study. I adhered to the tenets of transparency by openly discussing biases, participant selection challenges, and difficulties encountered during the coding stage. Additionally, my coding protocol was reviewed by two colleagues with doctoral degrees, and both were satisfied with the coding and thematic processes. I reviewed their feedback and made the appropriate adjustments.

Transferability

Thick, rich descriptions allow other researchers to perform their own research on PBL and/or motivation, or another subject to achieve similar, or possibly improved, results. I described my methodology, participant selection process, and demographic insights regarding my participants. The participants had varied teaching experiences. Some taught multiple grades and split their teaching between standard classes and advanced, and some taught in a team teaching construct. While they all had PBL instruction in common, several moved onto other career choices. This information also included a general location, number of years teaching experience, skill levels taught, and their own education level. I also discussed how the interviews were conducted, the length of the interviews, and my interview questions (see Appendix B).

Dependability

Dependability means that the results of a similar study based on this study, but with different participants, should have similar outcomes. To ensure reliability of the study, I have included the details of my processes, including the peer review of my study and the coding processes and details gleaned from my field notes throughout the interview stage. I also used member-checks so that participants could ensure the integrity of their transcribed interviews. While it is improbable that a study can be replicated exactly, the information provided allows other researchers to perform a highly similar study.

Confirmability

Confirmability deals with maintaining objectivity throughout the study. I shared my potential biases, and my plan to maintain neutrality. As a researcher, I made the conscious decision to set aside my own opinions and beliefs about PBL and student motivation. Participants' words were recorded verbatim, and I provided direct quotes from their interviews. Table 2 highlights the initial number of results from the first round of coding. I also provided direct quotes from each of the participants in the attention, relevance, confidence, and satisfaction categories in Table 3. As all the responses came through storytelling, I chose to leave the responses in a narrative form. Within the direct quotes, several participants included recalled quotes from students.

Results

The purpose of this qualitative study was to explore high school language arts teachers' perceptions of student motivation in a PBL class. The phenomenon being focused on in this study is high school teachers' perceptions of students' motivation to learn in a PBL language arts course, and the question being asked is: What are teachers' perceptions of student motivation in a high school PBL language arts class? There were no discrepant cases found in any of the gathered data. After one round of inductive coding, a priori codes were chosen to narrow the focus. These codes were directly related to Keller's (1987) ARCS model of motivational design: attention, relevance, confidence, and satisfaction.

Table 3

Codes and Participant Responses

A Priori Codes	Synonyms	Interview Questions	Themes
Attention/Engagement	Engage Consideration Response Interest	Thinking about your project-based learning experiences, share a story about a time when you could tell students were engaged with their subject. How is student engagement different when you use project-based learning?	Students became active participants in a community of believers and took ownership of their learning.
Relevance	Significant Important Meaning	How do students personalize their projects to make them more relevant?	Students found personal meaning in assignments and felt they were doing something important – often related to current social issues and local community needs.
Confidence	Belief Trust Empowerment	What have you noticed about student confidence as they complete their projects?	Students developed a sense of pride in their accomplishments and abilities and enjoyed increased autonomy in the learning experience.
Satisfaction	Enjoyment Pride Success	How would you describe students' levels of satisfaction when they are finished with their projects?	Students felt a greater sense of self-worth and were inspired to believe their actions could have a positive impact on the community.

Attention/Engagement

The first theme is attendance/engagement. Students became active participants in a community of believers and took ownership of their learning. All of the participants emphasized the deliberate engagement of students in the PBL classroom. While it was not always immediate and not necessarily 100% of the students, the majority of students finished the class with remarkable attention to the tasks at hand and a preference for PBL

over traditional classroom instruction. Keller (1999) states that attention is sustaining active interest for a meaningful period of time. Participant 7 put it this way:

> These are the disengaged kids. We're asking them to look for a need in the community. And what are ways to respond to that need? And what that ends up doing was empowering these kids, and initially, they're very skeptical like, "I can't have any impact on this problem in the community" and then as they think about it, they're like, "Wow! Well, what if we did blah blah blah," and then they would start to actually become engaged learners, because it actually started to matter.

Participant 8:

> It took a lot for me to engage them in the beginning, but once they're engaged like you get that hook. If the leader or the teacher invests that time in the beginning, then they take off because they own it. And it's not me trying to spoon-feed them all away. It's not me trying to like just kind of pull them, pull them along through a unit. It's not a slogging through. It's them trying to answer a question, so they want to answer this question. So, they're moving, you know, into that next thing.

Participant 9:

> Gosh! They enjoy, too, the nontraditional piece of it, because a classroom doesn't look like a traditional classroom. So sometimes it looks like a hot mess. It looks chaotic sometimes, because everyone's kind of doing something. Students enjoy also because it's project based and students are leading it.

Regarding collaborative work and engagement, Participant 1 stated:

> Well, I think what they do is they tend to discuss things with each other more, because if we're just reading and answering questions, they get the who they think is the smartest kid in the class to answer all the questions, and then they just copy them from him or her, to whereas if they're doing a project they're actually talking to each other. They're talking to people in their own group. They're talking to other students in the class. They're looking at other students' projects and making comments. And then [they say], "Oh, hey! This! We could use that same kind of idea, and let's do it this way." So, I see a lot of communication going on whenever they're doing the projects in comparison to just answering questions from a book.

Participant 5 stated:

> But when you get into the creativity aspects of it, and the application of it, you can find projects, so I would say at least 70% of my students to 80% of my students wanted more projects to work collaboratively.

Students had two projects in a class. One dealt with anti-bullying and the other was an art project that involved recreating a classic painting in an updated way.

Participant 5 stated:

> There was a lot more fluidity and creativity that was flowing, whereas in the other one (the anti-bullying project) they knew that the end result was a presentation that could be used for the school. They enjoyed it as far as the anti-bullying campaign. But then, when it came to the creativity one, some of my answers,

> when I asked my kids to do their end survey was, they wanted to be able to do more than one.

Teachers responded positively and enthusiastically when summing up student engagement.

Participant 7:

> They felt like they were doing something important, and part of those projects, those service-learning projects, was, we always had an event at the end, and I would contact all the local news outlets, and they would come cover it, and the kids would see their pictures in the newspaper. As I say, these were the kids who'd been identified as bad kids, difficult kids, and impossible kids. And here they were being celebrated for doing this amazing thing for the community, and that just turns their brains on. They're like, "Oh, I can actually achieve something. And oh, yes, it actually matters that I can," you know, right?

Participant 8:

> I think it was it was a palpable vibration in the classroom, right?
>
> So, there's a buzz! And laugh and like a talking over each other on topic when kids are really authentically engaged. And so there was a lot of that that happened.

Participant 9:

> They're leading the pieces of this puzzle to put it together. I think that they enjoy that piece. And students kind of will step in to some roles that you haven't seen them in before. They kind of are like now, you know, "I've realized now, like I really am invested in this piece of this project." And I feel like an expert in this,

> and I, you know, see students like who didn't care much about anything prior to all of a sudden, they're like "I think I'm the only one who's going to be allowed to like do this piece of it because. I feel like I could do it the best." And I'm like, Wow! You know, they take pride in something which is which is huge, because, again, oftentimes you don't see students find something that makes them proud like that.

Relevance

The second theme is relevance. Students found personal meaning in assignments and felt they were doing something important – often related to current social issues and local community needs. Recognizing students' perceptions of relevance was more challenging than identifying attention. Occasionally, there was initial interest in a project, but making a clear connection between their learning experiences and outside goals and interests (Keller, 2010) was often delayed until the students were either fully invested in their projects or the projects were completed.

Participant 7 shared this insight:

> These really are your least academically engaged, not stupid. I mean, these are by and large, very bright kids who, just for whatever reason in their life, have just not been able to engage with school. And what I found was that when we had kids actually doing something that engages them in the wider community they started to see relevance to the to the things that we were trying to teach them academically.

Participant 3:

> I really think that project based is so important at that age level because teenagers from the experience I have from raising my own and teaching a lot of others - they're all looking for acceptance. They're all searching for value. "Why am I learning this?" They want to be valued, and when you give them a chance to learn with and through a project where they get to bring a piece of themselves into it, the value shows all the way around, and they are connected to that project. They are connected to that learning in very specific ways, like when they've had the opportunity to say, "I think, I feel, I know" because they've had their hands on something. It's so much more meaningful than to have just read a chapter in a book and try to say the same things.

Participant 5:

> So, most of them were very proud to be able to share their work. And that, too, is such a boost for students. And what an amazing thing! You know I'm a shy person sometimes, and to have that ability at a young age to be able to share what you've learned, and something that's really definitely relevant.

Confidence

The third theme is confidence, where students developed a sense of pride in their accomplishments and abilities and enjoyed increased autonomy in the learning experience. While increased attention/engagement was a noticeable student response to PBL, increased student confidence was the most identifiable characteristic associated with PBL outcomes. Student confidence is based on the belief that success is possible through overcoming challenges in the attainment of that success (Keller, 2010a).

Confidence is a more internal process that focuses on ability and self-assurance. Participants noted multiple examples of greater self-confidence within their students.

Participant 4:

> Anyone can earn a grade; anyone can do content. But these kids found value like in themselves. That's so powerful. It really is.

Participant 7:

> I don't think I'm overstating this. I think it was transformative for a lot of kids who might have had some personal confidence in a very particular social scene among their peers, but just like I am an individual with agency in my own life, I found the kids really getting to a place of feeling like "Oh, no, actually, I could go to college."

Participant 8:

> And like, so there was so much more confidence, I mean, and some of them is, you know, a lot of them, they were like their sense of "I can do this, and I have a voice, and my voice is worth being heard, and I know how to get my voice heard with a little help from somebody else." That is the thing that that boosted their confidence through the course.

Participant 1:

> They feel confident that they've learned something through the project. Yeah, they do. So, they'll tell me things like "I didn't know that before," or "that was an interesting fact," or "I'd like to know a little bit more about that particular thing."

Participant 2:

I think their skills grew. Their, you know, their soft skills. Then researching and typing and definitely their communication skills getting up in front of the class and talking. I mean, they definitely grew in confidence, you know, in that area. I think that's so important, too, that one of the things that we're missing a lot in some classes is that we're making everything performance based instead of helping students internalize these things, helping them actually be better learners.

Participant 8:

When we did the book of poetry, they were, they were proud of themselves. Their confidence in their ability to understand art, even if their confidence in how to write a poem did not increase a lot for those kids who are very, "I'm not good at poetry," - their ability to talk about art in a meaningful way, you know, definitely their confidence increased in that.

Participant 3:

And project based gives you so much more at the end of the project, because you've tried the things that don't work, and you've figured out the things that do work instead of just is this making any sense instead of just going at you know how do you answer this specific question in an essay format. You've knocked it out in five paragraphs. How does this happen? And he or she's taking time and components and thought processing, critical thinking. And I just think it makes for such a stronger learning experience.

Participant 6:

> And so we did that [project], and that was a lot of fun, and that brought a lot of confidence that happened within the students because they got excited. And it was based on their ideas they were coming up with. When they presented it to the kids, they really took ownership in it and did a great job of answering questions and just owning it, and what I really liked about it, too, is, they owned where mistakes happened so that they could learn from it. I thought that was really helpful. It's so important. You know, it's part of the growth process.

Participant 8:

> I think that by turning it into a project there is an investment level that is higher for the students, or at least the way that I think of project-based learning, I mean the way that I think of it by definition. I'm giving them some sense of choice. I'm giving them some sense of ownership, and I'm stepping back like I'm scaffolding it. So that here's the parameters of the thing that you need to do. Now go! Go! Do the thing and because they're the ones that are doing the thing, their confidence increases more so than you know.

Satisfaction

The fourth theme is satisfaction. Students felt a greater sense of self-worth and were inspired to believe their actions could have a positive impact on the community. Keller (2010a) found that students need to experience satisfaction or a feeling of fulfillment based on their pleasure with the class outcomes and their increased sense of motivation and commitment towards accomplishing future goals. Contrasted with confidence, which is primarily an inner acknowledgement of capability, satisfaction is the

outward acknowledgement of a successful completion with both the task (process) and the final outcome. This was supported by teacher perceptions of student satisfaction upon completion of their projects.

Participant 6:

> So, I think that satisfaction is really individualized, based on how much they let go of the control that they need. And especially with here, where they're everything is controlled for them. They have very little control. So that's I mean, that's a that's a huge thing, especially for those who, you know, hopefully, will be leaving the system and something that they can't take from them. "You know what? I do have a sense of accomplishment."

Participant 3:

> Oh, well, we built a free food pantry But while we were doing it, the physical measuring and building and cutting and painting, and putting it together and they're like, what is this for? When we got it installed, and when they realized that, yeah, the food is actually free, it's actually feeding people. In some cases, their own families, and they could put stuff in, but they could also take stuff out. And it wasn't wrong to just take it. When they finally saw it and realized and then saw it stay there for a number of years. You know, that was a real moment for some of them. A real moment of "Wow. I really contributed to this, and it's going to be meaningful for me because I'll be able to benefit."

Participant 2:

> Satisfaction came from them seeing that it's not just all on the computer.

> It's not just what I read that I need to really go talk to other people, and to get, you know, a bigger perspective. Get more of a perspective than just you know their own perspective it's what they're reading on the Internet. So, I think I think that helped with their satisfaction.

Participant 7:

> I do want to stress how important I think it is that at least in the case of the kids we were working with, that they'd be service learning projects because the community service piece of it was a huge piece of the empowerment that was so important to these kids coming to feel like they had agency in their life.

Participant 8:

> They were interviewed by local reporters, and you know, and that was a lot of. external validation, that what they were doing was valued in the community, or interesting at least, and I think that that that recognition let them to, added to I would say they're feeling of satisfaction. But they also knew that what they did was really huge, right? So, at the end, what they had in front of them was this compilation of work that I believe, gave them a lot of satisfaction.

Participant 6:

> I think in the end, if you ask after the project is over, if you talk to them, their pride and presenting it to other people like showing off their work and feeling really good about what they've done.

And finally, Participant 2 summed up the PBL experience as observed in her classroom, stating:

> You know, this is probably going to sound like very ethereal. But I really think that project based is so important at that age level because teenagers, from the experience I have from raising my own and teaching a lot of others, they're all looking for acceptance. They're all searching for value. "Why am I learning this?" They want to be valued, and when you give them a chance to learn with and through a project where they get to bring a piece of themselves into it, the value shows all the way around, and they are connected to that project. They are connected to that learning in very specific ways.

Summary

This study focused on one central research question: What are teachers' perceptions of student motivation in a high school PBL language arts class? Keller's (1987) ARCS model of motivational design was the conceptual framework that provided a foundation for the four a priori codes that resulted in four themes that answered the research question: (a) active participation in and ownership of learning, (b) personal meaning related to assignments, (c) a sense of pride and autonomy derived from the learning experience, and (d) resulting self-worth and power upon completion of projects. These themes will be discussed further in Chapter 5.

Chapter 5 begins with a deeper investigation of this study's findings. Limitations, recommendation, and implication are explored. Finally, Chapter 5 concludes with a discussion about social change and how this study can inform educational practices in today's schools.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this basic qualitative study was to explore high school language arts teachers' perceptions of student motivation in a PBL class. The literature explores PBL and its role as a motivational teaching methodology. The focus of this study was to gain insight into how teachers perceive the use of PBL to inspire student motivation in the classroom. While PBL has been primarily used in science classes, little is known about the motivational efficacy of PBL in high school language arts classes. This gap in the literature was addressed by interviewing high school language arts teachers individually using semi-structured open-ended questions to gain knowledge about the motivational effects of PBL.

This study focused on the research question: What are high school language arts teachers' perceptions of PBL and its influence on their students' learning and motivation? Four themes emerged from the data. These themes were as follows: (a) attention/engagement: students became active participants in a community of believers and took ownership of their learning; (b) relevance: students found personal meaning in assignments and felt they were doing something important – often related to current social issues and local community needs; (c) confidence: students developed a sense of pride in their accomplishments and abilities and enjoyed increased autonomy in the learning experience; and (d) satisfaction: students felt a greater sense of self-worth and were inspired to believe their actions could have a positive impact on the community.

Participants shared stories focused on a wide variety of projects that made it clear that PBL had a positive motivational impact on students. The results revealed that most

students responded favorably in the PBL environment, and that the teachers also had strong, positive attitudes about using PBL as a teaching methodology.

Interpretation of the Findings

Analysis of the findings identified four main themes regarding PBL as a motivational classroom methodology. The results of this study show that these four attributes are each essential components of motivation and are clearly evident within a PBL classroom. Analysis of this data confirms previous studies about motivation and adds the PBL teaching methodology to the body of knowledge.

Attention/Engagement

Levels of attention and engagement in a PBL classroom emerged as a strong theme. Shadiev et al. (2020) stated that the constructivist underpinnings of PBL supports student-created knowledge and personal responsibility for successful implementation and completion of projects. Participants noted that it was initially difficult to overcome students' remarks, indicating they felt PBL required too much effort, and they preferred simpler tasks such as worksheets. As Participant 8 shared, "It took a lot for me to engage them in the beginning, but once they're engaged like you get that hook." This bears out Avsec and Jagiello-Kowalczyk's (2021) findings that students, and, to a certain extent, teachers, have become habituated to passive learning rather than the participatory structure of PBL. As Guo et al. (2020) posited, once students accepted the challenges of PBL, many students were motivated by self-directed learning and the opportunity to create their own projects (Shadiev et al., 2020). Students relished the experiences and often asked to continue their education through PBL. Dinis-Carvalho et al. (2017) stated

that classroom relationships increased student motivation because groups created a sense of belonging. Several participants observed that students also enjoyed group work that was characterized by energetic discussions and communal problem-solving that created "can-do" mindsets. Thus, students became active participants in a community of believers and took ownership of their learning.

Despite the challenges of introducing PBL as a new methodology, once students agreed to a buy-in, their behaviors became more positive. Visible thinking (Stehle & Peters-Burton, 2019) was observed by teachers as students worked through the PBL process. Participants noted that students often appeared to be creating chaos at the beginning of their learning and problem-solving, but also noted that this chaos seemed to excite the students. Participant 8 called it a "palpable vibration" and a "buzz" in the classroom as students grew more involved and excited with their projects. This also speaks to student responsiveness, which is a key factor in the sustained attention to which Keller (1999) refers.

Relevance

The theme of relevance was more challenging to define. Keller (2010a) described relevance as the connections students make between their academic learning and outside goals and interests. Participants 7 and 8 observed that students had initial reservations about PBL tasks until they were well into the projects or had actually completed them, but PBL allows students to own their work on projects that encourage them to look beyond the classroom (Chen et al., 2019). Participant 9 shared that students enjoyed "the nontraditional piece of it because a classroom doesn't look like a traditional classroom."

Galvan and Greenhow (2019) stated that most students need a real-world application for that "aha" moment of relevance. PBL provides a fertile environment for students to experience practical learning related to personal and professional goals (Dinis-Carvalho et al., 2017). Participant 7 shared that students had fun with the hands-on public events where they reveled in the personal connections and felt pride in seeing their efforts shared with a larger community audience. For the students, Participant 7 noted that "this reaction "just turns their brains on," and the students developed attitudes that said, "Oh, I can actually achieve something. And oh, yes, it actually matters." This opportunity to see the relevance of their projects in a broader application deepens student learning and allows them to reflect on further possibilities as seen in Du (2020). Positive social change projects allow students to go beyond the mere learning of facts and to interpretation and application of their knowledge in meaningful ways, as concluded by Guo et al. (2020).

One such project shared by the students of the team-teaching participants was the building of a community food bank. Students were able to access the food bank for themselves and their families, as well as provide for the community at large. Students created recipes with the donated ingredients and shared a food bank feast to kick off the grand opening. One student discovered a love for cooking through this project and became a chef after graduation. In this regard, PBL created a pathway for students to move from novices with basic head knowledge to experts in the realm of their experience, which is similar to the findings of Al Said et al. (2019). Students found personal meaning in assignments and felt they were doing something important, often related to current social issues and local community needs.

Confidence

The theme of confidence had a strong showing based on participants' perceptions of their students' responses to the PBL experience. Keller (2010a) stated that confidence is birthed from successfully overcoming challenges when working towards a desired goal. As related to PBL, Du et al. (2020) stated that confidence is a complex attribute related to classroom autonomy, community connections, and student enthusiasm, which includes their motivation. Participants 7 shared that students enjoyed sharing their efforts with a public audience, "being celebrated for doing this amazing thing for the community" and participated in activities they never thought possible such as public speaking and organization of group events.

PBL provides a vehicle for students to grow in confidence as they work through projects navigating collaborative learning, critical thinking challenges, and the reality of deadlines (Henri et al., 2017). Participants enthusiastically described the joy and increased confidence exhibited by their students when they successfully completed their projects. Participant 7 said that this experience was "transformative for a lot of kids," and Participant 6 said that the projects were very enjoyable "and that brought a lot of confidence…because they [the students] got excited." Students who doubted their ability to succeed at much of anything suddenly found a plethora of possibilities that lay before them. Al Said et al. (2019) found similar results when observing student responses to well-executed PBL experiences. Students developed a sense of pride in their accomplishments and abilities and enjoyed increased autonomy in the learning experience.

Satisfaction

Satisfaction comes from the successful culmination of positive engagement, acknowledged relevance, and increased self-confidence. According to Keller (2010a), students need to experience satisfaction based on their happiness with the class outcomes and a new or renewed commitment towards accomplishing future goals. Participants 3 shared that the students found their service projects empowering, "A real moment of 'wow! I…contributed to this, and it's going to be meaningful to me,'" and the successful creation and implementation of these projects gave students a greater sense of agency in their lives. Participant 7 shared that "the community service…was a huge piece of the empowerment that was so important to these kids." Students truly felt their horizons were expanded, and they recognized not only the value in their classroom and community contributions, but also recognized that they were valued by those who observed and benefited from those contributions.

Participants noted that they provided students with the opportunity to reflect on their encounter with PBL. Participant 6 shared that the pride in their work and the ability to share what they had done with others left students, "feeling really good about what they've done." The process of reflecting allows students to process their end of experience assessment of and satisfaction with collaborative work, project creations and outcomes, overall learning and assignment evaluations, and their feelings of success (Al Said et al., 2019). Participants also found that encouraging reflection of their PBL education journey supported the claim of Du et al. (2020) calling the reflection process empowering as students analyze and synthesize their PBL learning into every part of their

lives. Participant 3 shared that students recognized the value of their contributions to a project and felt connected to the project. “They are connected to that learning in very specific ways, like when they’ve had the opportunity to say, ‘I think, I feel, I know’ because they’ve had their hands on something. It’s so much more meaningful than to have just read a chapter in a book and try to say the same things.” Ultimately, students felt a greater sense of self-worth and were inspired to believe their actions could have a positive impact on the community.

General Findings

As an innovative teaching methodology, PBL shines is the area of positively affecting student learning (Chen et al., 2019; Guo et al., 2020). All nine participants in this study agreed that PBL was a mutually beneficial and enriching teaching and learning experience. High quality PBL encompasses collaborative groups, student-led instruction, problem-solving that develops critical thinking skills, and the development and presentation of a meaningful project that answers a significant question, preferably involving real-world application (Allison, 2018). Participants reported that each of these components played a part in encouraging students to make greater efforts in their creativity and took pride in the quality of their work.

Participants reported that students who were profiled as at risk, marginalized, or otherwise challenging, seemed to find purpose and great success in the PBL environment. Prior research indicates that academically, PBL has been shown to improve student performance in many areas including test taking (Al Said et al., 2019). Cheng et al. (2021) noted that PBL bridges the gap between knowledge and real-world practice by

helping provide students with applicable career skills. Manganelli et al. (2019) stated that students achieved greater personal, academic, and social goals when they were motivated, whether intrinsically or extrinsically. Participants shared heartwarming anecdotes of these students eventually embracing the academic rigor of PBL and experience triumphant, life-enhancing accomplishments. Participants shared that students enjoyed the non-traditional classroom, they engaged in meaningful discussions with group members and classmates, and they took risks that ultimately created deep inner confidence and overall satisfaction with their learning experience.

Limitations of the Study

The limitation of this study were recruiting enough teachers who used a PBL methodology in their language arts classrooms. Nine participants volunteered to be interviewed and data saturation was apparent and noted after the fourth participant. As Saunders et al. (2018) stated that saturation may be inferred when participants begin repeating information. The sample size may, however, limit the transferability of the study, but given the variations in grade levels and course programs, transferability is certainly attainable.

Another limitation was the team teaching construct shared by four participants. Three of those participants were charged with the initial implementation of PBL, which meant they had a greater timespan for trial and error. Those participants stayed with the program for three years, so they had more stability in their teaching environment after the first year. The fourth team teacher replaced one of the outgoing teachers and also had to learn how to implement PBL as well as the team-teaching rhythms. However, given the

collaborative nature of PBL, it is possible that collaborative teaching also had similar benefits for teachers as those experienced by students.

Recommendations

The results of this study are encouraging. Further research on administrative support is recommended to explore the potential impact of PBL as a schoolwide or districtwide methodology. Every participant in this study spoke positively about student responses to PBL, and they also spoke passionately about their experiences as the teachers. Professional development forums could focus on the implementation of PBL in individual classes. Participants stated that they felt a great deal of support was necessary at the administrative level. Second, further research on post-high school students and the effects of PBL on their career choices could provide foundational information of the lasting impact of PBL. Participants shared several stories where students learned skills while working on projects that led to stable and long lasting career choices.

A third recommendation would be to explore the use of PBL at the college level. Institutions of higher education have been slower to embrace student-led learning, opting for the more traditional lecture format. While there have been some changes, PBL is a highly motivational classroom design that has great potential for all the disciplines. Institutions that are seeking greater connectivity with the community workforce agencies may find that PBL is the ideal bridge for that gap.

A fourth recommendation is to research how PBL affects teachers. Every participant had multiple stories that focused on student performance, but the consistent underlying tenor was one of pride in the accomplishments of their students and true joy

that these teachers got to be a part of this learning adventure. Exploring teacher satisfaction with student performance, satisfaction with their own careers, and satisfaction with community engagement are just a few topics that are suitable for study.

Implications

The following is a discussion of PBL and its effects on social change and theoretical implications based on this study.

Social Change

One of the major tenets of Walden University is the emphasis on positive social change. PBL is an all-encompassing, diverse teaching methodology that encourages multiple levels of positive social change. On an individual level, students develop and demonstrate an array of academic and personal skills (Cheng et al., 2021). These skills lend themselves to a greater positivity regarding education and career choices.

Additionally, at the community level, PBL has been a proven conduit for improving the lives and circumstances of countless individuals and organizations. Students lead the way in answering the call for a variety of necessary services in the community (Lancaster et al., 2022) and often share in attainment of improved physical, social, and emotional benefits. As Guo et al. (2020) stated, positive social change projects created through PBL leads students into environments where they interpret and apply what they have learned. As PBL is embraced by more school districts, the increased student engagement and community connections create endless positive possibilities.

Theoretical Implications

Because PBL is a flexible teaching methodology, it is adaptable to numerous learning situations. Open-minded and creative instructors who already use PBL need to be joined by other teachers and administrations ready to embrace the risks of PBL in order to achieve greater academic, social, and personal benefits. Boosting creative thinking in inquiry-based learning skills provides a foundation for future academic and employment opportunities (Stehle & Peters-Burton, 2019). PBL opens the door for increased interdisciplinary learning, team teaching, collaborative conversations, and endless possibilities for real-world applications (Guo et al., 2020). This would provide a much needed change in our current academic climate, a change that has been proven to be an effective and valuable teaching methodology.

Conclusion

PBL promotes student attention/engagement by encouraging student-led learning and the assumption of ownership over their own learning experiences. PBL allows students to create relevant projects that may go beyond the classroom and into the community. Newly found or honed skills create inner confidence, greater self-efficacy, and inner trust. With the overwhelmingly positive response from teachers, there is a great need to implement PBL in more classrooms and school districts. The entire PBL journey takes students to a moment of completion where they can savor the satisfaction of lessons well-learned and a job well-done. Keller's (1987) ARCS model of motivational design has been used as an academic measuring stick for motivation in a plethora of classroom and business applications. Assessing students' levels of motivation in a PBL language

arts classroom provides valuable insight into the worthiness of increasing PBL opportunities in all disciplines. Teachers indicated that the vast majority of students became actively engaged in classroom activities and their attention often continued beyond the completion of the lessons and final projects. Students took ownership of their learning not only by increased participation, but by committing to the belief that they were doing something important. Engaged students found relevance in the projects, both personally and socially. The ability to understand how projects benefitted themselves and/or the community deepened the learning experience and provided students with real-world applications. Deeper learning accompanied by greater student autonomy and the successful navigation of challenges resulted in increased confidence. Students came to recognize their capabilities in areas of problem-solving, critical thinking, collaborative efforts, and newfound skills such as artistic gifts or public speaking. Finally, the positive outcomes of these first three ARCS components resulted in overall satisfaction with the learning process and outcomes. Students felt inspired by their contributions to the community and realized a greater sense of self-worth.

As an indicator of positive social change movements, PBL creates an environment where students actively seek to make meaningful contributions to improve their classroom environment and the community at large. Interaction with businesses, social change agencies, charitable organizations, and everyday citizens generates a potential ripple effect of positive and often long-lasting transformations. Inner transformations such as increased confidence, a greater desire to serve the community, and improved communications skills are worthy attributes for students who will one day be contributors

to and potential leaders of society. Public transformations such as urban beautification, food pantries, and public gardens lift communal spirits and encourage citizens to make their own positive contributions to the community.

As a motivational classroom design, PBL not only ticks all the academic competency boxes, but also provides an educational format that is enjoyable for teachers and students alike. Teachers acknowledge that initial implementation requires a great deal of administrative support, personal patience, and flexibility within the classroom. However, once the initial hurdles are dealt with, the sense of personal fulfillment and increase in academic engagement make the PBL experience a memorable one that has positive life-long implications.

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Appendix A: Participation Invitation Letter (Email)

Dear Invitee,

My name is Elizabeth Merrell Gross. I am a doctoral student a Walden University in the Education Program. I would like to request your participation in a doctoral research study I am conducting entitled: High School Language Arts Teachers' Perceptions of Students' Motivation to Learn in a Project-Based Learning Class. I would like to explore teacher perceptions of their project-based learning language arts class. The study involves interviews, which will be face-to-face or via virtual conferencing platform, depending on our mutual locations, and follow-up reflection emails.
Participation is voluntary and participants may withdraw at any time. Confidentiality is ensured and no names or identifying information will be included in the study.

If you would like to participate in the study, please read the attached Letter of Consent.

Your participation in the research will be of great importance to better understand how teachers perceive students' motivation in a project-based learning high school language arts class. The information gathered may assist teachers and administrators in the quest to meet the needs of students in their educational endeavors.

Thank you for your time and participation.

Sincerely,

Elizabeth Merrell Gross, M.F.A., Doctoral Student, Walden University

Appendix B: Interview Questions

Research Question: What are teachers' perceptions of student motivation in a high school PBL language arts class?

1. How do you use project-based learning in your class?
2. How long have you been using project-based learning?
3. Give me an example of a time when project-based learning created an experience that students couldn't have had any other way.
4. Overall, how would you describe your experiences with using project-based learning in your classroom?
5. Give me some examples where students' projects positively affected some aspects of learning in your classes.
6. What is the most challenging component of project-based learning in your classroom?
7. Name one aspect of PBL you feel students enjoy. Why?
8. Name one aspect of PBL you feel your students would want to change. Why?
9. Thinking about your project-based learning experiences, tell me a story about a time when you could tell students were engaged with their subject
10. How is student engagement different when you use project-based learning?
11. How do students personalize their projects to make them more relevant?
12. What have you noticed about student confidence as they complete their projects?
13. How would you describe students' levels of satisfaction when they are finished with their projects?