DEVELOPING STUDENTS' SENSE OF ACCOMPLISHMENT THROUGH STUDENT CHOICE: UNCOVERING AN EMERGING FRAMEWORK FOR THE DEVELOPMENT OF INTRINSIC MOTIVATION TO LEARN

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## DEDICATION

To Ruth, Greta, Jenny, Kim, Mary, Vic, and Kristy – the women that made me the teacher I am today. To John Nix, my unexpected mentor that always believed in me. And to Emily, Brynne, and Lizzie, who are the ones that taught me to always reach for the stars and go beyond.

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# ABSTRACT

Teachers are encouraged to provide and equitable learning environment in their classrooms. This can be a struggle due to the emphasis on standardization. The purpose of this mixed methods, action research study was to examine the impact of providing students with choices for how to demonstrate their learning (SC) on their sense of accomplishment (SoA) in a high school English Language Arts course. The research question that guided this study was, "How does elevating student choice for demonstrating learning through Project Based Learning (PBL) impact students' sense of accomplishment in the secondary English classroom?" Using a Project Based Learning (PBL) instructional approach, students were provided opportunities to make choices related to their methods of collaboration and demonstration of mastery over a six-week period as they engaged in a PBL unit focus on characterization in the Shakespearean play *Hamlet*. Based on the analysis of data generated by a pre/post intervention survey, semi daily questionnaires, and teacher observations, providing students with meaningful choices can lead to a greater SoA for students. Intrinsic motivation was found to be a pivotal outcome and an emerging framework for increasing intrinsic motivation for students to learn in the classroom was identified. Implications for teachers of English and those working in high school classroom are discussed

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PBL ......................................................................................Project Based Learning

SC......................................................................................................Student Choice

SoA ......................................................................................Sense of Accomplishment

CHAPTER 1

INTRODUCTION

Ten years. Three schools. Hundreds of students. Different buildings, hallways, desks, and administrators. Varying levels of accountability, faculty morale, and school spirit. Throughout my experiences as an educator, one thing has always stood out: the crippling impact of assessment practices.

Most teachers I know put a great deal of effort into creating an inviting atmosphere in their classrooms. They want to create a learning space that promotes healthy relationships amongst students to create a safe environment of learning for all. However, the same care and attention are not given to the assessments they are forced to take. Students are often forced to regurgitate their learning into standardized bubbles that strip them of choice and ignores their inherent diversity. The implicit bias of standardized assessments subjects marginalized students to standardize their learning into uncomfortable and inauthentic learning experiences.

In all fairness to my fellow teachers, this is not their fault. We are the product of the system in which we were raised. In most of my classes (except in my English classes), most of my assessments were standardized. I was a standardized learner. My learning was expected to fit the expectations of the white, middle-class system. This is also the system that we promote today. In every district I have taught, there is an emphasis on standardization. Each district claims that assessments can be standardized in order to level the playing field and make learning more common amongst all the classes.

What is the harm in holding everyone to the same standard? The harm is you take away their power of learning. When you standardize assessments for teachers, their ability to create assessments for their specific students is taken away. When you give students standardized assessments, their power for showcasing their learning is also taken away.

The problem is that when students are forced into standardized assessment practices then they will only be standard learners. Students are stripped of their sense of accomplishment – the sense of pride in their learning. Assessment anxiety and disappointment is all that is left behind. Students panic at the mention of the word "test" and do not look at assessments as an opportunity to show off what they have learned.

The moment I realized I was an assessment monster, my teaching philosophy changed. I handed my students a common midterm that every English II student was taking at the school. One of my students looked at me and asked, "Mrs. G, did you make this?" "No, I didn't. Someone at another school did," I embarrassingly replied. "So why are *we* having to take this?" he questioned with a huff of exasperation. It was that moment that made me stop and question my motives behind assessments – why *was* I giving that assessment? Of course, I *had* to give the assessment because it was required by the district, but did I really *believe* in that assessment? Did I *believe* that assessment would give my students the individual opportunity to showcase what they have learned from me?

Students can be given equitable assessment opportunities in order to foster student choice and a sense of accomplishment. Instead of promoting anxiety with assessments in our classrooms, teachers can provide students with opportunities to take pride in their learning.

**Problem of Practice**

An emphasis on standardized assessments limits a teacher's ability to differentiate assessment opportunities in order to provide equitable ways for students to showcase and feel pride in their learning (Sparapani & Callejo Perez, 2015). There is a major push for standardized assessments and curriculum in schools across the country (Sparapani & Callejo Perez, 2015; Rubin & Kazanjian, 2011). Many school districts want to push rigorous consistency in English classrooms through standardized assessments and common curriculum (Whitney & Candelaria, 2017; McGuinn, 2016). Often called curriculum narrowing, the standardized curriculum consists of predetermined, pre-structured materials that encourage sameness in order to address the demands of mandated high-stakes testing (Rubin & Kazanjian, 2011; Wraga, 1999). The individuality of students is lost while placing emphasis on the whole school or district (Rubin & Kazanjian, 2011). The sameness of standardization does not meet the needs of all students because of the increasingly diverse population of students in American classrooms; these diverse students need diverse ways of mastering content, which is not provided through the standardized curriculum (Sparapani & Callejo Perez, 2015). The standard curriculum is presented from the perspective of the White, Anglo Saxon, Protestant majority viewpoint (Giroux & McLaren 1986; McLaren, Martin, Farahmandpur, & Jaramillo, 2004), which discounts the experiences of large populations of students in the classroom. Students are not taught to think independently or critically because of the emphasis on isolated skills through memorization (Rubin & Kazanjian, 2011). Also, standardized assessments can cause anxiety and an increase in discipline issues amongst students (Whitney & Candalaria, 2017).

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This push challenges the need for differentiated instruction and assessment in order to address equity in the English classroom. While there are gains being made in the field of education, certain students are being left behind, like students of color, students living in poverty, and English Language Learners ("Reaching Educational Equity", 2017). This disparity highlights that it is not necessarily an achievement gap for these students, but an equity or opportunity gap. These students lack access to the necessary educational opportunities that are readily available to children of affluent or middle-class families. Standardized curriculum and assessments model the one-size-fits-all approach and do not acknowledge that students learn and gain knowledge in different ways (Angus, 2012). The implementation of standardized assessments attempts to put students on the same level, which discounts their personal histories. Too many schools are attempting to ignore the racial, social, and cultural experiences of students that are inherently present in the social environment of our schools by promoting the construction of standardized teaching practices (Au, 2007). This perpetuates the lack of equity in the classroom because students are expected to perform the same on the same type of assessments.

Assessments can connect teaching and learning (William, 2013) and can provide evidence of effective teaching and learning. Students will approach their learning based on their perception of assessments and tests (Mussawy, 2009). If students see assessments as daunting or meaningless, they may be less likely to invest in their own learning. Engaged learning occurs when students are involved in the assessments (Mussawy, 2009) because it involves them in their learning. Standardized assessment tools do not involve students in their learning because they are pre-made and lack differentiation.

The focus of this study was on the absence of equitable assessment opportunities for students to have student choice and foster a sense of accomplishment. Throughout this study, the impact of Project Based Learning (PBL) on student engagement, critical thinking, and differentiated learning opportunities is analyzed. This study interprets how Project Based Learning can be used as an alternative to traditional assessments, like standardized assessments, to foster voice and choice, self-directed learning, and self-esteem as learners, while promoting an equitable curriculum in the secondary English classroom.

**Theoretical Framework**

Differentiated instruction is a way of recognizing and understanding the differences of the learners in the classroom and tailoring curriculum and instruction to reflect those differences (Bajrami, 2013; Morgan, 2013). Teachers use differentiated instruction to elevate their instruction and maximize the learning of all of their students (Weller, 2017). Teachers respond to the needs of their students by adjusting their lessons and assessments to fit the needs of their students (Weller, 2017; Bajrami, 2013; Morgan, 2013). Effectively differentiated lessons focus on the elements of content, the activities of learning (process), the product of how students demonstrate what they know, and the impact of more attention to students' emotional needs (Tomlinson, 2008). Differentiated instruction is used as a method to promote equity in the classroom. For the purpose of this study, equity is defined as the explicit elevation of student choice and the intentional development of a student's sense of accomplishment. Some students are lagging behind because of the lack of learning opportunities (Wlodkowski & Ginsberg, 1995; Center for Responsive Schools, 2017; Angus, 2012). Because of the existence of the gap amongst

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diverse students, teachers need to provide students with equitable learning opportunities (Center for Responsive Schools, 2017). This gap is also referred to as an opportunity gap because of the gaps that exist not only within the different racial makeup of students but the different socioeconomic groups as well (Weller, 2017; Carter, 2013; Welner & Carter, 2013). Equity in the classroom extends beyond racial boundaries; we can address the opportunity gaps of students that are from different socioeconomic backgrounds and do not fit the mold of the typical, middle-class education expectations (Weller, 2017). Equitable learning opportunities are important because "education offers its recipients better prospects for economic and social mobility, and improved quality of life" and institutions "must remain committed to the establishment and maintenance of racial climate that is conducive to racial equity" (Howard, 2014, p. 94). Teachers can try to provide students with equitable learning opportunities in order to maximize their chances of success.

PBL is a growing trend in education that focuses on student choice and self-directed learning. In "A Review on Project Based Learning," author John Thomas (2000) defines PBL as "a model that organizes learning around projects [where the] projects are complex tasks, based on challenging questions or problems, that involve students in design, problem-solving, decision making, or investigative activities" (p. 1). Unlike Problem Based Learning, Project Based Learning does not have to focus on the solution of a problem. The idea of PBL is rooted in John Dewey's theory of learning by doing (Dewey, 1897). Dewey believed education can not be predetermined based on certain skills but can be an opportunity for students to discover their full potential through an exploration of their skills (Talebi, 2015). Also, Dewey was a proponent of hands-on

learning, which influenced the thinking behind PBL (Dewey, 1897). One of the major components of PBL is voice and choice, which enables students to be engaged and take ownership of their learning, and PBL also uses the culture and experiences of students to enhance their learning (Thomas, 2000).

Assessments and curriculum can target the needs and experiences of individuals, critical thinking, and cultural sensitivity (Au, 1994). Formative assessments are active assessments because they require teachers to change and create assessments based on the needs of their students (Garrison, & Ehringhaus, 2017). These assessments are used before summative assessments and during instruction in order to guide the instruction to fit the needs of the students (Chappius, & Chappius, 2008). Formative assessments also engage both the teachers and the students. According to Garrison and Ehringhaus (2017), "if students are not involved in the assessment process, formative assessment is not practiced or implemented to its full effectiveness." Teachers and students can use the formative assessment results to make decisions about the learning process (Chappuis, & Chappuis, 2004; Garrison, & Ehringhaus, 2017). Summative assessments are assessments used to gauge whether or not students have achieved learning goals (Stiggins, Arter, Chappuis, & Chappuis, 2004; Garrison, & Ehringhaus, 2017). Teachers can use summative assessments for information on who has mastered standards and who has not. Teachers can use specific learning targets for each task on their assessment and use the results to choose what to reemphasize or re-teach in their curriculum (Chappuis, & Chappuis, 2004). Due to the benefits of using PBL as a means of differentiating instruction, it seems logical that giving students choice in their demonstration of learning can lead to an increase in their sense of accomplishment.

**Research Questions**

The purpose of this action research study was to provide my students with an opportunity to choose how they demonstrate their progress towards course learning objectives as they engage in a PBL experience and to measure the impact of their choices on their subsequent academic achievement and sense of academic accomplishment. It was my hope that providing students with the agency to select how they demonstrate their learning will support my efforts to foster a more equitable classroom and ensure that students are developing a sense of academic accomplishment in my classroom.

Many teachers work to develop new methods of authentic assessment that utilize differentiated instruction while also meeting rigorous standards of achievement. I became interested in PBL as an assessment method because of the emphasis on student engagement, critical thinking, and differentiated learning opportunities. I have also been conflicted about the implementation of standardized assessments, like multiple-choice tests, in classes. Teachers are encouraged to differentiate instruction and assessment methods to address the needs of all students but are then expected to have students perform well on standardized assessments. This contributed to the formulation of my research question. My research question is as follows:

- How does elevating student choice for demonstrating learning through PBL impact students' sense of accomplishment in the secondary English classroom?

This question has been selected over others because it is the most realistic approach to solving the problem present in my current practice. Assessment practices may be difficult for teachers to manipulate because of forced mandates at schools.

However, PBL is a simple, small-scale strategy that can have obvious, large-scale benefits for students. Also, PBL as a strategy can be easily integrated into any curriculum without necessarily overhauling one's teaching practice.

**Researcher Positionality**

My understanding of positionality is that it relates to a reader's "place" in the research process. Where do I fit in? Positionality refers to the impact or influence of my position in the process. A researcher's positionality within the study will impact how the study will be conducted, as well as the focus of the study. In this study, my positionality was as an insider. Throughout this study, I examined my own practices and conducted an internal evaluation. I had a lot of influence on my subjects because they are my own students. It was also important to recognize positionality because of ethical issues. Being aware of positionality in research can help to combat biases throughout the research process. It also helps to understand the motives and reasons for our actions throughout a study. Understanding positionality in research can help provide personal and professional meaning to the study and findings. I needed to be aware of my own expectations and biases throughout the process. I had the advantage of being familiar with my setting, strengths, and weaknesses. In order to become a more effective teacher, I can routinely examine my curriculum and instruction choices.

**Research Design**

Action research is research that emphasizes teaching and learning (Efron & Ravid, 2013). It is important for action researchers to identify a problem that reflects an issue with the practice. Action research aims to connect theory and teaching practices with what is occurring in the educational setting to an overall understanding of best

education practices (Efron & Ravid, 2013). Action research places the teacher as an active participant in the research process. Herr and Anderson (2005) define action research as a process in which teachers are an intricate part instead of being an outsider. Teachers can pick a problem that is present in their environment and become an active participant in the research process. Action research is perfect for my research process for many reasons. The purpose of my study was to use the premise of action research as research that focuses on learning and teaching (Efron & Ravid, 2013). I wanted to understand how PBL as a means of authentic assessment impacts student self-esteem as learners. Both texts emphasize that the problems studied can be a topic of interest.

I used PBL as the intervention for this study. The students used the PBL while analyzing a play in order to understand themes in the text but also participate in their own inquiry process. I utilized a mixed-methods approach. This method encourages the integration of both qualitative and quantitative types of data. When using the mixed-methods approach, the researcher is collecting different types of data that will provide the best understanding of the research problem (Creswell, 2014). Using a mixed-methods approach was beneficial because it does not limit the researcher to one type of data collection method.

I collected data from my English IV Class. These students were college-prep, typically senior-level students. I conducted this study in my classroom. The school where I teach has a student population of almost 1,800 students. The informal percentages of the racial makeup of my school are 60% white and 40% minorities. In most of my classes in the past, the racial makeup of my class has been similar to the overall percentages of our school. I took into consideration my experiences as a white female and how they may

contrast with my students. Their experiences differ from mine since I grew up in a middle-class household.

By engaging students with their learning, they will hopefully take ownership of their learning. Rory O'Brien (1998) writes, "because action research is carried out in real-world circumstances, and involves close and open communication among the people involved, the researchers must pay close attention to ethical considerations in the conduct of their work" (p. 1). In order to successfully bridge the gap between the participants of my students and myself, we engaged in open communication. I emphasized that students had a voice in the study. All participants of the study were aware of all the guiding theories and principles of the student (Winter, 1996). This ensured safe ethics but also provided a strong purpose for the study. I kept students involved throughout the research process so they could see how I was learning as well. This process made it clear that teachers and students can be co-learners and have active voices in curriculum construction, whether it is directly or indirectly (Cochran-Smith & Lytle, 1993). In order to balance my interests and agendas throughout the study, I acknowledged that they exist. Cochran-Smith & Lytle (1999) emphasize that confronting one's assumptions and biases is important because it will improve one's teaching – taking data from daily experiences. This connects with the premise behind action research. Everyone has natural biases. I was clearly passionate about this topic and issue. However, I could not let that passion interrupt or interfere with the research process. Also, I could not let it influence the results of the study in any way. Action research can strengthen teachers to analyze themselves as educators in a reflective way while also helping them assume control over their practices (Ginns, Heirdsfield, Atweh, & Watters, 2001). Hopefully, this study will

encourage my fellow teachers to become teacher researchers within their own classroom.

The participants in my study were from my English IV class. I was a full-time secondary English teacher, and this group was convenient for my samples. The students in the English IV classes were senior-level students. This is a College Prep (CP) level class, which is a level below Honors. Most of the students were taking English IV for the first time. The students in these classes were on track to graduate at the end of the year. There were 23 students in the class. One of the students was from Belgium, and one of the students was from Myanmar. Ten students were African American, two students were Hispanic, and nine were White. All data collection throughout the study upheld anonymity for the students by removing their names or personal identifiers.

The following is a list of tools that I used throughout my research process (Efron and Ravid, 2013):

- PBL Reflection Survey (Appendix C)

  o Likert Scale

- Exit Slips (Appendix B)

  o Likert Scale and Open-Ended Response

- Pre and Post Intervention Survey (Appendix A)

  o Likert Scale

I wanted to use the Likert scale survey for a baseline of student opinions at the beginning of the semester. This may seem ironic because I am looking at the problems associated with standardized assessment methods. However, it may be reliable data because the students may not be comfortable enough to reveal their true feelings to me in an interview at the beginning of the semester. The Pre and Post Study Survey enabled me

to analyze the changes in attitudes before and after the study. The PBL Reflection also enabled me to analyze the attitudes of PBL after the completion of the study. By working with colleagues and ensuring proper planning, validity and reliability can be strengthened. My hope is that my findings will be able to be transferred not only into English classes but in all classes.

The life experiences of students impact their understanding of themselves and their learning. In order to effectively educate students, teachers can get to know their students as individuals. Teachers can understand that their life experiences impact their perception of school and power systems in our society. The goal of all teachers can be to create a collaborative space of learners that takes into account their individual differences as people and learners. Each year, I meet new students who bring different learning and life experiences from those of my own. In order for me to effectively teach and connect with these students, I can confront my own cultural history and identity.

My identity as a learner also provides some challenges with regard to relating to my students. I do not have any learning disabilities, and school was always easy for me. My parents placed a lot of importance on academic success, and failure was not an option. Many of my students do not come from households that value education. Also, many of my students have learning disabilities or are very disinterested in learning in general.

**Significance of the Study**

This study will benefit teachers of secondary English classes. Teachers are able to use the strategies and interventions implemented in this study in their own classrooms.

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The other teachers at my school will be able to benefit from the findings of my study as well. The results of this intervention study can benefit my own teaching practice. By taking a reflective look at my own teaching practices, my teaching craft can improve. Also, my student can benefit from the intervention. Their learning and sense of accomplishment can improve from the intervention of this study.

The findings from this study will have a significant impact on educators for various reasons. As stated previously, teachers are encouraged to authentically assess student learning. Hopefully, the findings of this study will provide teachers with an alternative to standardized assessment methods in their classes. PBL is a current trend in education, and hopefully, this study will take a closer look at the impact of PBL and assessment. The intended audience of this study can be all teachers wanting to implement authentic assessments in their classrooms. The focus of this study will be on a high school, English classroom. However, the findings will be applicable to all subjects on all levels. Teachers can take strategies from this study and apply it to their own learning environments.

**Limitations**

One of the major components of this intervention is to provide students with choice in their learning. It is the belief of the researcher that there is an absence of SC in traditional curriculum because of standardization, and by providing PBL as a means for differentiation, students can be provided with equitable learning opportunities (Thomas, 2000; Rubin & Kazanjian, 2011; Wraga, 1999). In the results of the Pre-Intervention Survey, some students responded that they already felt like they were afforded choice in the classroom. These responses could have resulted in a number of different reasons. The

students that felt they were provided with choice in their learning may be a part of the majority that has been trained to do well under standardization. This group of students usually includes white, middle and upper-class students that are the targets of standardized curriculum and assessment practices (Giroux & McLaren 1986; McLaren, Martin, Farahmandpur, & Jaramillo, 2004). By the end of the intervention, there were no students who responded that they did not feel like they were given choice. PBL provided all students with equitable learning opportunities, which was a major objective of the study, and addressed the lack of learning opportunities for all students (Thomas, 2000; Wlodkowski & Ginsberg, 1995; Angus, 2012). One limitation associated with the participants of this study is the type of students in the class. The class that participated in the intervention was composed of senior-level students in an English IV class. The intervention may yield different results when conducted in a different level of class, like English I with freshmen students.

Another limitation of the study is that there is no standardized assessment data from the participants to serve as a comparison to the collected data. The sameness of standardization did not serve as the best means of assessing SC or SoA in the classroom and did not take into account the diversity of the learners (Sparapani & Callejo Perez, 2015). The curriculum and instruction needed to meet the needs of the learners in my classroom needed to meet the needs of a larger population of learners than what is typically targeted by using a standardized curriculum (Giroux & McLaren 1986; McLaren, Martin, Farahmandpur, & Jaramillo, 2004).

**Organization of the Dissertation**

In the chapters that follow, I will provide a thorough account of my effort to address the problem of practice. In chapter 2, I provide a detailed review of the literature as it relates to the problems associated with high stakes, standardized testing with a focus on its negative impact on student motivation to learn and demonstrate mastery. Also, I review the relevant literature related to PBL, the positive impact of student choice on student learning, and standardization. In chapter 3, I will discuss my use of action research and the research design for this study. In chapter 4, I provide a presentation of the data I collected a well as my analysis and interpretation of that data. The remaining sections of this dissertation will include a literature review, data collection and analysis, findings and results, implications for further research studies, and references.

**Definition of Terms**

1. Project Based Learning (PBL): PBL is a model of teaching that deviates from traditional teacher-centered instruction and focuses on students learning through in-depth and intricate projects. PBL focuses on independent learning and the voice and choice of the students.

2. Authentic assessment: Authentic assessment will be defined as assessments that gauge the understanding and learning of students through relevant, engaging, and individualized tasks.

3. Equity: the explicit elevation of student choice and the intentional development of student sense of accomplishment

4. Student Choice (SC): the ability for students to make choices in their learning

5. Sense of Accomplishment (SoA): the intrinsic motivation and feelings associated with learning

6. Differentiation of Instruction: varying levels and style of instruction in order to accommodate the needs of all learners

CHAPTER 2

LITERATURE REVIEW

The purpose of this action research study was to provide student choice in my classroom for students to determine how they demonstrated their progress towards course learning objectives as they engaged in the PBL experience. This study also measured the impact of their choices on their sense of accomplishment. By providing this choice, it was my intention to foster a more equitable classroom and ensure that students developed a sense of accomplishment (SoA) in my classroom. Authentic assessment opportunities like PBL instead of standardized assessments enables educators to create a more equitable classroom in which students can feel pride in the learning and a heightened sense of accomplishment. The research question that guided this study was as follows:

- How does elevating student choice (SC) for demonstrating learning through PBL impact students' sense of accomplishment (SoA) in the secondary English classroom?

This chapter will analyze the literature associated with the topics and issues addressed above. The theoretical framework behind PBL is discussed at the beginning of the chapter. Student engagement is analyzed through relevant literature. Then, standardized curriculum and assessment practices are reviewed as it pertains to this topic. A basic overview of PBL is also given in this chapter. Finally, this chapter ends with a link to social justice through the analysis of the achievement gap in education, equity in the classroom, and diversity.

**Purpose of the Literature Review**

The literature review provides the researcher with an outlet to think critically about the problem of practice (Machi & McEvoy, 2016). Once a topic is chosen, the literature review provides the opportunity to analyze the concepts prior to research. This will provide a foundation of understanding for the researcher. The literature review is also important because it provides a chance to reflect on the information and concepts presented in the study (Machi & McEvoy, 2016).

The researcher has chosen sources that already exist on some of the topics. The literature presented in this review provides a foundation for understanding these concepts prior to the study. The researcher used a variety of texts to cover the topic. Scholarly articles, studies, and reports were collected. Search engines like JSTOR, ERIC, and Google Scholar were used to collect these sources.  The literature guided the research process by providing a foundation of understanding but also highlighting the need for further exploration of certain topics.

**Historical Perspective**

The implementation of PBL is a growing trend in education. However, the foundation of this trend is not a completely new concept. Early education philosophers like Aristotle and Confucius were proponents of the idea of learning by doing. Aristotle encouraged others to learn by looking for knowledge in the world outside of themselves (Hammond, Austin, Orcutt, & Rosso, 2001). Jean Piaget also paved the way for the implementation of PBL. Piaget believed that people learn through experience and that students can investigate and explore (as cited in Boss, 2011). The theories and practices of John Dewey support the thinking behind implementing PBL in the classroom as well.

Dewey believed education can be an active and social process (Dewey, 1897). Students

can take an active role in their learning through social interaction. Dewey also suggested

the main purpose of education is to enhance the inherent abilities of the individual

(Dewey, 1897). This suggests that learning and education can be an individualized

process, contrary to the ideas behind standardized curriculum. PBL methodology has

roots in the Project Method theory, which describes learning through projects based on

the four phases of purposing, planning, executing, and judging (Knoll, 2006; Kilpatrick,

1918; Holm, 2011). The methodology and ideas associated with the Project Method,

along with scientific inquiry, have resulted in many different methods of teaching that are

student-centered, such as PBL, expeditionary learning, and discovery learning (Holm,

2011; Knoll, 1997; Thomas, 2000; Prince & Felder, 2007).

While standardization seems to be a recent trend, standardization has roots as

early as 1890 by Alfred Binet; Binet administered achievement testing in the first way of

standardization from 1890-1930 with a second spike in popularity during the 1960s

(Brady, 2008). Standardization connects to the social efficiency model, which encourages

a factory-style design for education (Bobbitt, 1918). Within this model, the students

learned predetermined content that prepared them to enter the workforce after school.

Edward Lee Thorndike also championed performance testing as a means of

predicting academic success (Resnick & Resnick, 1992). Standardized tests gained

popularity for tracking students and admissions to university during this time (Brady

2008; Corbett, 1991; Resnick & Resnick, 1992). During the 1960s, standardized testing

became a means of determining the failures and successes of schools (Brady, 2008). The

pressure to create national accountability assessments, the responsibility to provide

special services to minorities, the creation of learning objectives, and equitable distribution of resources amongst schools also led to the emphasis on standardization (Corbett, 1991).

**Theoretical Framework**

There are many theories that support the use of PBL in the classroom. Constructivism is a learning theory that explains learning as the construction of one's own understanding and knowledge through experiences in the world and reflecting on those experiences (Bereiter, 1994; Olusegun, 2015). Olusegun (2015) writes, "Constructivists believe that learning is affected by the context in which an idea is taught as well as by students' beliefs and attitudes" (p. 66). The learner has an obligation to participate in their own learning, which can be a dynamic process that requires personal interpretation (Harasim, 2012; Mergel, 1998). Constructivism supports PBL because constructivism encourages active learning in which previously understood concepts can change through experience (Phillips, 1995; Olusegun, 2015).

The idea of experiential learning supports the idea of utilizing PBL in the classroom. Experiential learning emphasizes learning through the experiences of the individual (Miettinen, 2000). It is defined as "a process through which a learner constructs knowledge, skill, and value from direct experience" (Luckmann, 1996, p. 7). This process of learning allows teachers to individualize instruction and capitalize on the experiences of their students. Also, experiential learning emphasizes that "true learning is the result of students' experiences, and the evaluation and reflection of these experiences" (Moore, Boyd, & Dooley, 2010, p. 39). Human experience is important in

the way students conceptualize the world. Students "learn by doing" through experiential learning.

The Learner Centered ideology is one theory that supports the implementation of PBL. As it states, the Learner Centered ideology places the student at the center of learning (Schiro, 2013).  The learning of the individual is of the utmost importance. The "needs and interests of the individuals" (p. 105) guide the instruction in the classroom. This directly contradicts the purpose of a standardized curriculum but connects to PBL. According to this ideology, teachers take on the role of a facilitator of learning (Schiro, 2013). Teachers do not simply deliver information to students but guide students through their exploration and understanding of concepts and ideas.

Similarly, Social Reconstructionist ideology also supports the pedagogy of this study. This ideology emphasizes that education can contribute to reconstructing society (Schiro, 2013; Zuga, 1992). Social Reconstruction connects with Project Based Learning. Students using this ideology in the classroom researched and analyzed social situations, but also attempted to solve these issues (Schiro, 2013; Zuga, 1992). Project Based Learning is founded on these same ideas. Teachers can create change through equitable teaching practices that attempt to close the achievement gap. Social reconstructionists also emphasize the importance of learning in the community and the classroom, through communication, and through socialization (Schiro, 2013; Zuga, 1992).

**Project Based Learning**

Project Based Learning (PBL) is a model that utilizes projects composed of complex tasks to facilitate learning. The students create challenging questions, design steps to solve problems, communicate with their peers, and create presentations over an

extended period of time (Thomas, 2000; Jones, Rasmussen, & Moffitt, 1997; Thomas, Mergendoller, & Michaelson, 1999). There are many important aspects of PBL. One important characteristic of PBL is that it is not something to be added to the curriculum – it is the curriculum (Thomas, 2000). Curriculum is taught through the experiences of PBL. Students learn through the experiences of research, collaboration, investigation, and presentation. The "essential question" is also important to the PBL process. Students construct a question that drives their research and exploration (Jones, Rasmussen, & Moffitt, 1997; Thomas, Mergendoller, & Michaelson, 1999). This gives the students a purpose in their learning. Another important aspect of PBL is that it is student-driven (Thomas, 2001; Diehl, Grobe, Lopez, & Cabral, 1999; Moursund, 1999). The student becomes in charge of their learning, thus becoming more independent. The outcome of their learning depends heavily on their effort and investigation. Real-world problems are explored through PBL in order to capitalize on the interest of the students (David, 2008). The problems are not "school-like" (Thomas, 2000, p. 4), which further engages the student. Like Learner Centered ideology, PBL encourages the teacher to take on the role of the facilitator, "working with students to frame worthwhile questions, structuring meaningful tasks, coaching both knowledge development and social skills, and carefully assessing what students have learned from the experience" (David, 2008).

There are a few things that need to be considered in order to successfully implement PBL in the classroom. Exploration conducted through PBL is rooted in educational standards and objectives. It is not enough to simply understand concepts; students can learn to think critically throughout this process. Also, learning can be authentic, in that it has real-world applications. Voice and choice can also be present

when implementing PBL. Students can have ownership of their learning by having a voice and being able to choose their path of exploration. Students can be provided with opportunities to reflect on their learning and revise throughout the process. Finally, the students can have the opportunity to construct a product and present their findings in a public setting (Larmer, Mergendoller, & Boss 2015; Jones, Rasmussen, & Moffitt, 1997; Thomas, Mergendoller, & Michaelson, 1999).

Research has shown that PBL can impact student achievement and learning outcomes. PBL can create a deeper understanding of content knowledge for students (Quint & Condliffe, 2018). According to Terada (2018), "Concepts are better understood when students see a need for their use because that need encourages them to apply what they're learning to relevant situations, leading to a better sense of understanding." A study was conducted on the implementation of PBL in second grade Social Studies classes in a high poverty school (Duke & Halvorsen, 2017). One group of students was taught using traditional methods and the other group was taught using PBL. The teachers using PBL were trained and provided with PBL units for their classes. The PBL group showed significant improvement over the non-PBL group. The study acknowledges that much more research needs to be conducted in order to accurately gauge the impact of PBL on achievement.

Much of the research shows it is often difficult to get results on improvement through the use of PBL because of all the variations of implementation. However, research shows the positive impact of PBL on motivation, engagement, and self-efficacy of students (Quint & Condliffe, 2018; Iwamoto, Hargis, & Vuong, 2016; Kaldi, 2010). When using PBL in the classroom, students felt the assignments were more

worthwhile and engaging. PBL can give students a purpose (Pierce, 2018) which drives deeper engagement and understanding.

**Engagement**

Student engagement is an issue in today's classroom. Student engagement becomes an issue for students in the later years of schooling during middle and high school (Taylor & Parsons, 2011; Wilms, Friesen, & Milton, 2009). Many definitions of student engagement exist. One way to define student engagement is through assessments (Taylor & Parsons, 2011). If students do well on assessments, this reflects their engagement with the content of the class. Assessments are not the determining factor for measuring engagement. Student engagement can also be about the student's experience in the class as well. Students may learn and do well on assessments without being fully engaged with the content. For this study, the following definition will serve for the term: "work that stimulated their curiosity, permitted them to express their creativity, and fostered positive relationships with others" (Strong, Silver, & Robinson, 1995, p. 8). Engaging students in a classroom is about getting students to form a connection with the content. When students are able to connect what they are doing in the classroom to their own backgrounds and life experiences, they find their learning meaningful. When teachers ignore the experiences of students, students will resist engagement in the classroom.  (Wlodkowski & Ginsberg, 1995).

Taylor and Parsons (2011) analyze how to improve student engagement in six key concepts: interaction, exploration, relevancy, multimedia, instruction, and authentic assessment (p. 7). Interaction focuses on the relationships that are formed in the classroom. Nurturing relationships from positive interactions between teachers and

students can improve student engagement (Dunleavy & Milton, 2009; Taylor & Parsons, 2011). Practices in the classroom that engage the most learners typically have some exploratory aspect; these practices can include PBL, exploratory practices, or inquiry-driven learning (Willms, Friesen, & Milton, 2009; Brown, 2000; Hay, 2000; Oblinger & Oblinger, 2005; Barnes et al., 2007). Relevancy focuses on teaching that is relevant to the learner. Today's learners want their learning to "apply to real-life scenarios whenever possible as opposed to being theoretical and text-based" (Taylor & Parsons, 2011, p. 12). Willms, Friesen, & Milton (2009) define relevant tasks as tasks that require critical thinking, surround students in inquiry, connect to the outside world, are rigorous, and involve conversation. Multimedia technology is important for engaging learners because it "brings learners accessible and relevant subject matter and experts and is a tool for engaged learning" (Taylor & Parsons, 2011, p.14). Challenging instruction that incorporates student autonomy can engage learners (Glenn, 2000; Tapscott, 1998; Hay, 2000; Carlson, 2005). Finally, authentic assessment is crucial to engaging learners because it showcases their learning (Taylor & Parsons, 2011).

A study conducted by Terada (2018) highlighted the impact of PBL on student engagement. The goal of the study was to show how a teacher increased student engagement through the use of PBL. The article detailed the experience of PBL in a 6th and 7th grade science class in San Francisco. The teachers at the school have bought into the idea of PBL because they believe traditional methods are not working. One of the main ideas of this article is that PBL enforces critical thinking. The students took an active role in their learning and were engaged because of the need for answers. The teachers focused on the following concepts for their curriculum:

Engage: Students' interests are piqued with novel ideas.

Explore: Hands-on activities deepen understanding.

Explain: Students describe ideas in their own words.

Elaborate: Ideas are applied to a broader context.

Evaluate: Students provide a rich picture of their understanding.

The study showed there were higher rates of paying attention and staying on task when students participated in the PBL process (Terada, 2018). Students are more engaged with their learning when their learning is relevant. Also, students find lessons more engaging when they can make a connection to the content. According to Terada (2018), PBL can assist with learning if centered around meaningful goals, and "can be an effective way to cultivate a "need to know" attitude in students – students are motivated to deepen their understanding in order to solve a problem that is meaningful to them" (p. 1). Students need work that can help them become successful and help develop their sense of self (Strong, Silver, & Robinson, 1995).

**Assessment**

For this study, assessment will be defined as "a systematic process for gathering data about student achievement," (Dhindsa, Omar, & Waldrip, 2007, p. 1261). Assessments enable teachers to gather data on how students are progressing in class. Assessments are essential to learning and can be the connection between learning and instruction (William, 2013). Assessments can be broken into two major categories: formative and summative assessments (William, 2013; Stiggins, Arter, Chappuis, & Chappuis, 2004; Garrison, & Ehringhaus, 2017). Formative assessments are defined by the following key concepts from author William (2013):

1. Where the learner is right now

2. Where the learner needs to be

3. How to get the learner there

Formative assessments are active assessments because they require teachers to change and create assessments based on the needs of their students (Garrison, & Ehringhaus, 2017). These assessments are used before summative assessments and during instruction in order to guide the instruction to fit the needs of the students (Chappius, & Chappius, 2008). Formative assessments also engage both the teachers and the students. According to Garrison and Ehringhaus (2017), "if students are not involved in the assessment process, formative assessment is not practiced or implemented to its full effectiveness." Teachers and students can use the formative assessment results to make decisions about the learning process (Chappuis, & Chappuis, 2004; Garrison, & Ehringhaus, 2017).

Summative assessments are assessments used to gauge whether or not students have achieved learning goals (Stiggins, Arter, Chappuis, & Chappuis, 2004; Garrison, & Ehringhaus, 2017). Teachers can use summative assessments for information on who has mastered standards and who has not. Teachers can use specific learning targets for each task on their assessment and use the results to choose what to reemphasize or reteach in their curriculum (Chappuis, & Chappuis, 2004).

Students can use summative assessments to ask the following questions about their learning (Chappuis, & Chappuis, 2004):

- What are my strengths relative to the standards?

- What have I seen myself improve?

- Where are my areas of weakness?

- Where didn't I perform as desired, and how might I make those answers better?

- What do these results mean for the next steps in my learning, and how should I prepare for that improvement?

Feedback is essential to assessments when there is still time to scaffold learning (Stiggins, Arter, Chappuis, & Chappuis, 2004; Garrison, & Ehringhaus, 2017). Feedback connects to formative assessments because it gives students an image of how they are doing and what more they need to accomplish (Wiggins, 2012). According to Garrison and Ehringhaus, "descriptive feedback provides students with an understanding of what they are doing well, links to classroom learning, and gives specific input on how to reach the next step in the learning progression" (p. 1). Feedback can have an essential goal in mind to give students direction (Wiggins, 2012).

**Standardized Curriculum and Assessment**

Standardized curriculum and assessment is a debated issue in education today. This push for standardization is due largely in part to government legislation. With the creation of the No Child Left Behind Act (NCLB), schools were rewarded (or punished) for student performance on assessments. Each school's reported successes and struggles on assessments determined federal funding opportunities (Sparapani & Callejo Perez, 2015; Rubin & Kazanjian, 2011; Whitney & Candelaria, 2017; McGuinn, 2016). NCLB was replaced in 2015 with similar legislation known as the Every Student Succeeds Act (ESSA) which continued the use of consequences based on student performance (Whitney & Candelaria, 2017). Before further exploration of this concept, standardization can first be defined.  Often called curriculum narrowing, standardized curriculum consists

of predetermined, pre-structured materials that encourage "sameness" in order to address the demands of mandated high stakes testing (Rubin & Kazanjian, 2011; Wraga, 1999).

Is the standardization of curriculum helpful or hurtful for teachers and students? Standardization limits the creativity and autonomy of teachers. Teachers are forced to implement a scripted curriculum that takes away from authentic learning experiences (Rubin & Kazanjian, 2011). Teachers can no longer monitor the progress of the child and change lessons to meet their needs. If teachers have a predetermined curriculum, there is no outlet for teachers to use their creativity in curriculum design. Teachers also operate under constant scrutiny from constant evaluations and pressure for students to perform well (Berry, 2009).

There are notable disadvantages to implementing standardization in the classroom. The individuality of students is lost while placing emphasis on the whole school or district (Rubin & Kazanjian, 2011). The sameness of standardization does not meet the needs of all students because of the increasingly diverse population of students in American classrooms; these diverse students need diverse ways of mastering content, which is not provided through the standardized curriculum (Sparapani & Callejo Perez, 2015). Standard curriculum is present through the lenses of the White, Anglo Saxon, Protestant majority viewpoint (Giroux & McLaren 1986; McLaren, Martin, Farahmandpur, & Jaramillo, 2004) which discounts the experiences of large populations of students in the classroom. Students are not taught to think independently or critically because of the emphasis on isolated skills through memorization (Rubin & Kazanjian, 2011). One study (Whitney & Candalaria, 2017) conducted analyzed the socioemotional impact of standardization on elementary age students. Based on a survey of responses

from students, many self-reported feelings of anxiety and disciplinary issues in relation to standardized testing.

**Diversity**

Classrooms in America are becoming more diverse (Howard, 2014). In order to teach diverse learners effectively, teachers can take into account "the resources each brings to the table, including different dispositions, prior experiences and knowledge, cultural and linguistic capital, and sources of potential identification and opposition" (Doyle, 1979; Hollins, 1989; Moll, 1988). The challenge for teachers is how to identify these different characteristics and life experiences of students and how to use them in the classroom (Howard, 2014; Wlodkowski & Ginsberg, 1995). When teachers ignore the diversity of students, students may begin to resist learning; teachers can find ways to make learning meaningful for students by appealing to their diverse needs (Wlodkowski & Ginsberg, 1995).

A study conducted addresses the increasing diversity in classrooms (Angus, 2012). The purpose of this study was to detail how two teachers conceptualize and address diversity in their secondary English classrooms. The study looked at racial, language, gender diversity, and diversity based on socioeconomic status. The article also addressed what outside factors impact diversity in the classroom. Another important aspect of education discussed in the text is preparing teachers to address diversity in their classrooms. The study analyzed three different teachers' perceptions of diversity. Qualitative data was collected through interviews and observations from both teachers' classrooms. The study found that each individual teacher had different concepts of diversity. One teacher's concept of diversity was dependent on the socioeconomic status

of their students. The teacher defined diversity based on the cognitive abilities of their students. The teacher that focused more on socioeconomic status managed their classroom through emphasizing personal relationships. By building personal relationships with their students, they were able to gain their trust and engage them in instruction. The other teacher focused on differentiating instruction based on ability level. The teachers' concepts of diversity were influenced by the make-up of their schools and their personal concepts of diversity and life experiences. There are limitations to the results of this study. Geographic region could influence results. Also, the racial and cultural diversity of each school can influence results. The results of this study emphasize the importance of an educator's perception of diversity. Their perception of diversity can influence their teaching pedagogy and ideology of the curriculum.

**Opportunity Gap**

An opportunity gap exists in the education system. The gap exists amongst students of different races, genders, and socioeconomic status (Sparks, 2016; Angus, 2012; Rubin & Kazanjian, 2001). In the text entitled, "School Composition and the Black-White Achievement Gap" (2015), racial density is explored. Racial density refers to the racial makeup of a population, with the density being the number of people of each race. The racial density in schools impacts achievement in a negative way. According to the text, "Black and White students in the highest density schools had lower achievement than their peers in the lowest density schools. However, the Black–White student achievement gaps among schools in the higher density categories did not differ significantly from the achievement gap among the lowest density schools" (p. 12).

Because of the existence of the gap amongst diverse students, teachers need to provide students with equitable learning opportunities (Center for Responsive Schools, 2017).

According to the National Education Association (NEA) (2018), the following groups of students experience the gap in different ways:

- Racial and ethnic minorities

- English language learners

- Students with disabilities

- Boys/girls

- Students from low-income families

Also, the following are indicators of a gap in achievement (NEA, 2018):

- Performance on tests (statewide tests, SATs, etc.)

- Access to key opportunities (advanced mathematics, physics, higher education, etc.)

- Attainments (high school diploma, college degree, employment)

In another text about the gap that exists amongst students, Sparks (2016) compared the achievement of students across schools. The researchers analyzed testing data along with cultural and socioeconomic makeup of each school over a five year period. The study highlighted how racial and socioeconomic segregation widens the gaps among students. Students from wealthier parts of the community performed better academically than students from rural or poorer areas. Students from wealthier areas have more educational resources available to them.

A study conducted by Gordon, Piana, and Keleher (2000) analyzed the achievement gap amongst students in different schools. The study analyzes information

and data to find achievement differences in minorities like African Americans, Native Americans, and Hispanic children. The researchers compiled data from Racial Justice Report Card program. The quantitative and qualitative data were collected using a combination of methods like personal visits, written requests for government information, and internet research. The results from the data reinforced the assumptions by minority community members that "the public schools consistently fail to provide the same quality of education for students of color as for white students" (Gordon, Piana, & Keleher, 2000, p.1). Along with discrepancy in academic success, the study showed that "African American students especially, along with Latinos and Native American students, are suspended or expelled in numbers vastly disproportionate to those of their white peers" (p.2). Limitations exist with the results of this study. Multiple factors like the age and gender of students as well as the socioeconomic status of the students can influence results. Also, the different focus for academic success in a particular content area can influence the findings.

**Equity**

Although America provides every child with an education, "the unfortunate reality is that certain populations of students, particularly those living in poverty, students of color, and English language learners, continue to lag behind" (Center for Responsive Schools, paragraph 1, 2017). These students are lagging behind because of the lack of learning opportunities (Wlodkowski & Ginsberg, 1995; Center for Responsive Schools, 2017; Angus, 2012). Some of these students are lagging behind because they do not have access to the opportunities of others. One way to provide equitable learning opportunities is to enforce engaging academics, positive community, effective management, and

developmental awareness (Center for Responsive Schools, 2017). The importance of providing equitable learning opportunities is paramount to the success of our education system. According to the article:

> Our challenge and responsibility as a nation is to correct this inequity – to provide all children who walk through our school doors with the same high-quality education, regardless of who they are or where they come from; regardless of their socioeconomic, racial, ethnic, or language backgrounds; and regardless of their learning abilities and styles. (paragraph 3)

Equitable learning opportunities are important because "education offers its recipients better prospects for economic and social mobility, and an improved quality of life" and institutions "must remain committed to the establishment and maintenance of racial climate that is conducive to racial equity" (Howard, 2014, p. 94).

In order to emphasize the importance of equitable teaching practices, Rubel (2017) conducted a study to analyze the aspect of "whiteness" in the implementation of mathematics programs into different classes. The study promoted culturally relevant pedagogy and equitable learning opportunities. The goal of the study was "to present a research-based argument focused on teaching mathematics in hyper-segregated urban schools that moves away from a 'failure-focused' master narrative" (p. 67). The qualitative and quantitative data were collected through class notes, observations, and interviews. The researcher intended to design and study the professional growth of teachers using this program. The findings of the study were significant. The researchers noted that "there is a mismatch between the students in urban schools and a teaching force that is largely White and middle-class" and that "school segregation – currently,

accelerated by neoliberal processes of gentrification – is confluent with inequalities in teacher qualifications, experience, and turnover rates; advanced course offerings; money spent per student and condition of facilities; as well as deficit orientations to students and their families and communities" (p. 66). One significant limitation is that the study only focused on one content area. Would the results be different for other subjects? The study highlighted the importance of providing equitable learning opportunities in the classroom.

**Sense of Accomplishment**

Equitable teaching leads to the development of a sense of accomplishment (SoA) for students. For the purpose of this study, SoA will be defined as the intrinsic satisfaction that students gain from completing assessments. SoA is different than student achievement. Student achievement is often associated with measurable, external outcomes like letter grades or percentiles (O'Grady, 2012). Achievement is more focused on the product of learning rather than the process of learning, and SoA serves as an internal inventory of learning and emphasizes the satisfactions that students gain from learning (O'Grady, 2012).

The social cognitive theory supports the development of SoA and self-efficacy in students through vicarious/observational experiences, enactive mastery experiences, social persuasions and psychological states (M. van Dinther et al., 2014). A study conducted by M. van Dinther et al. (2014) focused on the impact of the social cognitive theory and the development of SoA/self-efficacy through the use of formative assessments. The purpose of the study was to analyze the connection between student perception of assessment and self-efficacy and how that impacted their learning outcomes

(M. van Dinther et al., 2014). The study found that through purposeful formative assessments that specifically targeted the development of student self-efficacy positively impacted student learning outcomes. The attention to SoA created a more authentic learning process for students (Gulikers 2006; M. van Dinther et al., 2014).

Another study on student self-efficacy focused on the impact strategies that were implemented in the classroom that specifically targeted increasing self-efficacy in a curriculum (Seawell & St. George, 2000). This curriculum was designed around the idea of problem-solving methods of instruction, which is similar to PBL. The researchers found that this curriculum increased SoA and self-efficacy because the students felt that their learning had meaning to something relevant to life outside of the classroom (Seawell & St. George, 2000). They found that students chose to participate in the learning activities and became more engaged in their learning.

**Student Choice**

Student choice (SC) is another crucial concept in this study. For the purpose of this study, SC will be defined as the autonomy of choice and option in their learning. Even providing the option of SC in the classroom engages students in critical thinking and critical decision-making habits that can extend beyond the classroom (Shevin & Klein, 2004; Nagro, et. al, 2019). Providing SC in the classroom creates an environment of authenticity to a student's learning experience (Berry, 2012). There are other positive benefits to providing SC in the classroom. Students will gain more independence and confidence, have greater engagement in content, and can reduce distracting behavior (Flowerday & Schraw, 2003; Toussaint, Kodak, & Vladescu, 2016; Shevin & Klein, 2004).

One researcher analyzed the impact of SC on student motivation and success in the classroom (Brooks & Young, 2015). The researchers found that while capitalizing on the self-determination theory and student motivation, the students used SC to empower themselves throughout their learning. Offering SC enhanced their feelings of determination and gave them intrinsic motivation for class participation (Brooks & Young, 2015).

**Summary**

The research and literature used in this chapter help to define key terms and concepts that will be explored throughout this study. A historical perspective of PBL and standardization is given in the first section. A major focus is given to John Dewey's theory of learning. Dewey (1897) believed that learning is an active process that is specific to the individual. Also, Piaget's belief in learning through experience (as cited in Boss, 2011) is important to the history of PBL. Expeditionary Learning, or learning by doing, coincides with the theory of PBL. Throughout the PBL process, students learn about their subject by researching and constructing their projects. The Project Method theory also serves as a historical foundation for PBL (Thomas, 2000). The history of standardization is also explained. As early as the 1890s with Alfred Binet's (Brady, 2008) emphasis on achievement testing, standardization led to the emergence of tracking, measuring the successes and failures of schools, accountability for teachers and students.

There are key concepts discussed in the theoretical framework section. Constructivism is important to this study. Oluseun (2015) describes Constructivism as learning through the construction of own experiences. Experiential learning also provides an important theoretical framework for this study. Simply put, experiential learning is

learning by doing. Throughout the PBL process, students are learning throughout the construction of their projects. Another important theory in this study is the Learner Centered Ideology. This ideology is based on the belief that the students can be the center of learning (Schiro, 2013). Learning can be based completely with the student at the center – what are the needs of the individual student? Lastly, Social Reconstruction is discussed as important to this study. Social Reconstruction emphasizes the ideology that education can contribute to the reconstruction of society (Zuga 1992). Education can create agents of social change for our society.

Project Based Learning is an ideology that emphasizes learning through projects (Thomas, 2000). Students begin with a driving question. This question guides their research and formulation of their final products. The students then research and create a project exemplifying what they have learned throughout the process. The final aspect of PBL is a public presentation. The students present their projects and information that they have learned.

Student engagement is crucial to this study. One important thing discussed in this section is how teachers can increase student engagement in their classrooms through interaction, exploration, relevancy, multimedia, instruction, and authentic assessment (Taylor & Parsons, 2011). A notable study discussed in this section was conducted by Terada (2018) and was a study on PBL and student engagement. The study looked at the implementation of PBL in a class and how student engagement increased with the use of PBL.

Along with engagement, the idea of assessment is important to this study. A definition of assessment is given in this section. Aspects of assessments like formative

and summative assessments are thoroughly discussed and defined (William, 2013). Following the section on assessment, standardized curriculum and assessment are included. The issue of "sameness" (Rubin & Kazanjian, 2011; Wraga, 1999) is discussed as well as the hindrance standardization places on teachers. Teachers are not able to differentiate instruction under the implementation of standardization.

The final section of this chapter addresses the issue of Social Justice in relation to this study. The concepts of diversity, the achievement gap in education, and equity are discussed. Classrooms around the country are becoming more and more diverse (Howard, 2014). Teachers can differentiate their instruction in order to accommodate their learners. One study highlighted in this section analyzes two teachers' concepts of diversity (Angus, 2012). Each teacher held their own perception of diversity, and their treatment of their students was different based on their individual concepts. This study emphasizes the importance of educators acknowledging how their perceptions impact their teaching. The idea of SA is explored and defined as the letter grade or percentage obtained in a class. SoA is defined as the intrinsic feeling associated with the learning process. Along with SoA, SC is a crucial term that is defined for the purpose of the study. SC is when students are given the autonomy of choice in certain aspects of their learning. SoA and SC are critical to the PBL process. The opportunity gap that exists in American schools exists within diverse learners (Sparks, 2016). This gap also exists because of the lack of equitable learning opportunities for certain groups of students (Wlodkowski & Ginsberg, 1995).

This study analyzed the impact of using PBL in a secondary, English classroom. PBL was used as an alternative to standardized assessment and curriculum practices. The

study analyzed how PBL can provide differentiated learning opportunities for learners in the classroom. The study assessed whether or not PBL can provide equitable learning opportunities to address the opportunity gap that exists in education today. In regards to standardized assessments, this study originally aimed to analyze the benefits of using PBL instead of standardized assessments.

# CHAPTER 3

# METHODOLOGY

**Overview of Study**

The purpose of this action research study was to provide my students with an opportunity to choose how they demonstrate their progress towards course learning objectives as they engage in a project-based learning experience and to measure the impact of their choices on their subsequent academic achievement and sense of academic accomplishment. It is my hope that providing students with the agency to select how they demonstrate their learning will support my efforts to foster a more equitable classroom and ensure that students are developing a sense of academic accomplishment in my classroom. By providing authentic assessment opportunities like PBL instead of high-stakes, standardized assessments, teachers can create a more equitable classroom in which students can feel pride in the learning and a heightened sense of accomplishment. The research question that guided this study was as follows:

- How does elevating student choice for demonstrating learning through PBL impact students' sense of accomplishment in the secondary English classroom?

This chapter will be an in-depth description of the mixed-methods, action research study. This chapter will describe the study of how PBL can be used as an intervention for differentiation in the secondary English classroom. The qualitative constructs of PBL, student choice (SC), sense of accomplishment (SoA), and equity (Eq) are defined and analyzed. Also, the role of the researcher and the participants are thoroughly examined.

Data instruments and tools are defined and evaluated in this section of the study. These tools are connected to the theoretical framework and problem of practice. Also, a plan for the analysis of data is provided. This chapter concludes with a summary of important information from the research study.

**Context and Participants**

Action research lends itself to a practical design, and that is why my participants are a convenience sample. The class I chose for my focus is my 2A English IV class. This class is traditionally for senior-level students. This was a College Prep (CP) level class, which is a level below Honors. Most of the students were taking English IV for the first time. The students in these classes were on track to graduate at the end of the year. It is a class that is focused on the study of British Literature. Classes are 85 minutes and are separated on an A/B schedule. I taught this class the second block of every A day. I chose this class because of the maturity of the students. These students were in their twelfth and final year of secondary schooling. They had a lot of experience in traditional education. When thinking about which of my classes I would choose, I thought this class would be best because of the students' understanding and experiences in the education system.

There were 23 students in the class. One of the students is from Belgium, and one of the students is from Myanmar. Ten students were African American, two students were Hispanic, and nine were White. There were two students that are ESOL students. The student from Belgium's primary language was French. The student from Myanmar's primary language was Burmese. There were five students with learning disabilities who had an Individualized Education Plan (IEP). One student had a 504, which is similar to an IEP. The accommodations associated with a 504 may not necessarily impact their

academic learning or may not be connected to a learning disability. 13 of the students were boys and 10 of the students were girls.

Students did not need permission forms to participate in the study because this study occurred naturally throughout the instruction of the course. I took the necessary precautions to protect their identities throughout the research process. The students and I were co-learners throughout this process. The students were learning the content of our class, and I was learning about my teaching practice from their learning. Positionality relates to my place in the research process – where do I fit into the research process, and how or what is my influence in the research process? In action research, the teacher becomes the practitioner and the researcher. One challenge was that I needed to be able to separate myself as a practitioner to look at my own practice as a researcher.

I served two roles throughout this process: the researcher and the practitioner. This is one of the things I love the most about action research – I was an active part of the research process. This research process informed me on the success of my students but also the success of my own practice. I collaborated with my advisor, Dr. Christopher Bogiages. He provided guidance and directions throughout the process. Also, I collaborated with other teachers in my department at school, due to requirements from my school and district.

**Research Design and Intervention**

This study is an action research study that focuses on my enactment of instructional intervention in my own classroom (Efron & Ravid, 2013; McKim, 2017). The intervention involves the use of Project Based Learning (PBL) (Thomas, 2000). PBL is an instructional approach that utilizes projects composed of rigorous tasks to facilitate

equitable learning (Thomas, 2000; Jones, Rasmussen, & Moffitt, 1997). This is a mixed-methods study that integrates both qualitative and quantitative data at each phase of the research study (Kroll & Neri, 2009). The mixed-methods approach enabled me to blend the qualitative and quantitative strategies in order to enhance my findings and conclusions (Efron & Ravid, 2013; Kroll & Neri, 2009). Collecting both types of data ensures that the researcher will be able to have a more complete understanding of their findings (Creswell, 2013). The study utilized a concurrent triangulation for the mixed-methods design (Creswell, 2013; Kroll & Neri, 2009). In this design, the qualitative and quantitative data are collected at the same time; the data is then analyzed separately but then compared and combined to corroborate, confirm, or enhance findings (Creswell, 2013; Kroll & Neri, 2009). The findings will be a part of triangulation, which is an objective of this mixed-methods design (Bentahar & Cameron, 2015). Triangulation allows a researcher to support their findings through different data while emphasizing the external and internal validity concurrently (Bentahar & Cameron, 2015). This type of integration enhances the confidence of the researcher in their findings (McKim, 2017; Creswell, 2013; Kroll & Neri, 2009).

Action research is research based on the process of learning and teaching and is usually developed based on an individual area identified as an interest of the practitioner (Efron & Ravid, 2013; Herr & Anderson, 2005). The emphasis of the area of interest to the practitioner is particularly important in action research because it enables the researcher to connect what happens in the educational setting to theory, thus deepening their understanding of their practice (Efron & Ravid, 2013). The research is an intricate part of the research process and environment and is almost seen as a collaborator with the

participants throughout the process (Herr & Anderson, 2005). The researcher is an active

learner and participant in the research process. The type of action research this study

follows is based on the 7-step model outlined by Sagor (2000). These steps include

selecting a focus, clarifying theories, identifying research questions, collecting data,

analyzing data, reporting results, and taking informed action.

In order to select a focus, I needed to focus on what was important to my teaching

practice (Sagor, 2000). What were the issues in the classroom that I felt were prevalent

throughout my career? What issues are currently important? (Sagor, 2000; Efron &

Ravid, 2013). I needed to utilize the reflective requirement of action research in order to

begin this process (Efron & Ravid, 2013). Once I determined my focus, I could begin

narrowing this idea by focusing on certain theories of value to my practice (Efron &

Ravid, 2013).

When clarifying theories for this research process, I needed to identify the values,

beliefs, and theoretical perspectives I felt were important to my practice (Sagor, 2000).

These included my constructs of PBL, equity, SC, and SoA. For PBL, the students create

challenging questions, design steps to solve problems, communicate with their peers, and

create presentations over an extended period of time (Thomas, 2000; Jones, Rasmussen,

& Moffitt, 1997; Thomas, Mergendoller, & Michaelson, 1999). Students learn through

the experiences of research, collaboration, investigation, and presentation. The "essential

question" is also important to the PBL process. Students construct a question that drives

their research and exploration (Jones, Rasmussen, & Moffitt, 1997; Thomas,

Mergendoller, & Michaelson, 1999). This gives the students a purpose in their learning.

Another important aspect of PBL is that it is student-driven (Thomas, 2001; Diehl,

Grobe, Lopez, & Cabral, 1999; Moursund, 1999). The student becomes in charge of their learning, thus becoming more independent. The outcome of their learning depends heavily on their effort and investigation. Real-world problems are explored through PBL in order to capitalize on the interest of the students (David, 2008). PBL mandates that students can have the opportunity to construct a product and present their findings in a public setting (Larmer, Mergendoller, & Boss 2015; Jones, Rasmussen, & Moffitt, 1997; Thomas, Mergendoller, & Michaelson, 1999).

PBL relates to the problem of practice because students currently have a lack of equitable assessment opportunities in school. With the implementation of PBL for differentiation, students will have more opportunities for choice in their showcase of learning. Also, students do not have a way to foster their sense of accomplishment through current, standardized assessment opportunities. By giving students choice through PBL, students will increase their sense of accomplishment. Assessment will be defined as "a systematic process for gathering data about student achievement" (Dhindsa, Omar, & Waldrip, 2007, p. 1261). Assessments are essential to learning and can be the connection between learning and instruction and can be broken into two major categories: formative and summative assessments (William, 2013; Stiggins, Arter, Chappuis, & Chappuis, 2004; Garrison, C. & Ehringhaus, 2017).

Equity (Eq) is also a construct that will be crucial for this study. For the purpose of this study, Eq is defined as the explicit elevation of student choice (SC) and the intentional development of a student's sense of accomplishment (SoA). SC will be defined as the autonomy of choice and option in their learning. SC in the classroom engages the students in critical thinking and critical decision-making habits that can

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extend beyond the classroom (Shevin & Klein, 2004; Nagro, et. al, 2019). Providing SC in the classroom creates an environment of authenticity to a student's learning experience (Berry, 2012). Students gain more independence and confidence, greater engagement in content, and can reduce distracting behavior (Flowerday & Schraw, 2003; Toussaint, Kodak, & Vladescu, 2016; Shevin & Klein, 2004). Another important construct in the study is a sense of accomplishment (SoA). Equitable teaching leads to the development of SoA for students. For this study, SoA is defined as the intrinsic satisfaction that students gain from completing assessments. SoA serves as an internal inventory of learning and emphasizes the satisfactions that a student gains from learning (O'Grady, 2012).

I then used these constructs and beliefs to formulate my research question and overall driving question for my study. This is important because it is a question that is based on meaningful reflection for myself and my practice (Sagor, 2000; Efron & Ravid, 2013). The research question is as follows:

- How does elevating student choice for demonstrating learning through PBL

  impact a student's sense of accomplishment in the secondary English classroom?

This question was the result of following the first steps of selecting a focus from reflecting on teaching practices and experiences and analyzing theories and beliefs about education (Sagor, 2000; Efron & Ravid, 2013).

The next step in this action research plan was to collect data. Data collection was based on a mixed-methods, concurrent triangulation design (Creswell, 2013; Kroll & Neri, 2009). In this design, the qualitative and quantitative data were collected at the same time; the results were analyzed separately but then compared and combined to

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corroborate, confirm, or enhance findings (Creswell, 2013; Kroll & Neri, 2009). I

collected both qualitative and quantitative data simultaneously throughout the duration of

the study. Teachers can choose the data collection instruments and techniques that best fit

the needs of their students and school (Sagor, 2000).

One instrument for data collection used in this study is the PBL lesson. The

format of a PBL lesson is crucial to the success of this study. PBL units begin with the

creation of an essential question. This question serves as a guiding focus throughout the

unit of study  (Thomas, 2000; Jones, Rasmussen, & Moffitt, 1997). Then students

conduct research and sustained inquiry that addresses their essential question and topic.

The inquiry can last for an extended period of time, which differentiates the PBL process

from a simple project. Students participate in strategies of revision throughout the

process. Then, students create a product that showcases their learning. Their products can

be presented in a public setting. At the conclusion of the process, the students reflect on

their learning in some format. Throughout the PBL process, lessons and assessments can

be structured on the ideas of authenticity and student voice and choice (Larmer,

Mergendoller, & Boss 2015; Jones, Rasmussen, & Moffitt, 1997; Thomas, Mergendoller,

& Michaelson, 1999). Students can have autonomy over aspects of this process and can

have a choice.

In order to measure SC, each lesson in the research study was evaluated for the

opportunity to give students the ability to choose. Also, the prompted reflective journal

provided data to analyze the opportunity for student choice in each lesson. In order to

measure SoA, students participated in a pre- and post-survey from an adapted Likert scale

assessing their SoA. Also, exit slips were used to gauge the daily SoA of students as a

result of instruction and assessments. Finally, a reflection component assessed SoA as a result of implementing PBL in the classroom.

After the data was collected, the next step in the action research process was to analyze the data. The researcher is tasked with answering the questions of what stories do their data tell and why did this story occur when analyzing the data (Sagor, 2000). When these questions are answered, the researcher can then use their findings to come to conclusions about the interventions used in their classrooms to inform their future teaching practice (Sagor, 2000; Efron & Ravid, 2013). The qualitative and quantitative data throughout this study was collected simultaneously but is analyzed separately (Creswell, 2013; Kroll & Neri, 2009). This is an element of concurrent triangulation design that enabled me to gain confidence in my findings because of the integration of the different types of data (McKim, 2017; Creswell, 2013; Kroll & Neri, 2009).

The last two steps of reporting results and taking informed action are used to empower teachers and their learning (Sagor, 2000). The reporting of findings mostly occurs in informal settings with other teachers or educators. The teachers then use their findings to take informed action and improve their own practice and the practice of others (Sagor, 2000).

## Data Collection Measures, Instruments and Tools

This study utilized a mixed-methods data collection design. There is a mix of qualitative and quantitative data. All of the instruments for data collection was created by the researcher in order to specifically target the constructs of the research plan. The mixed-methods design benefits the research by affording multiple data collection instruments and tools and more opportunities for data and validity (Efron & Ravid, 2013;

McKim, 2017). The multiple methods of data provided the researcher with the possibility of overlapping data (Efron & Ravid, 2013; McKim, 2017). The specific mixed-methods design was a concurrent triangulation for the mixed-methods design (Creswell, 2013; Kroll & Neri, 2009). In this design, the qualitative and quantitative data were collected at the same time; the data were analyzed separately but then compared and combined to corroborate, confirm, or enhance the findings (Creswell, 2013; Kroll & Neri, 2009). The findings were triangulated, which allowed me to support my findings through different data while emphasizing the external and internal validity concurrently and enhancing my confidence in my findings (Bentahar & Cameron, 2015, McKim, 2017; Creswell, 2013; Kroll & Neri, 2009).

**Pre and Post Intervention Survey.** The first instrument for data collection is a Pre and Post Intervention survey. Surveys are a common data-gathering tool that can be a quick and effective way for a researcher to gather feedback (Efron & Ravid, 2013). Surveys can provide an efficient and inexpensive way to assess large groups for information and data (Efron & Ravid, 2013). They can be used to gather information, attitudes, and perceptions for planning purposes (Efron & Ravid, 2013). Surveys can establish the prevalence of a condition or issue, which can help to inform instructional practices (Mathers, Fox, Hunn, 2009). Another benefit of using surveys is that it can take many forms in order to benefit the practitioner (Efron & Ravid, 2013; Mathers, Fox, Hunn, 2009).

This is a survey based on a Likert scale model (Erickson & Noonan, 2018). Each question requires a response of a 1 to 5, 1 being the lower response and 5 being the highest. Each of the responses was crafted to reflect the constructs of SC and SoA. The

statements for the survey were created to target the objectives of my study. I reflected

similar validity structures by creating three SC statements and seven SoA statements.

These surveys were created as a Google Form document and were distributed online to

the student participants. Students were given this survey before the intervention and after

the conclusion of the intervention. A copy of this survey is in the appendix. The answers

to the survey were collected digitally and stored in Google Drive. The answers to the

survey were collected and analyzed.

**Exit ticket questionnaire.** The next instrument in this study is the Exit Slip

questionnaire. These exit tickets had a mixture of elements of a survey and a

questionnaire. Questionnaires can either be created by the researcher or can be based on a

pre-made instrument (Mathers, Fox, & Hunn, 2009). Questionnaires can be a convenient

way to assess large populations of people for information when the questions are clear

and concise (Mathers, Fox, & Hunn, 2009).  This is a beneficial tool for data collection

because of the ability to disseminate the surveys/questionnaires throughout ongoing

instruction (Efron & Ravid, 2013). Information can be collected naturally throughout the

teaching process to inform the practitioner of their instruction (Efron & Ravid, 2013;

Mathers, Fox, & Hunn, 2009). These surveys consist of structured and unstructured

responses: Likert survey responses and open-ended responses (Efron & Ravid, 2013;

Mathers, Fox, & Hunn, 2009). Open-ended responses allow for the individual

interpretation and response of the participant (Mathers, Fox, & Hunn, 2009).

The content of the Exit Slips was created by the researcher. The questions and

prompts on Exit Slips were crafted with SoA and SC as a focus. The prompts were

directly linked to the content of the pre and post-study questionnaires for the purpose of

monitoring the data throughout the study. Also, the Exit Slips were used for general feedback for reflective teaching purposes. There were 4 questions on the Exit Slips that reflect the constructs from the study. Two of the questions were based on an adapted Likert scale survey. Two of the questions were open-ended questions. The Exit Slips were distributed through Google Forms to the students at the end of every other lesson. These reflective notes were given to the students every other day to avoid repetition. The answers to the Exit Slips were collected digitally and stored in Google Drive to await analysis. The responses from the Exit Slips were collected, analyzed and thematically coded.

**Reflective Journal Prompts.** Reflective journal prompts were used to collect data. These reflective journals consisted of open-ended questions in order to allow for the individual interpretation and response of the participant (Mathers, Fox, & Hunn, 2009). The documentation provided through the teacher reflective journals provided evidence of behaviors, attitudes, and insights into daily classroom activities (Efron & Ravid, 2013). The journals were used to identify patterns in qualitative data related to SC and SoA (Efron & Ravid, 2013).

These journal prompts were recorded before and after the lesson. The prompts and questions were open-ended questions. The pre-lesson prompts were designed to reflect expectations for SC and SoA in the lesson for that day. The post-lesson prompts were designed to reflect the reality of the implementation and opportunities offered for SC and SoA in the lesson and also offer an opportunity for reflection for the practitioner. These observations and notes were recorded through Google Forms and stored on Google

Drive. The responses from the observations were collected, analyzed and thematically coded.

Lesson plans were utilized as data collection instruments and could serve as a reflection. The lesson plans were created by the practitioner. These lessons were created based on a number of different factors. The lessons were created based on the South Carolina State English Language Arts (SC ELA) Standards. The lessons reflected the expectations of the school and school district of the practitioner. Each of the daily lessons outlined specific activities and assessments that met the different academic needs of the students. If replicating the study, each practitioner can keep in mind their individual learners when crafting their lessons. The unit focused on the major components of PBL. The major components of PBL are as follows: development of an essential question, sustained inquiry, creation of a product that displays learning, and the presentation of findings in a public setting. The lessons were created specifically focusing on emphasizing SC and SoA. Along with lesson plans, the rubrics for the assessments during the unit were used for data collection. The rubrics were created by the teacher using the SC ELA Standards. Both the lessons and rubrics were typed and stored in a folder on Google Drive.  The lessons were analyzed and thematically coded at the conclusion of the unit.

**Reflection.** The last instrument for data collection is a Reflection of the PBL process and other constructs from the research process.  A reflection component is required for PBL instruction. This instrument was modeled after a survey and a questionnaire. The reflection consisted of open-ended questions in order to allow for the individual interpretation and response of the participant (Mathers, Fox, Hunn, 2009). This

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questionnaire was created by the researcher to be a convenient way to gather feedback

after the PBL process (Mathers, Fox, Hunn, 2009). Since this is a required component of

the PBL process, the information was collected naturally because of the format of a

questionnaire (Efron & Ravid, 2013; Mathers, Fox, Hunn, 2009).

This instrument was created on Google Forms with the data being stored on

Google Drive. The reflection was an open-ended question format on Google Forms. The

questions were created by the researcher with the focus being on PBL, SoA, and SC. The

responses from the reflection were collected, analyzed and thematically coded.

**Research Procedure**

In the following section, I will provide a thorough description of the procedures I

followed throughout the intervention to provide students with a PBL experience. I will

describe when and how the data for the study was collected. The students created

challenging questions, designed steps to solve problems, communicated with their peers,

and created presentations over an extended period of time (Thomas, 2000; Jones,

Rasmussen, & Moffitt, 1997; Thomas, Mergendoller, & Michaelson, 1999). The PBL

process was integrated within the Action Research process to perform the intervention. A

chart is provided with details about the lessons provided during the intervention

(Appendix E). The study was structured to follow these cycles: Introduction to

PBL/Essential Question, Sustained Inquiry, Creation of Product/Presentation to Public

Audience, and Reflection (Thomas, 2000). These four cycles were loosely crafted after

the ideas from the Project Method theory, in which PBL has roots, that describes learning

through projects based on the four phases of purposing, planning, executing, and judging

(Knoll, 2006; Kilpatrick, 1918; Holm, 2011). The cycles of my research study were

designed to emphasize the principles of PBL and the chosen structure of the Action Research method. The data were collected concurrently, while the research was being conducted (Creswell, 2013; Kroll & Neri, 2009).

**Action Research Cycle 1: Introduction to PBL/Essential Question.** The first cycle of this research study focuses on the introduction to PBL and the creation of the students' Essential Questions (Thomas, 2000). Voice and choice can also be present when implementing PBL. Students can have ownership of their learning by having a voice and being able to choose their path of exploration (Thomas, 2000). The "essential question" is also important to the PBL process. Students construct a question that drives their research and exploration (Jones, Rasmussen, & Moffitt, 1997; Thomas, Mergendoller, & Michaelson, 1999). This gives the students a purpose in their learning.

The study began with an introduction to PBL and the focus of study. The focus of our study was the connection of social issues to the play *Hamlet* by William Shakespeare. When we studied the play in class, we focused on the theme of "Madness." I used this as a springboard into our discussion of contemporary social issues. The study began with researching the history of issues with mental illness in the United Kingdom (UK). First, I gave a brief overview of the PBL process and the expectations and outcomes of this learning journey. They were told they would be picking a social issue, researching this issue, writing an argumentative paper about this issue, creating a product to bring awareness to or attempting to solve this issue, and presenting their findings and product to a public audience. Then, the students were given background information on the historical treatment of people with mental illness in the UK. Students were given the choice of different informational articles to analyze the topic of the treatment of people

with mental illness. The students analyzed the text for elements of informational texts that we discussed throughout the year. Then, the students shared their findings with the class through whole-class discussion. At the conclusion of this lesson, students were given an exit ticket to gain data on their attitudes of SC and SoA. The exit ticket was given through a Google Form and the data was stored on Google Drive. The lesson plan was also used as a data source for what SC I was allotting for my students and how was I gauging and enabling SoA through my plans.

For the next lesson, students were challenged to compare and contrast the treatment of people with mental illness in the past to how they are treated in today's society. The students could choose any aspect of the treatment of people with mental illness, either lack of healthcare or medicine, institutions, counseling, legislation, treatment in education, etc. Then, the students were to conduct research on their topic from the past and how it is treated today. After they acquire and synthesize their information, the students choose their means of displaying their research and presenting it to the class. This lesson helped to scaffold the students for what they would be doing later on in the study. At the conclusion of this lesson, students were given an exit ticket to gain data on their attitudes of SC and SoA. The exit ticket was given through a Google Form and the data was stored on Google Drive. The lesson plan was also used as a data source for what SC I was allotting for my students and how was I gauging and enabling SoA through my plans.

The final lesson of this cycle focused on students choosing their topics and writing their Essential Questions. The students began the lesson by making a list of issues that spark a passion in them. What are things they feel passionate about and why? Then,

we discussed these lists in a whole-group setting. Then, the students used these lists to begin choosing their topics of focus. When the students chose a topic, they would create what I call a process map. This just maps out the process for their projects. In this map, the students included their essential questions that would guide their research throughout the rest of this process. A copy of a process map is included in the Appendix. At the conclusion of this lesson, students were given an exit ticket to gain data on their attitudes of SC and SoA. The exit ticket was given through a Google Form and the data was stored on Google Drive. The lesson plan was also used as a data source for what SC I was allotting for my students and how was I gauging and enabling SoA through my plans.

**Action Research Cycle 2: Sustained Inquiry.** The next cycle of this research process is based on Sustained Inquiry. This is another way PBL is differentiated from a simple project – students engaged in a sustained inquiry on their chosen topics (Thomas, 2000). When students have a choice in their topics of study, the student becomes in charge of their learning, thus becoming more independent. The outcome of their learning depends heavily on their effort and investigation. Real-world problems are explored through PBL in order to capitalize on the interest of the students (David, 2008). The problems are not "school-like" (Thomas, 2000, p. 4) which further engages the student. Like the learner-centered ideology, PBL encourages the teacher to take on the role of the facilitator, "working with students to frame worthwhile questions, structuring meaningful tasks, coaching both knowledge development and social skills, and carefully assessing what students have learned from the experience" (David, 2008).

The next lesson during this unit focused on gathering sources associated with their topic of study. The students had a minimum of sources they had to acquire but were able

to choose what type of source and if they wanted to get more. My school is one-to-one with technology, so every student has a Chromebook and access to the internet. The research was done in the classroom. At the conclusion of this lesson, students were given an exit ticket to gain data on their attitudes of SC and SoA. The exit ticket was given through a Google Form and the data was stored on Google Drive. The lesson plan was also used as a data source for what SC I was allotting for my students and how was I gauging and enabling SoA through my plans.

The next three lessons focused on the writing of their papers. These lessons were structured on the idea that students would do all of their writing on their Chromebooks to enable the students to participate in digital writing conferences with myself and their peers. The students created a Google Doc in their class folder on Google Drive. I have access to every document in their folder on Google Drive, so I was able to monitor their writing as they progressed. I allotted the students three class periods to complete their writing. Their writing focused on the following elements: the history of their topic, the current state of their topic, a counter to why their topic may not be important, and an explanation of their product. At the conclusion of every other lesson, students were given an exit ticket to gain data on their attitudes of SC and SoA. The exit ticket was given through a Google Form and the data was stored on Google Drive. The lesson plans were also used as a data source for what SC I was allotting for my students and how was I gauging and enabling SoA through my plans.

**Action Research Cycle 3: Creation of Product/Presentation to Public Audience.** The third cycle of this process focused on the Creation of their Products and the Presentation to the Public Audience, both key components of the PBL process

(Thomas, 2000). Voice and choice can also be present when implementing PBL. Students can have ownership of their learning by having a voice and being able to choose their path of exploration. Students can be provided with opportunities to reflect on their learning and revise throughout the process. Finally, the students can have the opportunity to construct a product and present their findings in a public setting (Larmer, Mergendoller, & Boss 2015; Jones, Rasmussen, & Moffitt, 1997; Thomas, Mergendoller, & Michaelson, 1999).

The next three lessons were focused on students choosing what to create for their products. For their products, the students chose to create something that either attempts to solve or bring awareness to their topic. Students could choose any format or application to create their products. Along with the product, the students created a Google Slides component for their final presentation. Their Google Slides consisted of information from their research and papers, and they also presented their final products to their audience. At the conclusion of every other lesson, students were given an exit ticket to gain data on their attitudes of SC and SoA. The exit ticket was given through a Google Form and the data was stored on Google Drive. The lesson plan was also used as a data source for what SC I was allotting for my students and how was I gauging and enabling SoA through my plans.

After the students created their products and finished their Google Slides, the students presented their findings to a Public Audience. The students set up their presentations in the Media Center at our school. The students invited teachers and administrators, as well as their parents, to their presentations. They presented the information they learned throughout the process as well as their products to each person

that came to their station. Students had to answer questions on the spot from their audience. This took the majority of the class period.

**Action Research Cycle 4: Reflection.** In this cycle of the research process, the focus was on reflection. Reflection is a crucial component of the PBL process (Thomas, 2000). Reflection encourages us to make meaning of learning and enhances understanding of our own learning (Costa & Kallick, 2018). In the sense of PBL, reflection enables the participant to reflect on the steps of their learning, their product, and their presentation, and how it impacted their overall understanding of their focus (Thomas, 2000). This reflection encourages students to synthesize their experiences to create meaning, thus elevating this learning experience (Costa & Kallick, 2018).

In the first part of this cycle, the students completed the post-study survey. This study enabled me to collect data to compare to their original responses before the study. I analyzed the findings to observe their responses to prompts and questions about SC and SoA. These reflections were completed in class on a Google Form document on the last day of the research study at the beginning of class. When the students completed the study, I assigned the students a task of a deeper reflection. I gave the students a reflection that was constructed of short answer responses. These prompts and questions were constructed to reflect the students' opinions about the PBL process. The students responded to these questions and prompts on a Google Form, in which the data was stored on Google Drive for me to qualitatively analyze through thematic coding.

When the students completed the form, the students were to choose the most important prompts on the PBL reflection. They had the choice of any prompts that seemed significant to their learning experience. The students then had to take their

responses to the chosen prompts or questions and chose a way to display and present their reflective responses to the class. They were encouraged to elaborate further on their chosen responses in order to fully capture their learning experience. The students could choose any method to display, create, and present their responses. For this assignment, the goal was to assess their opinions on SC and SoA throughout this process while providing them with choice and ownership of their learning.

This process provided a lot of meaningful data in regards to the overall PBL process, SC and student SoA. It was a learning experience for my students as well as myself. Through these four cycles of the research process, the data collected was analyzed in a mixed-method design to enhance the meaning of the findings.

**Treatment, Processing, and Analysis of Data**

This study utilized a mixed-methods data collection design. There is a mix of qualitative and quantitative data. All of the instruments for data collection were created by the researcher in order to specifically target the constructs of the research plan. I benefited from using multiple data collection instruments and tools for more opportunities for data and validity (Efron & Ravid, 2013; McKim, 2017). With the exception of some of the student products, the data for this research process was collected digitally. Data was stored in a folder on Google Drive to ensure the privacy of information and ensure ease in the collection of information. Statistical analysis and qualitative coding were the methods of analysis used (Efron & Ravid, 2013).

**Pre- and post-study survey.** The pre-study survey was administered to the students before the start of the data collection. The post-study survey was administered on the last day of data collection. The surveys were administered through the use of a

Google Form. All of the information was collected anonymously and stored digitally

through Google Drive. The quantitative data were analyzed as ordinal data (Efron &

Ravid, 2013). The data from this instrument were input into a Google Excel sheet. This

app then used a formula determined by the researcher to determine the mean of the data.

**Exit ticket questionnaire.** The exit ticket questionnaires were administered to the

participants every other class period. I decided not to give the participants the exit tickets

each class day to avoid repetition. There was a mixture of Likert scale-type prompts and

open-ended questions on the exit tickets. The Likert scale questions were designed to

match the pre and post surveys in order to emphasize validity and provide multiple

outlets for tracking data. The exit tickets were administered through the use of a Google

Form. All of the information was collected anonymously and stored digitally through

Google Drive. The data was analyzed using both quantitative and qualitative methods of

data analysis. The quantitative data were analyzed as ordinal data. The data from this

instrument were input into a Google Excel sheet. This app then used a formula

determined by the researcher to determine the mean of the data. In order to bring meaning

and order to the qualitative data, qualitative coding was utilized (Efron & Ravid, 2013). I

used codes based on the construct of the study in order to gather research (Efron &

Ravid, 2013; Saldana, 2009). I then analyzed the data for patterns in codes by using the

constructs as identifiers. This data was analyzed after the lesson and was analyzed in

summation at the conclusion of the study.

**Reflective Journal Prompts.** The reflective journal prompts were crafted to

make predictions and analyze outcomes of lessons that emphasized SC and SoA. The

prompts parallelled the prompts on the exit tickets and pre and post surveys in order to

emphasize validity and connect data trends. The reflective journal prompts were administered through the use of a Google Form. All of the information was stored digitally through Google Drive. The data were analyzed using a qualitative method of analysis. The responses were analyzed holistically in order to create a narrative of the total experience (Creswell, 2014). This data was analyzed after the lesson and was analyzed in summation at the conclusion of the study.

**Reflection.** The reflections were administered through the use of a Google Form. All of the information was collected anonymously and stored digitally through Google Drive. The data were analyzed using a qualitative method of analysis. In order to bring meaning and order to the data, qualitative coding was utilized (Efron & Ravid, 2013). I used codes based on the construct of the study in order to gather research (Efron & Ravid, 2013; Saldana, 2009). I then analyzed the data for patterns in codes by using the constructs as identifiers. This data was analyzed after the presentation of the products and at the conclusion of the PBL unit.

The two forms of data collection methods were integrated at the conclusion of the study. The specific mixed-method design was a concurrent triangulation for the mixed-methods design (Creswell, 2013; Kroll & Neri, 2009). In this design, the qualitative and quantitative data were collected at the same time; the data were analyzed separately but then compared and combined to corroborate, confirm, or enhance the findings (Creswell, 2013; Kroll & Neri, 2009). The findings were triangulated, which allowed me to support my findings through different data while emphasizing the external and internal validity concurrently and enhancing my confidence in my findings (Bentahar & Cameron, 2015, McKim, 2017; Creswell, 2013; Kroll & Neri, 2009). The integration of the qualitative

and quantitative data helped to formulate strong conclusions from the data (McKim, 2017). This triangulation of data provided the opportunity to corroborate certain findings and give complementary and uniquely different data for interpretation and analysis (Almaki, 2016).

**Summary**

This chapter is a review of the research design of this study. The plan of this study is to analyze the impact of differentiation through the implementation of PBL on student choice and student sense of accomplishment. This action research study took place in an English IV CP level class. The students were senior-level students on track to graduate. The intervention of PBL is discussed throughout the chapter. PBL was used for differentiation purpose to impact SoA and provide SC. This intervention was used to construct lessons and assessments that are meaningful to students. The constructs of SA, SoA, and SC are defined in detail and are connected to the purpose of the study. Each of the instruments for data collection that was used in the study is discussed and analyzed. A copy of each of the instruments is provided in the appendix. The procedure for the research process is also detailed, as well as the process for data analysis. Based on the information in this chapter, any research practitioner can be able to replicate the study in their classroom. The next chapter will present the findings of this study. It will go into detail about the results of the instruments used to gather data and will analyze the products created by the students. The findings were analyzed for the impact of the intervention on the students.

CHAPTER 4

FINDINGS AND DISCUSSION

The purpose of this action research study was to provide my students with an opportunity to choose how they demonstrate their progress towards course learning objectives as they engage in a project-based learning experience and to measure the impact of their choices on their subsequent academic achievement and sense of academic accomplishment. It is my hope that providing students with the agency to select how they demonstrate their learning will support my efforts to foster a more equitable classroom and ensure that students are developing a sense of accomplishment in my classroom. By providing authentic assessment opportunities like PBL (Thomas, 2000) instead of high-stakes, standardized assessments, I hope to create a more equitable classroom in which students can feel pride in the learning and a heightened sense of accomplishment.

The research question that guided this study was, "How does elevating student choice for demonstrating learning through PBL impact students' sense of accomplishment in the secondary English classroom?" To address this question, I designed a mixed-methods, action research study that integrated both qualitative and quantitative data in each phase of the study (Kroll & Neri, 2009; Efron & Ravid, 2013). The study used a concurrent triangulation of data for the mixed-methods design (Creswell, 2013; Kroll & Neri, 2009). In this design, the qualitative and quantitative data were collected at the same time. Throughout the study, the data were collected

simultaneously but analyzed separately, and then compared and combined to corroborate, confirm, or enhance findings (Creswell, 2013; Kroll & Neri, 2009). The data analysis was structured to connect with the research question. Quantitative data were analyzed first, followed by qualitative data. Then, findings from the data were analyzed for patterns or trends, which were scrutinized. A summary of the information will conclude this chapter.

**Quantitative Data Analysis and Interpretation**

Quantitative data regarding student choice (SC) and sense of accomplishment (SoA) were collected using a Pre and Post Intervention Survey (Appendix A), and a semi-daily exit ticket questionnaire (Appendix B). Both instruments used a Likert-style question format (Erickson & Noonan, 2018). However, the exit ticket was much shorter and consisted of only two Likert-style items and included open-response items for each Likert-style question. For the Likert-style questions, response choices were provided on a 1 to 5 scale, with a 1 being "not very like me"  and a 5 being "very like me." While the pre- and post-intervention surveys generated diagnostic data regarding SC and SoA,  the exit ticket monitored student perceptions of SC and SoA during the intervention. The addition of the open-ended response items to the exit ticket allowed students to provide a description of their thinking regarding their response to the Likert-style question. This provided me with an opportunity to collect qualitative data that captured the voice of students and their thinking related to SoA and SC (Mathers, Fox, & Hunn, 2009). Using the same 1 to 5 scale as the pre- and post-intervention survey, the exit ticket paired Likert-style items with open response items as follows:

-SC Likert prompt: "I made choices that impacted my learning today."

-Open-Ended Response: "Why did you answer this way?"

-SoA Likert prompt: "I am proud of what I accomplished in class today."

-Open-Ended Response: "Why did you answer this way?"

The Likert-style item responses generated ordinal data from which the median value was calculated in order to identify the central tendency of the data (Manikandan, 2011). The median value is the central value that is revealed when data is looked at as a whole (Whitley & Ball, 2002). For SC, the median value on the pre-intervention survey from students was determined to be 4. The median value on the post-intervention survey for SC was determined to be 5. For SoA, the median responses on the pre- and post-intervention survey were also 4 and 5 respectively.

| Table 4.1: Pre and Post Intervention Survey Item Response Frequencies and Change | | | | | | |
|---|---|---|---|---|---|---|
| | **Student Choice** | | | **Student Sense of Accomplishment** | | |
| **Likert Style Survey Response Options** | **Pre Intervention** <br><br> **Median = 4** | **Post Intervention** <br><br> **Median =5** | **% Change** | **Pre Intervention** <br><br> **Median =4** | **Post Intervention** <br><br> **Median = 5** | **% Change** |
| 1 | .097 (n=6) | 0 | -9.7% | .021(n=3) | 0 | -2.1% |
| 2 | .080 (n=5) | 0 | -8.0% | .079(n=11) | .014(n=2) | 6.5% |
| 3 | .226 (n=14) | .070 (n=4) | -15.6% | .257(n=36) | .150(n=21) | -10.7% |
| 4 | .290 (n=18) | .158 (n=9) | -13.2% | .393(n=55) | .336(n=47) | -5.7% |
| 5 | .306 (n=19) | .772 (n=44) | +17.4% | .250(n=35) | .500(n=70) | +25% |

In an effort to develop a more thorough representation of the changes in student responses to the questions about SC and SoA, the frequency of Likert-style item responses was also calculated and compared from the pre- and post-intervention surveys.

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Table 4.1 provides a breakdown of the pre- and post-intervention survey data in which patterns in student responses are seen to be congruent with the overall change in the mean value for student choice and sense of accomplishment. After the intervention, the frequency of students who responded to survey items with a 1, "not very like me," dropped to zero. Similarly, the frequency of "2" responses also dropped, but not entirely to zero. The frequency of 3s, 4s, and 5s all showed shifts from pre to post as well, with the frequency of 5s, "very like me," as the only response that demonstrated an increase in frequency.
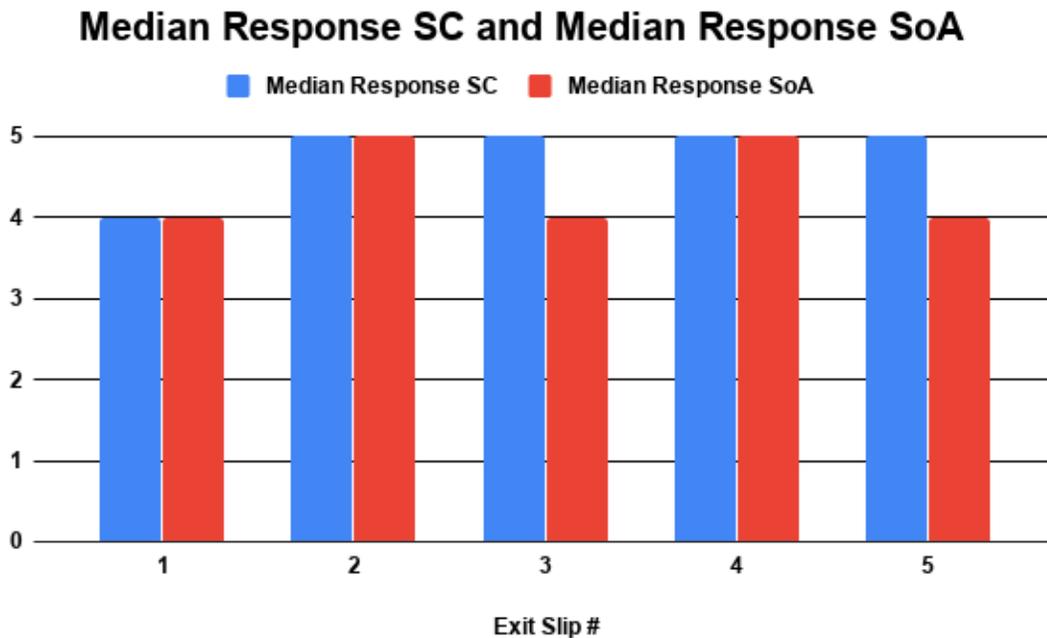


Figure 4.1: Median Responses for SC and SoA on Exit Ticket Questionnaires

Again, median values for the group were also calculated from their responses to the Likert-style items on the exit ticket which was administered at various times throughout the intervention. These median values are shown in figure 4.3. For SC, the median response on the first exit ticket was a 4. The median response for SC moved to a

5 on all of the subsequent exit tickets. For the SoA construct, the median value for the responses fluctuated between a 4 and 5 consistently from week to week during the intervention.

Based on the patterns in the quantitative data shown above, I determined that the intervention had a positive impact on my students' views of SC and SoA. The increase in median values from pre- to post-intervention indicates that the students felt like they had been given useful opportunities to make choices during the intervention and had felt an increased sense of accomplishment in their learning. This interpretation is further supported by the trend in Likert-style item response frequencies.

**Qualitative Data Analysis and Interpretation**

The decision to use a mixed-methods approach for this study proved to be a good one. While the patterns in the data described above indicate the intervention had a positive impact, the qualitative data helped to further describe and better understand why and how student choice (SC) and sense of accomplishment (SoA) were developing as a result of the intervention.

In order to further explain the patterns in the quantitative data previously discussed, qualitative data representing my students' views of SC and SoA were collected before, during and after the intervention. The primary source of qualitative data was the open-ended response items on the exit ticket. Additional data was also generated from the documentation of my observations and reflections during the intervention.

The data generated by the open-response items were analyzed through open coding (Blair, 2015). Data from the open response items were analyzed holistically in order to capture an overall picture and narrative from the data (Creswell, 2014). Trends

and commonalities within and across what students wrote in their responses were identified. From these trends, I developed a set of emergent codes that were further clarified and defined through a process of inter rater reliability (Crewell, 2014). Emergent codes are codes created from the commonalities discovered in the data (Blair, 2015). Inter-rater reliability is a process that ensures trustworthiness in data analysis by including multiple researchers in the analysis process (Creswell, 2014). An external researcher, outside of my study, and I reviewed the comments separately and created codes. We then cross-checked the codes and came to an agreement for the codes selected for analysis (Creswell, 2014).

From this coding process and reflections following the intervention (Appendix C), I developed short narratives that highlight how the students were thinking about SC and SoA and the impact of this work on their achievement of the learning objectives on which the intervention was focused. Each narrative is framed around an emergent code that came from the initial coding of the data. I will first provide the narratives for each code and then discuss the codes collectively in a summative narrative that captures how students felt about student choice and sense of accomplishment. This will be done for each construct separately and a final summary of both constructs will follow.

**Student Choice - Learning.** One of the emergent codes for student choice is learning. The students commented on their learning, which shows they were reflecting or conscious of their learning. When commenting on being afforded choice in the day's lesson, one student said, "it's something I like to know more about and learn about something that I am interested in." Because this student was given the choice of what to learn, they were motivated to dive deeper into their topics because they *wanted* to learn

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more. One student commented that "Because through research, I did learn something new," while another student responded, "Because I learned something new all on my own." This reflects that SC gave students more independence in their learning. By being given the choice, the students became independent learners that gained knowledge through their own research because of their opportunity for choice. They chose to engage in their learning because they were *given* the choice.

   **Student Choice - Interest.** Another emergent code related to student choice is interest. Because the students were given the choice in their learning, they were able to choose topics and activities that interest them. This term refers to the students commenting on the importance of something from that day. These responses ranged from passions to important topics or information. This is apparent in their responses. One student commented, "I get to research and learn about something I'm interested and passionate about." This comment shows for this student, SC provided a connection between student interest and learning. Because the student was able to choose a topic based on their interest, they felt as though they learned. Two students also commented that their interests led to wanting to know more about their topics. The students responded that "it's something I like to know more about and learn about something that I am interested in" and "because I want to find more information." SC enabled the interest in their topics to spark curiosity and further pursue knowledge for these particular students. This leads to these students becoming independent and possibly life-long learners. This also connected to a code of passion that appeared in the final reflection. After the intervention, one student commented, "Voice and choice are the most important part, because if you get to choose a passion, it will turn out better." Choice in learning led

to this student to discover an interest and passion for learning. Overall, I observed that this passion and interest led to high-quality products and high-quality learning from the students.

**Student Choice - Importance.** Along with learning and interest, the responses from the students showed a trend in the importance of their choices. This emergent code of importance was created from their responses on how they chose topics that were important to them. One student commented that "I actually learned something important today," while another student said, "I choose a very important topic for my project that means a lot to me and I feel very strongly about." The second comment emphasizes the connection of SC to the code. Because the student was afforded SC in class, they were able to discover something important to their learning. Because of this importance of learning, these students became more engaged in their learning.

**Student Choice - Self-Correction.** The final emergent code of self-correction came from analyzing their responses on their need to improve. The exit tickets provided students with an ability to reflect on their choices, and when they did, some students recognized the need for improvement in some instances. This was shown through the comments provided on the exit ticket questionnaires. One student commented, "I didn't do much of my work and that's gonna [sic] impact me having to do this later." This comment indicates the student recognized they did not work to their full potential and also shows they planned to complete the work later. Another student commented, "Because I feel is though had it been a longer day I could of [sic] got more done but next class will be an improvement." This again shows that the student recognized their shortcomings but also planned to rectify their lack of effort during the next class period.

One meaningful comment to me came from a student who said, "At first I wasn't doing anything because I couldn't really focus, So i [sic] asked my teacher could I go outside which made an impact on how I worked at the end of class." This is meaningful to me for multiple reasons. First, the student felt as though they were given the choice to accommodate their learning needs. Second, the student showed an awareness of their learning needs and did not just ignore their own needs. Through these comments, the students became self-aware of their learning because they were given choice in their learning; they could choose not to complete something. This ability to choose increased responsibility and ownership of their learning. Many students were motivated to improve because it was ultimately their responsibility to complete their assignments. This was the most pleasing code for me to discover throughout this process. The PBL reflections showcased this self-awareness in their learning at the conclusion of the investigation. A student commented that "Showcasing your product is important so that you get feedback on where you did good and where you didn't." This shows an awareness of the quality of work performed in class, which is a powerful reflective skill. Another student also commented on the overall quality of work by saying, "I didn't feel very connected to almost any of the topics but that's my own lack of motivation to complete the project in the first place." This shows another aspect of self-awareness which can lead to growth opportunities. A final aspect of self-awareness that is important is that it guides students to know themselves as learners. This is shown in one student's comment that "The overall process wasn't very intimidating to do so enjoyed the entire process, but I did dislike the essay because I'm not very good at essay just bc [because] [sic] I don't enjoy it." As teachers, we can be guiding our students to become independent learners, thinkers,

and people. If we give students the ability to choose, they could become in charge of their learning and will become more independent.

**A Framework for Student Choice.** The students made various comments about their ability to choose throughout the intervention. The most informative comments for me as a researcher were those that centered around the opportunities for choice. This supports my efforts to give them the ability to choose throughout this learning process. When analyzing the responses and coding the comments, a framework emerged for SC. Because the students were afforded SC, learning, interest, importance, and self-correction became more valuable. Students became passionate about their learning. In the final reflection on the PBL process, one student commented, "As I made these choices it kept on making me more and more passionate about the topic to the point where I would intentionally research more and more to find out more so I would have a better project." SC created opportunities for authentic learning for many students in my classroom.

When reviewing their comments and just thinking about our experiences in the intervention, my idea and expectation of their choices changed. Initially, I was just focused on students making choices in their PBL assignments and products. However, many of the students not only chose how to display their learning, but how they learned in general. Students became more comfortable in choosing their physical positions and seating in the classroom. Students also chose their own timeline for the completion of their assignments. Many students needed more time to complete an assignment or they finished faster than others. The students became more independent in their learning when they were able to choose their timeline for work completion. I saw a positive reaction in

their learning by allowing them to have that choice. It also challenged me as an educator to be more flexible to the needs of my students.

**Sense of Accomplishment-Pride.** One emergent SoA code is pride. Pride is the satisfaction of the students with their showcase of learning. The data showed that students felt varying levels of pride in their learning throughout this intervention. When asked about SoA on the questionnaire, some students responded that they felt pride in their completion of assignments. One student commented that "I researched a lot and got my presentation almost completed" and another commented that they felt SoA "Because I was finished with my research and my claim." By allowing individualized instruction and assessment opportunities like PBL, the students were able to achieve their goals, which gave them a sense of pride. One student responded that "I got to talk about something that I am passionate about so I am proud of the work I get to do about my topic." This comment not only shows pride but connects to SC as well. Because of SC, the learner was able to feel pride in their work. For the final reflection, many students referenced a feeling of pride. One student wrote that "What I enjoy about the process is the freedom of the entire project – the way you can mold your final project into something more, something you can be proud of." One student wrote that the format of PBL "Made me keep going and made me feel motivated," while another wrote, "being able to choose a topic that I care about gave me more motivation to put in more effort towards my project." This emphasizes that SC and SoA have an intricate relationship. SC leads to a greater SoA or pride in students and their learning. This is important to me as an educator because I want students to not only accomplish great things but feel accomplished as well. Assessments in the classroom can be an act and a feeling of pride.

**Sense of Accomplishment-Quality.** One of the emergent codes that closely relates to the code of pride is quality. Students became proud of the quality of their work that they were doing in class. For quality, I coded these responses based on the students' comments about the depth of their learning as well as making statements like "better" and "good." One student responded that "I got some good research done today." Although informal, this comment shows that the student is evaluating their learning for that day. This shows that the student is becoming a more conscientious learner. The pride students felt in their learning connected to the quality of their work. This is shown through one particular response from the final reflection. The student comments that "I did thorough research about my topic and visit many different sources so I can widespread of viewpoints about standardized testing." This student is again evaluating the quality of their work. This is a valuable skill that teachers can emphasize to our 21st-century learners.

**Sense of Accomplishment-Motivation.** The final emergent code from the SoA responses was motivation. For me, this code is similar to the self-correction code from the SC responses. When reflecting on their learning, students were confronted with their varying levels of motivation. For the responses associated with motivation, many of the students commented that because they were given choice, they were more motivated to complete assignments. One student commented that "I did more than enough research because I was so interested in this topic and put it into a format that I like and I'm proud to have made it." They chose what they were interested in, and that led to being more motivated to do well. This code connects to the median results for SoA from the exit ticket questionnaires. Because of the individuality of students, their levels of motivation

will vary on a daily basis. This emphasizes the need for choice in the classroom and emphasizes how standardization will not address the needs of all students because it ignores the individuality of learners.

**A Framework for Sense of Accomplishment.** Throughout the analysis of the responses, three important terms emerged from questions of SoA: pride, quality, and motivation. These things are important to students when asked about their feelings of SoA. When given an instruction and assessment opportunity like PBL, students are given opportunities to feel greater SoA, which leads to a greater sense of pride, evaluation of the quality of their work, and greater motivation to learn. The data also shows that SC and SoA are connected. One student reflected that "What I enjoy about the process is the freedom of the entire project the way that you can mold your final project into something more something you can be proud of." Because students were afforded choice throughout the process, students felt a greater SoA.
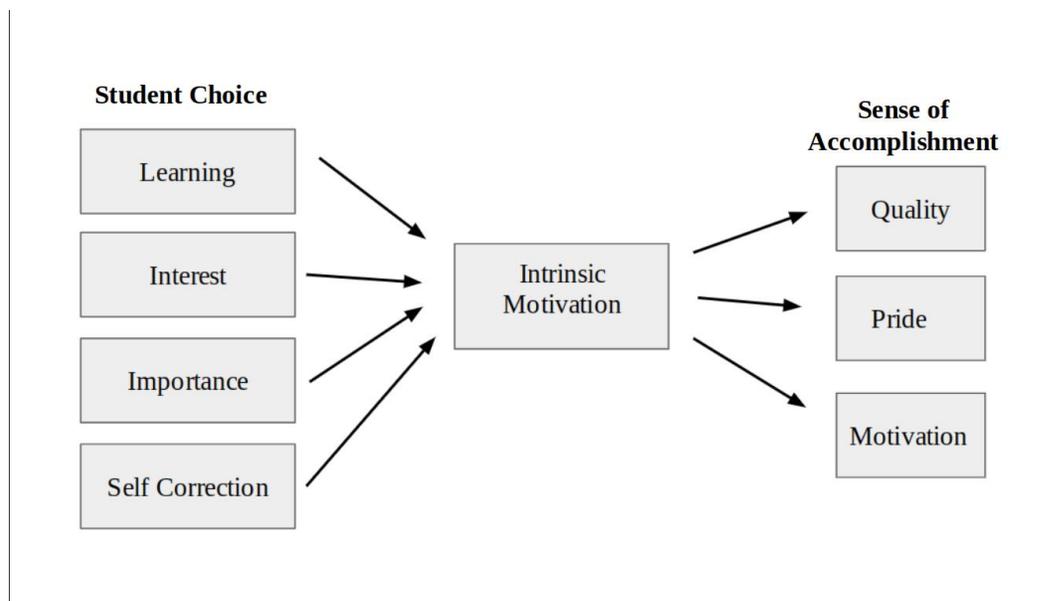
**Summary of Findings**



Figure 4.2: Major Takeaways from Data Analysis

From analyzing the data, three key takeaways have emerged. They are as follows:

1. Students generally responded positively when given choices in their learning.

2. Students defined choice in terms of learning, interest, importance, and self-correction.

3. Students began to develop a sense of accomplishment (SoA) when their choices contributed to feelings of pride in their learning and work when they viewed their work in terms of quality, and this led to an intrinsic motivation to learn.

Throughout the PBL process, students clearly felt like they were given the opportunity of choice in their learning. This ability to choose led to the development of intrinsic motivation. This is supported in both the quantitative and qualitative data. The Post-Intervention Survey results and the Exit Ticket Questionnaire responses show an increase in the responses affirming their ability to choose. Also, throughout the collection of qualitative responses from the questionnaires, students remarked on being given choice. This is reassuring to not only myself as a researcher but as an educator.

When given choice in the classroom, the students identified learning, interest, importance, and self-corrections as important facets of choice. Many students wanted to learn because of their ability to choose. SC also connected to interest for many of the students. Because of the structure of the learning environment and emphasis on choice, the students were able to choose topics and ideas that interest them. This enabled many of the students to become interested in their learning. Along with interest in topics, students were also able to choose topics that were important to them. By choosing these topics, the learning experience, in general, became important to the students. Another important takeaway from the findings in the data is that this process increased self-correction in

students. The responsibility for their learning as a result of SC caused the students to become more aware of their learning and mistakes and they began to self-correct. As a result of being given the opportunities to make choices, the students began demonstrating the characteristics of independent learners. The emphasis on learning, interest, importance, and self-correction that emerged from SC contributed to the development of intrinsic motivation, which led to a great SoA in students.

The ideas acquired from the analysis of SC leads to the idea that a sense of accomplishment can be defined as the intrinsic motivation to learn in ways that foster pride in quality work. Instead of anxiety-inducing standardized assessment practice, PBL provided students with a way to learn independently and proudly showcase their learning. When reflecting on SoA, the students identified the quality of work, pride, and motivation as important factors during their learning. Many students remarked on the quality of work, good or bad, and its impact on SoA. Also, many of the students felt pride in their work because of the choices they were given throughout the process. Finally, some students also linked motivation to their SoA. Because the students were given choice in their learning, this leads to a great intrinsic motivation to work, which made the students feel pride and motivation when assessing the quality of their work.

**Chapter Summary**

This chapter reports the data collected and the findings of this study. The data presented in this chapter were collected to answer the following research question: How does elevating student choice for demonstrating learning through PBL impact students' sense of accomplishment in the secondary English classroom?

Throughout the study, the data were collected simultaneously and analyzed separately, but then compared and combined to corroborate, confirm, or enhance findings (Creswell, 2013; Kroll & Neri, 2009). The data analysis was structured to connect with the research question. In this chapter, quantitative data were analyzed and interpreted first. Then, the qualitative data were presented and interpreted. The final section of this chapter provided readers with an overview of the major takeaways from the data presented in this chapter.

The final chapter of this study will analyze the implications of the data collected and will reflect on the implications of the data. The chapter will discuss any changes to the study that can be made and the limitations of the study. The following chapter will explore and analyze the impact of the intervention on students. It will also discuss implications for future uses of this knowledge and my next steps.

CHAPTER 5

REFLECTIONS AND IMPLICATIONS FOR FUTURE RESEARCH

The purpose of this action research study was to provide my students with an opportunity to choose how they demonstrate their progress towards course learning objectives as they engage in a PBL experience and to measure the impact of their choices on their subsequent academic achievement and sense of academic accomplishment. This mixed-methods, action research study was conducted in the Spring of 2019 in an upper-level, high school English course. The study spanned six weeks and focused on instruction and assessments guided by Project-Based Learning (PBL) (Thomas, 2000). The study was guided by the following research question:

How does elevating student choice (SC) for demonstrating learning through PBL impact students' sense of accomplishment (SoA) in the secondary English classroom?

Data was collected through qualitative and quantitative methods. The participants completed a pre-intervention survey was composed of Likert-style prompts. Then, the students participated in a PBL unit based on William Shakespeare's text *Hamlet*. Students conducted sustained research on a topic of their choice that connected to the themes discussed in *Hamlet*. During the unit, a semi-daily exit ticket questionnaire was disseminated to the students for completion. These questionnaires were a combination of Likert-style questions and open-ended responses. At the end of the unit and intervention, the students completed the post-intervention survey and a PBL reflection which consisted

of open-ended questions. The data was collected throughout the unit and analyzed upon completion of the intervention. The key findings of the study displayed that students reacted positively to choice, identified learning, importance, and self-correction as important components of choice and began to develop SoA when their choices contributed to their feelings of pride in their work, the quality of their work, and the development of intrinsic motivation.

This chapter serves as a reflection on the overall study. A reflection on the key findings is provided. Also, the connection to action research and the theoretical framework of the study will be revisited. The limitations of the study are analyzed in this chapter, as well as a discussion of steps for the future are also discussed. Finally, a conclusion of thoughts is provided at the end of the chapter.

**Reflection on Key Findings**

In the weeks and months before enacting this study, I was drawn to the use of Project-Based Learning for a variety of reasons. PBL emphasizes beliefs from Piaget that people learn through experience and that students can investigate and explore (as cited in Boss, 2011). I loved the thought of students exploring literature in my classroom. Also, I was attracted to the idea that the student becomes in charge of their learning, thus becoming more independent through the use of an instructional practice like PBL (Thomas, 2000). I wanted students to feel like they have a stake in their learning in my classroom and feel empowered by this thought.

I also had an aversion to standardized teaching practices because it limited the unique nature of teaching (Rubin & Kazanjian, 2011). I felt that this was the culprit for student boredom and disinterest in their learning. Because of standardized practices,

teachers can no longer adapt their lessons and assessments to fulfill the needs of their students, and it forces teachers to operate under scrutiny from constant evaluations and pressure for students to perform well (Berry, 2009). It seemed to me that standardization was taking the individual out of education for both the students and the teachers.

In my teaching practice, I was seeing students disengaged in their learning. Students were bored at school, and they hated coming to school. Students would complain about too many tests and too much homework. I would hear frequent conversations about why they were having to take certain classes and how these classes would not help them in the real world. I was also hearing teacher frustration in the fact that students were not engaged in their learning. I saw teachers that cared about the learning of their students, but they were also giving students standardized assessments with large quantities of questions that did not promote any critical thinking.

Because of these observations, I designed my intervention to address what I thought was the issue of standardized instruction and assessment practices. I wanted to engage my students in learning and assessments without using standardized materials. I was interested in seeing what would occur if students were given the power of choice in the classroom. Instead of being told what to do, what if students *chose* what to do? In order to do this, I used the aspect of voice and choice from PBL to engage students with a text and conduct research about topics of their choice (Thomas, 2000).

I expected to learn that providing students with a choice would enhance their pride in their learning. I hoped that by avoiding standardized teaching and assessment practices, my students would be proud of their learning. I thought that PBL would be the key to providing this opportunity for learning in my classroom.

Through my effort to create a more equitable and engaging classroom, I was able to deepen my understanding of the positive impact of providing students with more opportunities to choose how they demonstrate their learning. This deeper understanding is characterized by the key findings that emerged from this study, which include,

1. When given the opportunity to share their thoughts about their educational choices, students characterize choice in terms of a) learning, b) interest, c) importance, and d) self-correction.

2. Students characterize their sense of accomplishment by a) discussing feelings of pride in their learning, b) viewing their classroom work in terms of quality, and c) developing an intrinsic motivation to learn.

3. When considered together, student choice and student sense of accomplishment are interrelated through the development of an intrinsic motivation to learn.

These key findings can be summarized in the following statement: When given authentic and meaningful opportunities to make choices during the learning process, students generally respond in ways that cultivate an intrinsic motivation to learn which leads to a heightened sense of academic accomplishment and demonstrably higher levels of academic achievement. While I still think that the practice of standardizing assessments and instruction has no benefit, I have now discovered a more important facet of this issue: intrinsic motivation. I did not foresee that the development of intrinsic motivation to learn would play such a central role in the study. Therefore, intrinsic motivation is a key insight from this study. The goal of the study morphed into a study where it was not necessarily about giving students choice, but about creating an intrinsic

motivation to learn by fostering SoA. These terms became beautifully connected in a serendipitous and unexpected manner.

Intrinsic motivation to learn is a skill all teachers want to foster in students. I recently had a discussion with colleagues at my school about this topic. The teachers complained that students were too focused on extrinsic motivation, such as the grade, instead of learning for the sake of learning. However, these same teachers also take points off a test if their names are not on their paper and do not allow students to redo any assignments given in class to improve their learning outcomes. There is a limited choice for those students in their learning. How can we encourage students to value their learning if we never give them the chance to love their learning (Mathewson, 2019)?

Intrinsic motivation can be defined as the internal desire to accomplish something (Mathewson, 2019; Lumsden, 1994). A student who is motivated undertakes a task "for its own sake, for the enjoyment it provides, the learning it permits, or the feelings of accomplishment it evokes" (Lepper, 1988). There are many benefits to fostering the intrinsic motivation to learn in students. Intrinsic motivation in students leads to high academic achievement (Mathewson, 2019; Lumsden, 1994). Also, students who are intrinsically motivated to learn will attempt more challenging problems, will develop a deeper understanding of concepts, and will be more likely to put maximum effort into tasks (Lepper, 1988). As this study shows, teachers can develop intrinsic motivation in their students by providing choice and fostering SoA. Another way teachers can foster the intrinsic motivation to learn is by developing meaningful relationships with students; when teachers know their students, they can develop lessons and assessments based on the students' interests thus developing their engagement (Mathewson, 2019).

Teachers can use the knowledge from this study to reform their teaching and assessment practices to facilitate great SoA in their classrooms by providing students with choice. When given the opportunity for choice in their learning, the students redefined my own definition of choice in the classroom. Initially, I intended to give students choice through the use of PBL as an instructional tool. Through PBL, students have the choice of choosing their topics of studies, determining their research content, constructing their own products of learning, and then choosing their method of presentation to a public audience (Thomas, 2000). However, during this process, the students exceeded my expectations for choice. Because I initially gave them choices through PBL, students became empowered and made other choices. The students created different ways of assessment because of their personal choices. For example, instead of writing a traditional paper, one student chose to do an illustrated analysis of her topic. She chose to illustrate her research and analysis through her artistic skills. Another student chose to create a documentary based on his research of Colorism in film.

Another way that the students redefined my definition of choice in the classroom is that they determined their own timelines for learning that benefited their individual needs. Many of the students felt empowered to ask for more time on certain aspects of the projects because they were consumed in research. They *wanted* more time for investigation because they were interested in their learning. Other students finished work faster than others. They were able to move on to other parts of the assignment because of their freedom to dictate their own timelines. Another interesting element of choice that came throughout the research process was the choice to move in the classroom. The students also chose their own seating arrangements while we were learning. Their

comfort increased their learning and productivity. I am pretty flexible in general when it comes to where students sit in my room. However, during this study, I noticed more students taking the initiative to find a comfortable space for their learning. I now realize that when you give students a choice in their learning, they will be empowered to create a learning environment that benefits their learning outcomes.

The framework developed from this study is transferable to all schools and settings. PBL is an instructional vehicle to a bigger picture of developing intrinsic motivation in students. The instruction tool of PBL can easily be transferable to all content areas or grade levels in school in order to achieve similar results to this study. While this intervention was conducted in an English IV class, this could also be implemented in another level of English using a different text and applying different standards. Other content areas could also use PBL to emphasize the objectives of their curriculum. This transferability helps to enable me to implement this intervention into my overall teaching practice.

**Reflection on Action Research**

At the beginning of this process, I thought that action research would just be a rigid, research process that would explore important aspects of teaching. While there is still some truth to this statement, I have found this practice of research to be so much more. One thing that I particularly valued about this process is the ability to explore something of my own interest. Like my students, I enjoy learning about things that interest and help me in the real-world. Action research is research based on the process of learning and teaching and is usually developed based on the individual area based on the interest of the practitioner (Efron & Ravid, 2013; Herr & Anderson, 2005). Throughout

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this process, the values, beliefs, and theoretical perspectives that I felt were important to my practice were emphasized (Sagor, 2000).  I was able to focus on how I can improve my teaching practice to help my students learn, which is always my goal as an effective educator.

A transformative part of this process for me was that I was mirroring the process my students were going through by enacting this study. For PBL, students create challenging questions, design steps to solve problems, communicate with their peers, and create presentations over an extended period of time (Thomas, 2000; Jones, Rasmussen, & Moffitt, 1997; Thomas, Mergendoller, & Michaelson, 1999). This is a similar process to that of the action research process. During action research, educators pick a relevant topic, conduct research, analyze data, and reflect on the findings in a real-world setting (Herr & Anderson, 2015). I also participated in this process while conducting this research. By conducting action research and this study, I learned through the experiences of research, collaboration, investigation, and presentation. Because of the structure of action research and the data from this study, I have become a better teacher and teacher researcher (Herr & Anderson, 2015).

How can I use my knowledge of the action research process to help others? How can I be a teacher leader and share my knowledge with others? Action research can be a vehicle for me to mentor others and be a teacher leader. Action research is a more formal way of conducting research about issues in teaching (Herr & Anderson, 2015). However, a simpler version of action research can be used in order to make this process more accessible and affordable for other educators. I am privileged to be a coaching teacher for people wanting to be high school English teachers. I help these teaching candidates

practice their skills, provide guidance for their own learning, and become more comfortable implementing their teaching pedagogy. I can use a simplified method of action research to enhance their learning experience.

Throughout this dissertation process, I felt empowered having to seek out solutions to the relevant problem of practice that I discovered in my classroom (Herr & Anderson, 2015). I gained knowledge on how to more effectively instruct the students in my classroom because of this research. I can equip my student teachers with the same skills that I learned throughout this process by validating their learning through the inquiry process. After observing my student teacher completing a class, I can encourage thoughtful reflection on their experience; through this reflection, we can uncover relevant issues that present themselves in the classroom (Herr & Anderson, 2015). When these issues are identified, the student teachers will be encouraged to perform informal research about the topic in order to ameliorate whatever issue is occurring in their practice (Herr & Anderson, 2015). Then, we can collaborate to develop a solution or new thinking on the teaching issue in order to improve the learning environment. By participating in this process with a teacher candidate, I am doing more than just give the candidate advice about how to solve issues in the classroom. I am helping that candidate to take an interest in educational research and being a reflective practitioner (Herr & Anderson, 2015). I am also giving them the tools action research provides to attempt to learn about solutions for future problems as well (Herr & Anderson, 2015).

**Limitations**

One of the major components of this intervention is to provide students with choice in their learning. It is the belief of the researcher that there is an absence of

SC in traditional curriculum because of standardization, and by providing PBL as a means for differentiation, students can be provided with equitable learning opportunities (Thomas, 2000; Rubin & Kazanjian, 2011; Wraga, 1999). In the results of the Pre-Intervention Survey, some students responded that they already felt like they were afforded choice in the classroom. These responses could have resulted in a number of different reasons. The students that felt they were provided with choice in their learning may be a part of the majority that has been trained to do well under standardization. This group of students usually includes white, middle and upper-class students that are the targets of standardized curriculum and assessment practices (Giroux & McLaren 1986; McLaren, Martin, Farahmandpur, & Jaramillo, 2004). One limitation associated with the participants of this study is the type of students in the class. The class that participated in the intervention was composed of senior-level students in an English IV class. The intervention may yield different results when conducted in a different level of class, like English I with freshmen students.

Another limitation of the study is that there is no standardized assessment data from the participants to serve as a comparison to the collected data. The sameness of standardization did not serve as the best means of assessing SC or SoA in the classroom and did not take into account the diversity of the learners (Sparapani & Callejo Perez, 2015). The curriculum and instruction needed to meet the needs of the learners in my classroom needed to meet the needs of a larger population of learners than what is typically targeted by using a standardized curriculum (Giroux & McLaren 1986; McLaren, Martin, Farahmandpur, & Jaramillo, 2004).

**Implementation Plan- Future Plans to Increase Intrinsic Motivation**

Throughout this study, the things I did and the things students said showed an increase in the intrinsic motivation to learn. Thus, this study contributes to an emerging framework for developing intrinsic motivation in students in the high school ELA classroom. In my future teaching practice, I will continue to provide students with the ability to make choices in their learning. I will develop a more refined framework of SC in order to increase the intrinsic motivation to learn in my classroom based on the ideas contributed by my students from this study.

In addition to choice, intrinsic motivation can be developed in students by providing academic independence (Mathewson, 2019). When students have independent time to make choices and learn on their own, intrinsic motivation to learn can be developed (Mathewson, 2019). In order to do this successfully, teachers can serve as a facilitator in this process. The transition to a more independent learning environment may be difficult at first because many students have never been given the opportunity of independence in their learning (Mathewson, 2019). The teacher can scaffold the students throughout this process of learning. The beliefs of the teacher about learning in their classroom can have a significant impact on a students' intrinsic motivation to learn (Lumsden, 1994). By fully investing in this implementation plan, I can positively influence my students' intrinsic motivation to learn.

The framework for this implementation plan to foster intrinsic motivation to learn for my future students is founded on the data from this study. This plan will be based on the defining attributes of SC and SoA from the student voices of this study. First, the students will continue to be given opportunities to make choices in their learning but will

also be given more structured opportunities to reflect on this learning. This can be done through the continued use of strategies like PBL that emphasize voice and choice in learning (Thomas, 2000). At the conclusion of units, I can provide students with structured reflection time for them to think and speak about their learning. Student voices are powerful, and I can use reflection to provide students with a voice to showcase their learning.

The next step would be to make targeted efforts to provide students with opportunities to capitalize on their interests. My students in this study identified interest and importance as crucial parts of student choice, and this is also crucial to the development of intrinsic motivation; students will be more motivated to learn if they are passionate about what they are learning (Mathewson, 2019; Lumsden, 1994). In order to make this an intricate part of my future teaching practice, I can focus on developing relationships with students. When I truly get to know my students, I can tailor their learning to best suit their interests and what they deem important to their lives.

Along with interests, the students identified self-correction as another intricate part of SC. When given choice in their learning, the students began to self-correct their performance and efforts in class. In order to enhance intrinsic motivation in my future practice, I need to provide a safe learning environment that provides outlets for self-correction in learning. I can make more purposeful choices in my own instruction to allow students more time to self-correct. However, I can create an environment of learning that empowers students to self-correct and does not shame them for failures. Many students have been programmed to focus solely on the extrinsic rewards of

learning, like teacher reaction or numerical grades assigned to learning, that they are too afraid to take risks in their learning for fear of failure (Mathewson, 2019).

I will also give students an opportunity to develop and share affirmations of pride in the quality of their work and learning. Students can be allowed to celebrate the accomplishments of their learning. When reflecting on SoA throughout this study, the students identified their pride in their learning. With more concentrated efforts for students to share this pride, they can develop more motivation to learn. This celebration of learning can create an environment where students are encouraged to reflect on and evaluate their learning through celebration (Berger, Rugen, & Woodfin, 2014). These steps will guide an implementation plan for developing the intrinsic motivation to learn in my students.

**Conclusion**

This study has given me new knowledge of my own teaching practice. The importance of SC in the curriculum has been enhanced throughout this process. Also, the importance of providing students with equitable opportunities to showcase their learning has also been emphasized throughout this process. The most important part of this study is that my students learned. My students learned about themselves and the content I was teaching. The students felt pride in their learning. I hope that my future endeavors as a reflective practitioner result in creating more independent learners that have a renewed passion for learning and education. Teachers can use the insights from the study to create learners with a greater intrinsic motivation to learn.

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# APPENDIX A

## PRE AND POST INTERVENTION SURVEY

1. I can learn what is being taught in English class.

2. I am confident in my ability to write an argumentative essay.

3. I am confident in my ability to research and find credible sources.

4. I can confidently synthesize information from multiple sources.

5. I feel comfortable presenting evidence of my learning in a public setting.

6. I can create a product that shows an accurate portrayal of my learning.

7. I am proud of what I accomplish in class.

8. I feel like I am given the opportunity to showcase my learning in an effective way.

9. I feel like I am given the opportunity to make choices daily assignments.

10. I feel like I am given enough choice in my assessment opportunities.

# APPENDIX B

## EXIT TICKET QUESTIONNAIRE

1. I made choices that had an impact on my learning today.

2. Why did you answer this way?

3. I am proud of what I accomplished in class today.

4. Why did you answer this way?

5. What did you learn today?

6. What is one question you have from today?

APPENDIX C

PBL REFLECTION

1. Reflect on the overall PBL process. What did you like about PBL? What did you dislike?

2. What were elements of the PBL process that you felt were valuable to your learning? (Essential question, voice, and choice, sustained inquiry, creating a product, a public showcase of learning)

3. What were elements of the PBL process that you would change? (Essential question, voice, and choice, sustained inquiry, creating a product, a public showcase of learning)

4.  What were some strengths in your project? Weaknesses?

5. Describe some of the choices that you made throughout the project.

6. How did the choices throughout the project impact your motivation?

7. How did you feel after you presented the product that you created for your project?

8. Do you feel like you have learned something as a result of this project? What have you learned?

# APPENDIX D

## SC, SOA AND PBL REFLECTION CODEBOOK

| CODE | TYPE OF CODE | DEFINITION | EXAMPLE |
|------|-------------|------------|---------|
| Choice | SC | Reference to the construct from the study. Students comment on making choices or the impact of the choices. | I got to choose how I research my topic and what I want to talk about<br><br>I choose what I wanted to learn and I wanted to learn more since the topic I choose interested me |
| Learning | SC | Comments centered on learning. The students wrote about what they learned or if they learned from that lesson. | Because I learned something new.<br><br>I actually learned something important today |
| Interest | SC | The students commented on what interested them or what they were passionate about. | I got to talk about something that I am passionate about so I am proud of the work I get to do about my topic<br><br>I did more than enough research because I was so interested in this topic and put it into a format that I like and I'm proud to have made it. |
| Importance | SC | This term refers to the students commenting on the importance of something from that day. These responses ranged from passions to important topics or information. | I actually learned something important today<br><br>I choose a very important topic for my project that |

| CODE | TYPE OF CODE | DEFINITION | EXAMPLE |
|------|--------------|------------|---------|
| | | | means a lot to me and I feel very strongly about. |
| Self-Correction | SC | References to self-correction were made in these statements. Students recognized their shortcomings in their work for the day. | Because I feel is though had it been a longer day I could of got more done but next class will be an improvement<br><br>I was off task a lot today and I did not focus as much as I could on my work |

| CODE | TYPE OF CODE | DEFINITION | EXAMPLE |
|------|--------------|------------|---------|
| Pride | SoA | Reference to the construct of SoA from the study. Students made references to being proud in their learning and work. | I'm actually proud of what I did today<br><br>Because I learned something new all on my own. |
| Quality | SoA | Students made references to the quality of their work by emphasizing how their work become more in-depth, better, or other phrases like that. | I'm just going more into depth on my essay, and my presentation.<br><br>I made a choice to do research and made my learning faster and better |
| Motivation | SoA | Students made references to their motivation during that class. Students expressed their motivation to either get work completed or how it impacted their work ethic. | Because I am diligent with my research.<br><br>I did more than enough research because I was so interested in this topic and put it into a format that I like and I'm proud to have made it. |

| CODE | TYPE OF CODE | DEFINITION | EXAMPLE |
|---|---|---|---|
| Choice | A priori | Reference to the construct from the study. Students comment on making choices or the impact of the choices. | I like that you can pick how you're going to present your thesis based on your strong suits.<br><br>Since my products were obtainable, the choices I made to actually do then work positively impacted my products<br><br>It allowed me to open my eyes to the essential things of our environment and help me to appreciate my research. The next step is to meet people and try to find a solution to these problems. |
| Pride | A priori | Reference to the construct of SoA from the study. Students made references to being proud in their learning and work. | What I enjoy about the process is the freedom of the entire project the way that you can mold your final project into something more something you can be proud of.<br><br>Made me keep going and made me feel motivated<br><br>It allowed me to open my eyes to the essential things of our environment and help me to appreciate my research.<br><br>being able to choose a topic that i care about gave me more motivation to put in more effort towards my project. |

| Learning | Emergent | Comments centered on learning. The students wrote about what they learned or if they learned from the process | I did thorough research about my topic and visit many different sources so I can widespread of viewpoints about standardized testing. I talked to current students, teachers, and parents. |
|---|---|---|---|
| | | | I choose to change the way I look at the project like instead of criticizing it going along and seeing the point then trying to come up with a possible solution to the problem. learning new stuf about our society. |
| | | | I also thought the public showcase was important, because you and your audience learn as well. |
| | | | I believe the research part is the most valuable part cause your attaining information for your project that you have to remember |
| Organization | Emergent | This term refers to the students commenting on the importance of organizing their learning. This was usually made in reference to the "Essential question" component of PBL. | For my learning essential question was definitely a big factor because it set the groundwork of my entire project. |
| | | | Some elements of the PBL process that I felt was valuable to my learning was the essential question because it helped set up the rest of the project. |
| Self-Awareness | Emergent | References to self-awareness were made in these statements. | Showcasing your product is important, so that you get |

| | | | |
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| | | Students recognized their shortcomings in their work for the day. | feedback on where you did good and where you didn't<br><br>I didn't feel very connected to almost any of the topics but that's my own lack of motivation to complete the project in the first place<br><br>The overall process wasn't very intimidating to do so enjoyed the entire process but I did dislike the essay because I'm not very good at essay just bc I don't enjoy it |
| Public Showcase | Emergent | References to the importance of "showing off" their learning. Students expressed SoA in their presentations | Showcasing your product is important, so that you get feedback on where you did good and where you didn't<br><br>I also thought the public showcase was important, because you and your audience learn as well.<br><br>Also the public showcase because it helps me become familiar with my project and present it in a way that others can understand that. |
| Creation/Creativity | Emergent | Students made positive comments about their creations during the PBL. They also emphasized creativity | I feel is though what was the most important elements that I found valuable were the actual product of my video.I think my product which was a video from a show was very informative. I feel is though the site of footage that media can be more impact than actual words and monolingual or going on and on about the |

| | | | point your trying to get across with your topic.<br><br>The creating process of our product was very valuable to our learning. I'm a visual learner so having something to look at was very useful when talking and presenting our topic. |
|---|---|---|---|
| Passion | Emergent | Comments referencing their passions. The PBL process enabled students to build off of their passions | As I made these choices it kept on making me more and more passionate about the topic to the point where i would intentionally research more and more to find out more so I would have a better project<br><br>Voice and choice are the most important part, because if you get to choose a passion, it will turn out better |

# APPENDIX E

## LESSON PLAN CHART

| Lesson Plan/ Date | Objectives/ Standards | Instructional Strategy | Assessment |
|---|---|---|---|
| #1 3/25 | Informational Texts Standard 5: Determine meaning and develop logical interpretations by making predictions, inferring, drawing conclusions, analyzing, synthesizing, providing evidence, and investigating multiple interpretations. Standard 6: Summarize key details and ideas to support analysis of central ideas. Standard 7: Research events, topics, ideas, or concepts through multiple media, formats, and in visual, auditory, and kinesthetic modalities.  I can…. | 1. Bell ringer: how does "madness" play a role in Hamlet? 2. Students are given a basic overview of the project 3. Students take guided notes of the history of mental illness 4. Students are given the choice of picking different controversial methods of treatment for mental illnesses. Students can pick whatever treatment they want. They must research the history of the treatment and the contemporary replacement for this treatment 5. Students must put their information and research on an infographic using an app of their choice. | Summative: Infographic, Notes in Interactive Notebook *Notebooks taken up at the end of the unit* |

120

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| | -analyze an informational text<br>-analyze theme across text genres | | |
| #2  3/27 | <u>Inquiry</u><br>-Standard 1: Formulate relevant, self-generated questions based on interests and/or needs that can be investigated.<br>-Standard 2: Transact with texts to formulate questions, propose explanations, and consider alternative views and multiple perspectives.<br>-Standard 3: Construct knowledge, applying disciplinary concepts and tools, to build deeper understanding of the world through exploration, collaboration, and analysis.<br><br><u>I can…</u><br>-choose a topic that interests me<br>-create an essential question to guide my research<br>-create a process map that will guide me through | 1.Bell Ringer: What do you think are the most important issues in America today? **Mentimeter follow-up<br>2.What are some things that you feel passionate about?<br>3.Students will begin to explore topics for their projects. What are some things they want to change?<br>4. Students will first conference about their topics.<br>5. Then, students will develop an essential question.<br>6.Students will then construct a concept map. Students may choose any form to present their concept map. | Summative: Notes in Interactive notebook (Including Essential Question), Formative: Process Map |

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| | my research process | | |
| #3 3/29 | <u>Inquiry</u><br>-Standard 1: Formulate relevant, self-generated questions based on interests and/or needs that can be investigated.<br>-Standard 2: Transact with texts to formulate questions, propose explanations, and consider alternative views and multiple perspectives.<br>-Standard 3: Construct knowledge, applying disciplinary concepts and tools, to build deeper understanding of the world through exploration, collaboration, and analysis.<br><br><u>I can….</u><br>-evaluate and analyze sources<br>-synthesize information from multiple sources | 1.Bell ringer: In notebooks, students will write down how you can identify a credible source<br>2.Students will begin collecting sources. Students will be required to find 3 sources.<br>3. Students will be required to include certain information that analyzes their sources. This will be decided as a class.<br>4. Students may make the following choices in regards to sources:<br>    -If they need more sources<br>    -The genre of sources<br>    -How they present their evaluation of sources | Summative-Evaluation of sources in notebooks |
| #4, #5, #6 4/2, 4/4, 4/8 | Standard 1: Write arguments to support claims with clear reasons | Writing Workshop<br>1. Students will participate in a writer's workshop for argumentative essays | -Writing<br>-Peer editing |

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| | and relevant evidence<br><br>I can….<br>-write an argumentative essay<br>-peer edit an essay<br>-revise my own writing | 2.Each day will have a different focus of the paper as needed for the class<br>3.One day will be devoted to peer feedback and digital writing conferences with teacher<br>4. Another day will be devoted to revision and work on final drafts<br>5.All writing will be done on Google Docs and will be saved in their class folders on Google Drive | |
| #7 & #8  4/10 & 4/12 | Writing<br>Standard 1: Write arguments to support claims with clear reasons and relevant evidence<br>Inquiry<br>Standard 4: Synthesize information to share learning and/or take action.<br><br>I can….<br>-create a product that displays information<br>-synthesize information in a creative way | 1.Students will work on their products<br>2.Students can choose to display their information in any format<br>3.Products must display historical and contemporary information and must attempt to solve or bring awareness to their issue | Summative: Product<br>Formative: Practice of presentation/Presentation<br>Summative: Argumentative essay |
| #9  4/23 | Standard 1: Interact with others to explore ideas and concepts, communicate | Presentation Day!<br>1.Students will walk to the library and set up their projects<br>2.Students will have some last minute time | Summative: Presentations, Products |

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|---|---|---|---|
| | meaning, and develop logical interpretations through collaborative conversations; build upon the ideas of others to clearly express one's own views while respecting diverse perspectives. Standard 2: Articulate ideas, claims, and perspectives in a logical sequence using information, findings, and credible evidence from sources.<br><br>I can….<br>  -Present my findings to a public audience<br>  -Organize my information and research into a presentation<br>  -Discuss ideas and analysis | to prepare for presentations 3.Students will present their products and information to faculty members in the library 4.Presentations will take the entirety of class | |
| #10  4/ 25 | Communication -Standard 1: Interact with others to explore ideas and concepts, communicate meaning, and develop logical interpretations through collaborative | -Bell ringer: Students will complete the post-study survey - Students will complete the PBL reflection on Google Forms -Students will get the major themes/prompts from the reflections.  -Students will highlight their major | Summative: Presentations and products Formative: Reflections |

| | conversations; build upon the ideas of others to clearly express one's own views while respecting diverse perspectives.<br>Inquiry-<br>Standard 5: Reflect throughout the inquiry process to assess metacognition, broaden understanding, and guide actions, both individually and collaboratively.<br><br>I can….<br>-Present my reflection content<br>-Design a presentation<br>-Reflect on my learning | opinions from the reflections<br>-Students will create some sort of presentation to display their reflections.<br>　　-They can choose whatever medium they want to display their reflections.<br>-Students must present their reflections to the class in some format. They can post to our SeeSaw page, Google Drive, or in-person to the class. | |