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A Problem-Based Learning Approach to Civics Education: Exploring Citizenship Through Authentic Scenarios in a Middle School Civics Classroom

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A PROBLEM-BASED LEARNING APPROACH TO CIVICS EDUCATION: EXPLORING CITIZENSHIP THROUGH AUTHENTIC SCENARIOS IN A MIDDLE SCHOOL CIVICS CLASSROOM

by

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ABSTRACT

This dissertation focuses on implementing problem-based learning as an instructional intervention in a middle school civics classroom. This action research study responds to the observations of the teacher-researcher who noticed that her students were not make meaningful connections to the practice of citizenship. The problem of practice was developed when the teacher-researcher realized that the students were not engaged in learning with the traditional lecture-style, rote memorization instruction; she needed an intervention that was active, collaborative, and meaningful. To increase the connection to middle school learners, the intervention should emphasize problem solving skills and build empathy for others through a social equity lens. This mixed methods study is informed by the following research questions: First, what are the effects of using problem-based learning as an instructional method in a middle school civics classroom? Second, how does using problem-based learning to solve authentic, citizenship scenarios help middle school students make connections to their community? The teacher-research adopted a phenomenological approach as she seeks to incorporate the students' feelings throughout the data collection process. The theoretical foundation for this study included problem-based learning, constructivism, social studies pedagogy, middle school pedagogy, and integrated learning.

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INTRODUCTION

A principal at a southeastern middle school walks around the campus on a normal school day in late spring. State-mandated accountability testing is nearly approaching, and the principal is anxious to observe the teaching that is occurring in the classroom. The principal enters the first civics classroom where the teacher is preparing the students for the upcoming civics end-of-course exam. This exam is 30% of the students' grades in their middle school civics course. While observing the room, the principal notices that one student is sitting in the back checking her hair with her make-up mirror. Another student is sleeping with his head resting against the wall. The teacher is standing at the front of the classroom lecturing as students copy the notes that are projected on the wall. These notes outline the duties and responsibilities of citizenship. The teacher reviews the facts of good citizenship in a monotonous voice as most of the students struggle to focus as they hurriedly copy the notes. The teacher describes the ways a person can be a good citizen and help their community, but most students are not connecting to these examples. Listening to the comments from a few students who are engaged in the lesson, the principal determines that students view good citizenship as something to strive for when they are adults; citizenship does not seem meaningful to them now. The middle school students are not connecting with each other nor are they understanding the ways that they can be good citizens in their daily lives to affect their community in a positive way.

As a solution to this disconnection, an intervention is needed that appeals specifically to middle school students and helps them to connect to their fellow students and community. It needs to encourage student buy-in to help encourage students to care about the problems that exist in their community. Furthermore, that increased caring for their community has the capacity to build the affective skills of students as the importance of civic engagement is understood (Allen & Stevens, 1998). Middle school students need a specific curricular method to engage them in the classroom collectively and to increase meaningful connections with the world around them.

Problem of Practice

For middle school learners, Brown and Knowles (2014) recommended that "a curriculum that focuses on the real concerns of the young adolescent is highly motivating and leads to significant learning" (p. 151). Curricular design should be purposely aimed at meeting those needs as well as be equally challenging. In the 21st century, innovative educators must seek to capture the attention and interest of middle school students while simultaneously challenging them to think critically and solve problems. The traditional classroom model has become outdated and is unable to motivate students toward success because students do not see value in the mindless memorization of facts. "Instruction limited to recitation and lecture will not be highly successful" (Allen & Stevens, 1998). Students, especially middle school students, will lose focus on learning if they are told what to do and how to think. Authoritarian, administrative bureaucracy in education destroys innovation and creativity (Darling-Hammond, 1997). Efforts should be made by educators to create a learning environment that is engaging and mentally stimulating.

For learning to increase and be meaningful, students must see the connections between academic learning and the real world (Brown & Knowles, 2014; Hmelo-Silver, 2004). Students should be shown how "knowledge across disciplines is interrelated in a natural world" (Harrell, 2010, p. 146). In a modern classroom, the memorization of facts is archaic and largely unnecessary because information is so easily accessible. "Traditional instructional approaches involving lectures, note-taking, or copying from a book will not improve middle school students' cognitive growth (Brown & Knowles, 2014, p. 26). When choosing a meaningful and effective instructional method, the emphasis should be on teaching students how to process, organize, and create information because there is too much existing information in the modern world to possibly memorize. Learning should take a more meaningful approach as it guides all students equitably, creating an environment that fosters meaningful connections, innovative productivity, and cooperative learning where diversity is valued and viewed as an asset (Darling-Hammond, 1997; Hmelo-Silver, 2004).

Connecting new knowledge to previous knowledge helps students learn and grow, which will also expand understanding as students internalize and use new content (Null, 2011; Zhbanova et al., 2010). A student must internalize and find meaning in the knowledge presented to successfully engage in classroom learning. Students must be given freedom to learn and grow in a way that is productive for them, and this process varies by a student's personality, learning style, and preference (Brown & Knowles, 2014; Darling-Hammond, 1997; Null, 2011). Learning should be experiential and meaningful while also focusing on the needs and engagement of the students.

As students enter the workplace, they must learn how to apply knowledge to real-life situations; this application can be practical and experiential early in student development, even as early as middle school, so that these skills are mastered and familiar in adulthood. Learned information from a variety of sources must be successfully synthesized if it is to be effectively applied to problems (Brown & Knowles, 2014). "The pressures of an ever-increasing, crowded curriculum can be relieved by integrating learning experiences in an in-depth, holistic way, providing students with skills to generalize from one situation and apply that principle to another" (Zhbanova et al., 2010, p. 251). Because society functions through the ability to use and apply integrated knowledge in various situations, it is important for students to utilize this practice in school. If learning should be meaningful and engaging rather than bureaucratic and authoritarian, how does that occur? "Meaningful learning experiences occur through integrated thematic instruction that focuses on the questions, issues, and concerns of young adolescents in relation to their world" (AMLE, 2012, p. 66). This integrated connection among academic disciplines, which is also correlated to real-life skills, increases meaningful learning (Brown & Knowles, 2014; Hmelo-Silver, 2004). Therefore, an intervention is needed for a learning approach that is interdisciplinary, focuses on problem-solving, and connects to the real world.

Meaningful instruction must be purposeful. Teachers should plan unique, relatable ways to communicate the curriculum to the middle school students (Brown & Knowles, 2014). If students do not feel that what they are learning is beneficial, they will not be motivated to learn. They need to understand how the information in all their

classes connects as “an organic whole” while “engaging the individual in focused learning experiences” (Harrell, 2010, p. 146). Learning should be active and meaningful to engage and motivate middle school students. Teachers must go beyond lectures and worksheets and create activities to keep students’ minds engaged. “Cognitive processing will improve if students are given powerful learning experiences with opportunities to make genuine connections between content and their experiences” (Brown & Knowles, 2014, p. 26). Learning and assessment should be cooperative and not competitive (Brinegar, Harrison, & Hurd, 2019). The teacher should take on the role as facilitator while students are learning from each other in an environment that encourages all students to participate. Students learn best through engaging in collaborative and cooperative activities (Hmelo-Silver, 2004).

Theoretical Framework

John Amos Comenius (1592-1670) recognized that “people learn by doing,” thus birthing developmental theory in which learning “progresses from concrete experience to abstract thought” (Schiro, 2013, p. 128). Developmental theory is foundational to the learner-centered ideology, which is credited to the enlightenment thinker, Jean-Jacques Rousseau, who believed that education is best when it follows the natural development of children as they relate to the world around them (Schiro, 2013). The practical nature of the learner-centered ideology occurred when Johann Heinrich Pestalozzi promoted students’ interests and the self-directed nature of effective learning; active learning also emerged as Pestalozzi saw the developmental benefit of “experience and observation as sources of understanding” (Schiro, 2013, p. 128). A social/emotional component of

learning was also included as the importance of affective skills became realized as Pestalozzi promoted educating the heart as well as the head and the hands (Schiro, 2013, p. 128). Friedrich Froebel, the founder of the kindergarten system and a student of Pestalozzi, viewed learning as a "process," or a systematic "method with self-activity as its center" (Baader, 2004, p. 430; Schiro, 2013). These developmental theory thinkers, combined with the constructivism of John Dewey, founded the ideas that would lead to the learner-centered ideology, which is the ideal foundation for the active learning needs of middle schoolers (AMLE, 2012; Schiro, 2013). "Learner centered educators view learning from a constructivist perspective" (Schiro, 2013, p. 135). Effective middle school pedagogy combines the active, authentic, collaborative learning of problem-based learning (PBL) with the foundational, learner-centered ideology of constructivism.

This study was designed to explore the effects of using PBL as an instructional intervention to engage learners in citizenship education through authentic scenarios in a middle school civics classroom. This study incorporated elements of social equity because the chosen intervention, PBL, incorporates culturally relevant teaching (CRT) practices such as connecting knowledge to community improvement and believing that all students can succeed (Ladson-Billings, 2009). According to Efron and Ravid (2013), action research that promotes social equity is critical research, which seeks to "expose repression, domination, and inequalities" (p. 42). To this end, the teacher-researcher examined how PBL facilitates CRT practices such as coteaching, active learning, scaffolding, and emphasizing students' real world experiences in a middle school civics classroom so that middle school students can understand the importance of civic engagement as citizens (Brinegar, Harrison, & Hurd, 2019); Ladson-Billings, 2009).

Problem-solving is naturally engaging because it is a way to facilitate active learning, which is a major component of effective middle school pedagogy (AMLE, 2012). Haydon et al. (2012) defined "engagement" as "the student working on academic tasks as demonstrated through writing, raising his or her hand, choral responding, reading aloud, talking to the teacher or peer about the assignment, and placing and/or scrolling finger(s) on the iPad" (p. 235). These active learning practices can be incorporated into PBL techniques. Hmelo-Silver (2004) noted that elements of PBL include "facilitated problem solving," "collaborative groups," and "self-directed learning" (p. 235), which are all consistent with middle school pedagogy (AMLE, 2012; Brown & Knowles, 2014). Effective educators value collaboration among students as well as among teachers and their students (Brubaker, 2004). This collaboration between teachers and students and students among themselves are elements of engaging, active learning and PBL that can lead to greater understanding of the ways in which middle school students can be good citizens. Activating prior knowledge and then building on those experiences makes learning meaningful (Bevevino et al., 1999). Providing meaningful experiences through enacting PBL as a learning intervention helps students achieve the goal of making connections to better understand citizenship and ways to uplift their community.

The theoretical foundation for this study included problem-based learning, constructivism, social studies pedagogy, middle school pedagogy, and integrated learning. CRT practices also informed the methodology and implementation of the study.

Problem-Based Learning (PBL)

PBL was originally designed as a learning method to teach adults in medical school to connect learning to practice (experiences) in the real world (Delisle, 1997).

Expanding to other disciplines, PBL is defined as "focused, experiential learning" centered on "messy, real-world problems" (Torp & Sage, 1998, p. 14). Furthermore, Robert Delisle (1997) noted that PBL can be traced back to John Dewey's philosophy in 1944 that learning should be based on the natural interests of students to think and create. Beau Fly Jones et al. (1997) built on this definition to also add to PBL the elements of project-based, thematic, and interdisciplinary learning. Moreover, along with John Dewey and Jerome Bruner, Servant and Schmidt (2016) noted the importance of Flexner, Comenius, and Rogers in the development and evolution of PBL.

Torp and Sage (1998) argued that PBL may not always be interdisciplinary, but it should always be integrative, which is ideal through the lens of a learner-centered ideology and in a middle school setting (AMLE, 2021; Schiro, 2013). Moreover, in a PBL classroom students are viewed as "stakeholders" and teachers are "coaches" (Torp & Sage, 1998, pp. 16-17). Overall, it is useful to explore the benefits of PBL because it can increase engagement, connect learning to the real world, encourage high-level thinking, promote self-directed learning, and foster understanding and reflection (Torp & Sage, 1998, p. 16-17). PBL is an intervention that fosters classroom equity because diversity is a key component. "The constructivist perspective views learning as an experiential process" (Iwamoto et al., 2016, p. 25). The PBL process builds on students' foundational knowledge and provides an avenue to them to apply that knowledge to real-life scenarios that could exist in their community. Undergirding PBL with CRT promotes an emphasis on student voice and choice as essential elements in the curriculum; students' diverse backgrounds and experiences are also valued as students make

connections to their own lives and identities (Brinegar, Harrison, & Hurd, 2019). PBL combined with constructivism creates effective middle school pedagogy (See Figure 1.1).

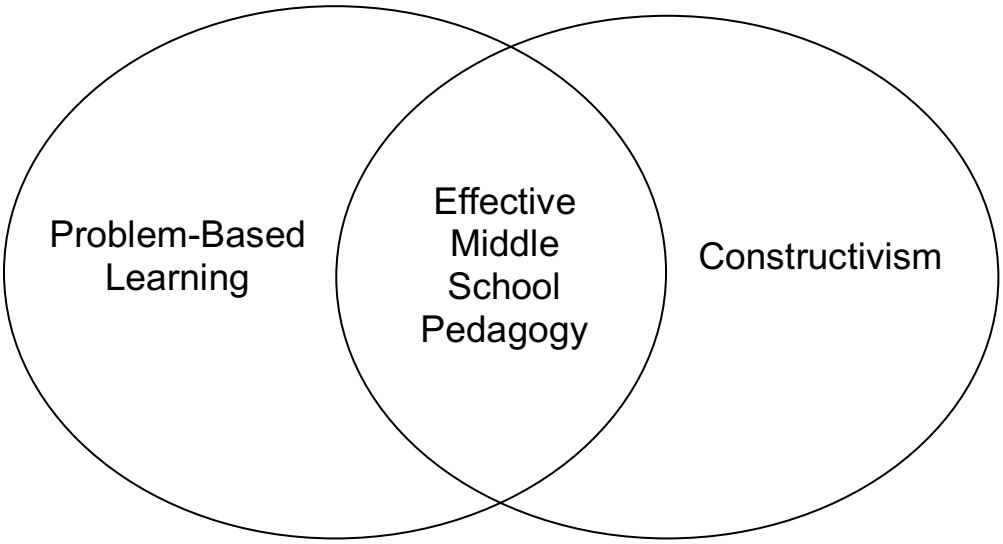

Figure 1.1 Effective Middle School Pedagogy

According to Null (2011), "a pragmatic curricular philosophy is held together by a commitment to achieving goals such as affecting change, making a difference in students' lives" (p. 117). In an age of popular strategies promoting career readiness and increased rigor, PBL could be used to support those goals in middle school classrooms while also proactively engaging learners. Middle school students need a curriculum that is active and engaging but also flexible and learner centered. Every student can learn, and organizational and curriculum changes should be made to create an optimal educational environment (Deal & Peterson, 1999) that motivates active learning through problem solving techniques (Ellerton, 2013). PBL creates that optimal learning environment because it meets the students where they are and provide equitable experiences for all students. Scaffolding techniques are included to support a variety of learners; gifted learners are provided an avenue to probe their creativity and challenge their abilities. PBL

is effective to engage with every learner regardless of background, learning style, or needs; it is an instructional method that empowers every student (Hmelo-Silver, 2004).

Culturally Responsive Teaching (CRT)

A learner-centered curriculum should be inclusive of all students; specifically, the needs of students of color should not be overlooked. Through this action research study, the teacher-researcher incorporated CRT practices to create an equitable environment in my classroom. According to Ladson-Billings (2009), CRT practices include elements of PBL because "students are allowed to ask their own questions and search for their own answers" (p. 127). This idea of empowering students to ask questions with which there in not only one correct answer is consistent with Hmelo-Silver's (2007) ill-structured problem. Howard (2015) pointed out how teachers should value the "cultural capital" that students of color bring to the classroom (p. 197). This concept is consistent with the basic idea of valuing diversity. Many teachers are not trained in including interventions and teaching practices that are culturally responsive. As Ladson-Billings (2009) contended, there is a lack of preparedness of educators when teaching African American students as well as a lack of literature and research on the subject. To be truly valued, there needs to be proactive and purposeful preparation of pre-service teachers and professional development on CRT. "It is critical for teacher educators to provide spaces for preservice teachers to express their uncertainties, frustrations, and regrets over prejudiced notions" (Howard, 2015, p. 199). Howard (2015) recommended the practical suggestion of journaling to help reveal any racist attitudes or prejudices. The teacher-researcher in this study used reflective journaling as one of the data collection methods.

African American students can keep their cultural identity and still excel academically; CRT is how this can be accomplished; communicating to students of color that academic accomplishments do not have to equal abandoning their heritage. Ladson-Billings (2009) discusses how African American students would purposely not do well in school because they felt like if they do then they are betraying their African American identity. During the 2004 Democratic National Convention, President Barack Obama stated the following about acting white: “Go into any inner-city neighborhood, and folks will tell you that government alone can’t teach our kids to learn. They know that parents have to teach, that children can’t achieve unless we raise their expectations and turn off the television sets and eradicate the slander that says a black youth with a book is acting white” (Sadowski, 2010, p. 35). Ladson-Billings (2009) proposed that one way to eradicate this slander is for white educators and the school system to accept, validate, and support African American culture through CRT practices. Differences in the “dominant language, literacy, and culture” should not be viewed as an obstacle to be overcome, but if diversity is achieved, it adds value and enhances the curriculum (Paris, 1993, p. 93). PBL is an equitable practice that values diversity because PBL is more effective as an intervention when more perspectives are included.

Exposure to multicultural experiences benefits students in building critical thinking skills and positive character traits such as tolerance and empathy. Encouraging dialogue about race, gender, and socioeconomic status allows for purposeful connections among peoples of varying backgrounds. This dialogue can be encouraged in a civics classroom, where a diverse student population can educate themselves through discussion, debate, research, and reflection. Henze et al. (1998) studied the impact of

dialogue and reflection on the topics of race, power, and white privilege to advance efforts to enhance race relations. Inequalities and racism will continue unless there is honest discussion about the problems that persist so that solutions can be found, and all races need to be open to discuss these important issues so that equity in education will be achieved (Howard, 2010). Discrimination is reduced when all perspectives have an equal seat at the table; privileges are acknowledged, and biases are recognized. Beverly Daniel Tatum (2010) notes that a problem must be recognized to be solved. Bell hooks (1994) also acknowledged the importance of conversation to facilitate unity when she said, "To engage in dialogue is one of the simplest ways we can begin as teachers, scholars, and critical thinkers to cross boundaries" (p. 130). A middle school civics classroom is one of the first places where boundaries can be crossed as meaningful dialogue begins and diverse voices are included; problems can be openly discussed in an inclusive manner.

Research Questions

Because PBL fosters collaboration and engagement (Hmelo-Silver, 2004), it is an effective teaching method among middle school students who crave meaningful, emotional connections (Brown & Knowles, 2014). The exploratory, active nature of PBL appeals to middle school learners as they use resources to solve authentic problems (Brown & Knowles, 2014). PBL as an instructional method gives middle school students independent experiences to connect with real-world problems related to becoming responsible citizens. The purpose of this study was to identify and evaluate the effects of using PBL as an instructional method to teach citizenship to middle school students in a civics classroom.

PBL facilitates active problem-solving that is self-directed, collaborative, and reflective (Hmelo-Silver, 2004). As a civics teacher, the teacher-researcher moved beyond instructing students to merely memorize the requirements of American citizenship. She wanted her students to be socially responsive and view good citizenship as connecting to and having empathy for the people around them in their own community.

An effective intervention with a phenomenological approach was needed to teach middle school students that American citizenship is more than just voting, paying taxes, and jury duties; good citizenship also includes being responsive to society's inequities through empathy and advocating for social change when needed. Community stakeholders are concerned about the social responsiveness of the next generation. District and school administrators are concerned about enhancing the school culture through peer and community involvement of students. Civics teachers are invested in teaching the citizenship standards, but they can also value character building and the social equity aspect of building empathy and making meaningful connections with others in their community. Finally, middle school students should be encouraged to be good citizens by helping solve problems in their community. Even at a young age, they can still connect to the underserved people around them and look for ways to increase equity through problem-solving collaboration in the classroom.

Research questions for the study were the following:

RQ 1: What are the effects of using problem-based learning as an instructional method in a middle school civics classroom?

RQ 2: How does using problem-based learning to solve authentic, citizenship scenarios help middle school students make connections to their community?

The teacher-researcher chose these research questions because as a middle school civics teacher, she was searching for an intervention that taught the citizenship standards yet also enhanced her students' cognitive and emotional development through building empathy for others. Students must move beyond merely memorizing small pieces of information, because that does not facilitate cognitive development and understanding (Brown & Knowles, 2014). Furthermore, in studying PBL, the teacher-researcher realized that it was an instructional method that engaged students in making meaningful connections to the world around them. This connection would increase cognitive understanding as well as help students make emotional connections to the importance of active citizenship in their community. As they worked together to brainstorm and research the most effective solutions to problems pertaining to American citizenship, the teacher-researcher explored the effects and outcomes that emerged. The teacher-researcher observed the students as they were eventually able to work through the PBL steps independently and make meaningful connections to society to order to benefit the community and become responsible citizens.

The teacher-researcher used a mixed methods approach to discover the effects of PBL on citizenship education in a middle school civics classroom. She chose to explore the effects of this intervention to examine its effectiveness as an instructional method of the civics standards on citizenship; however, she also looked to uncover any unexpected benefits for her students by using PBL as a teaching tool in the classroom. The effects of

using PBL as an instructional method in a middle school civics classroom to make connections among students through collaboration (which is an element of PBL) were also explored and investigated. Along with assessing achievement of the citizenship standards, the teacher-researcher identified the respondents' feelings and self-reflection after performing rounds of each of the selected PBL tasks. The teacher-researcher observed her students through the PBL reflective process. The PBL strategies were employed to help the students develop their problem-solving skills in collaborative groups to increase their knowledge of the citizenship standards and make connections to the world around them by brainstorming to solve real world problems as local and global citizens. She examined connections to community that were made by using PBL to solve authentic citizenship scenarios. She observed how community awareness increased among her students by encouraging them to think in socially responsive ways by recognizing and solving problems in their community.

Researcher Positionality

The teacher-researcher's positionality was as an insider because her respondents were her own students in a middle school civics classroom. After teaching in a middle school context for over six years, she understood their learning preferences and needs. As she related to her students, she understood that as an action researcher she should maintain "disciplined subjectivity" and recognize that there must be a balance between subjectivity and objectivity (Efron & Ravid, 2013, p. 57). As an "insider," she understood that there was the temptation to put a positive spin on her results (Herr & Anderson, 2015, p. 44-45), but she must maintain this balance. This awareness was important to

reduce bias, which is an accepted part of action research but should be minimized as much as possible.

Research Design

The research for this study was grounded in PBL, constructivism, middle school pedagogy, and citizenship education. The student respondents in the study were mostly eighth grade students of varying abilities. Middle school learners are a unique age group who need to be proactively engaged in learning (Brown & Knowles, 2014); it is important that they are challenged through a curriculum that is student-centered, limitless, and encourages problem solving. Ensuring that these areas are a prominent part of the curriculum helps motivate and engage students.

The problem of practice highlighted a need for an intervention that is active, flexible, and engaging for middle school learners in a civics classroom. Using both qualitative and quantitative methods in this study was useful because the teacher-researcher wanted to understand her students' thoughts and feelings as well as evaluate their engagement in tasks and understanding of the civics content as it relates to chosen PBL teaching strategies. Toward this end, she used observations, reflections, surveys, Likert scale results, and teacher-created rubrics. This triangulation focused on obtaining a "fuller picture" of the needs and responses of middle school students (Efron & Ravid, 2013, p. 67).

The student population in the teacher-researcher's civics courses was made up of mostly students on a standard track with a few advanced or gifted students as well as students with disabilities. She taught about 90 eighth grade students who were divided into five class periods. Civics is a required course in the state of Florida. In her sixth to

eighth grade middle school, 80% of the students were considered economically disadvantaged, and minority students made up 16% of the school population (Florida Department of Education).

The teacher-researcher utilized Hmelo-Silver's (2004) plan as the steps in which the students proceeded through as they explored solutions to problems. First, students were given a problem. Second, they identified the applicable facts that were related to the problem. Next, the students brainstormed possible solutions. Fourth, areas for improvement were uncovered. Afterward, students researched these selected issues. Finally, the students reflected on the new knowledge obtained (Hmelo-Silver, 2004). The teacher-researcher also utilized the PBL self-assessment strategies of journaling and reflecting (Barell, 2007). The constructivist theory of building on prior knowledge to obtain new knowledge (Henson, 2010) was the foundation of this PBL process.

One source used to collect data was the students' problem-solving journals (guiding questions paper packets); these journals were utilized to encourage questioning techniques throughout the process as well as aid the students in their organization of materials (Lambros, 2002). The teacher-researcher followed this design as she used observation data to guide the improvement of PBL strategies after each PBL cycle that was implemented in the classroom. She used both teacher reflection data and student observation data to inform and shape the research plan. Action research is more "fluid, open, and responsive" than formal research, which allows the researcher to be more responsive to the initial data (Herr & Anderson, 2015, p. 90).

The process of implementing PBL strategies in my classroom lends itself to action research because the PBL process is also reflective in nature. Through exploring

community problems related to citizenship, the teacher-researcher connected students to the needs around them. The importance of building equity in the classroom and the community was supported as every student's perspective was included as they communicated their ideas for solutions to the problems presented. As stated previously, the reflective nature of action research allowed the teacher-researcher to learn more about the unique characteristics of her middle school learners to observe and evaluate ways to increase their engagement, civics content knowledge, and enhance their civic engagement and awareness of societal issues.

Significance of the Study

According to Efron and Ravid (2013), action research employs teachers themselves as the researchers, and they study their own practice. In addition, Herr and Anderson (2015) noted that action research is cyclical in nature. "Each cycle increases the researchers' knowledge of the original question, puzzle, or problem, and it is hoped, leads to its solution" (p. 5). The action research process not only seeks to solve a problem of practice, but also teaches educators more about themselves and reveals ways that they might be contributing to the problems that they seek to solve. In addition, the process revealed some bad habits and some faults in the teaching and learning process. This reflective component in the action research process is a unique asset for the teacher-researcher.

Although action research is not generalizable statistically, action research studies are useful to other educators who teach in a similar context (Herr & Anderson, 2013). While the goal of action research is not to generalize findings to other classrooms, there can still be strategies that are uncovered in the findings that could help other teachers

implement PBL strategies in their own classrooms (Herr & Anderson, 2015). As a classroom teacher-leader who was involved in curriculum planning and mapping for her school, she sought to empower both her students and teacher colleagues to solve problems to become life-long learners as well as risk-takers who see the long-term vision of combining student engagement and content knowledge in an effective PBL curriculum.

Efron and Ravid (2013) also noted that a unique aspect of action research is to be able to improve the teacher-researcher's own classroom procedures and curriculum; therefore, it is allowable that the number of respondents is limited. In addition, action research is not concerned about the transferability to other classrooms; the focus is on improving the researcher's own practice (Efron & Ravid, 2013, p. 65). As Herr and Anderson (2015) pointed out, the action research process is continual, because the collected data moves and directs the study (p. 93). This PBL perspective is in alignment with constructivist theory, which combines data analysis and reflection to allow for more expansive conclusions (Butterfield, 2009). The teacher-researcher used PBL to incorporate brainstorming and questioning techniques to facilitate a connection to the importance of civic engagement in one's community. Promoting civic engagement encourages students to develop positive character traits and stresses the importance and value of becoming life-long learners by uncovering solutions to problems. The teacher-researcher observed PBL fostering a love of community and establishing the students' connection of social equity issues, which will evolve to increased civic engagement and community service as students mature.

Limitations of the Study

Although a major element of action research is its flexible nature (Herr & Anderson, 2015), the teacher-researcher was concerned that she did not have some elements firmly established, specifically "outsider" input from other teachers. Also, there were no English language learner (ELL) students present in the sample of students chosen because the teacher did not teach any ELL students the school year when the study was implemented. Finally, the teacher-researcher's middle school and the student respondents that attended there were accustomed to their close-knit, rural environment. Students from a school in an urban community were not included in the study.

Organization of the Dissertation

PBL is a strategy that helps increase engagement by encouraging students to participate in solving real world problems. Collaborative learning, which is a key component of PBL, was successful in a middle school civics classroom with students who crave social interaction and engagement. PBL could become a foundational, curriculum structure in which the teacher-researcher frames her civics curriculum if it continues to be both engaging and beneficial to learning civics content knowledge and the importance of civic engagement in society. This dissertation discusses the relevant literature related to the core components of PBL, constructivism, and middle school student learning. The research design outlines the research methods that were used in the study. The findings present the benefits of PBL in a middle school civics classroom and make recommendations for future PBL studies in this context. Finally, the last chapter reflects on the study and research methods chosen and makes an action plan.

Glossary of Terms

Problem-based learning (PBL): "an instructional method in which students learn through facilitated problem solving" (Hmelo-Silver, 2004, p. 235).

Culturally responsive teaching (CRT): "using the cultural characteristics, experiences, and perspectives of ethnically diverse students as conduits for teaching them more effectively" (Gay, 2002, p. 106).

English language learners (ELL): students who must "face the challenge of mastering the academic curriculum while learning a new language" (Gottschalk, 2016, p. 64).

CHAPTER 2

LITERATURE REVIEW

This action research study explored the effects of using problem-based learning (PBL) to teach citizenship in a middle school civics classroom. In middle school civics classrooms, there is a need to teach citizenship in a way that connects with the students so that they are aware of the impact that they can have in the community around them as positive, proactive citizens. The intervention selected by the teacher-researcher needed to be a self-directed teaching method that promoted active learning and problem solving as well as incorporating social and emotional learning to execute effective middle school pedagogy and build connections to social equity.

Middle school students have unique learning needs; they need social interaction and active learning to make connections. Even as middle school students, they need to understand how they can be good citizens by voting and paying taxes but also caring about the people around them. Solving authentic citizenship scenarios through collaborative brainstorming helps middle school students connect their background knowledge to problems in their community. As American citizens, even middle school students can be agents for social change and equity as they develop their affective skills and build empathy.

Two research questions were used to guide this study. The research questions focus on identifying the effects of a multi-cycle PBL process in a middle school

classroom and the community connections that students make based on the implementation of PBL with a phenomenological approach. The questions are as follows:

RQ 1: What are the effects of using problem-based learning as an instructional method in a middle school civics classroom?

RQ 2: How does using problem-based learning to solve authentic citizenship scenarios help middle school students make connections to their community?

A literature review is important to understand the current perspectives and findings of previous studies related to the chosen intervention (PBL) and the theoretical and conceptual frameworks. An effective literature review frames the research question and is ongoing even throughout the data collection process (Herr & Anderson, 2015). Furthermore, a rationale of the study is established by examining the studies of other educators, especially those that have employed the same intervention in their classrooms (Efron & Ravid, 2013). A teacher-researcher must be aware of what is going on in other classrooms to inform the best practices in his or her own classroom. However, while a literature review is vital to undergird and inform the study both before and during the collection of data, the teacher-researcher should be careful not to be limited by any preconceived notions shaped by the literature or allow the literature review to limit the perspective of the teacher-researcher when he or she is interacting with his or her own data (Herr & Anderson, 2015).

The approach to building the literature review for this study began with seeking out the historical foundations of PBL. After observing her students learning about citizenship in her civics class, the teacher-researcher realized that there was a disconnect

between learning and action. Students could memorize the elements of good citizenship but seemed disconnected from practical ways in which they could be good citizens in their own community. The teacher-researcher was first introduced to PBL by reading the article by Cindy Hmelo-Silver (2004) called "Problem-Based Learning: What and How Do Students Learn?" It helped her realize that PBL could be that intervention that appealed to middle-school learning because it is experientially based (Brown & Knowles, 2007). The teacher-researcher had studied and used project-based learning many times as a social studies teacher but was looking for an intervention that would guide her students to use prior knowledge to think critically and collaborate, which is recommended for middle schoolers (Brown & Knowles, 2004). PBL learning seemed lacking because of its narrow focus, and the teacher-researcher sought an intervention that was more mentally challenging.

After identifying the need to teach citizenship in a more meaningful way that impacts and inspires middle school students to make a positive impact in their community, she recognized that PBL could be the intervention that she would use to meet the needs of her students. Not only is PBL based in constructivism where students build knowledge with other students through collaboration (Savin-Baden & Howell Major, 2004), but problem-solving with collaboration is also an ideal instructional method for middle school students (Brown & Knowles, 2014). The teacher-researcher started reading about the historical path and evolution of PBL (Hamed, 2013; Hmelo-Silver, 2004; Savin-Baden & Howell Major, 2004) and then explored how PBL connects with the needs of middle school students (Allen & Stevens, 1998; Brown & Knowles, 2014; Busey & Russell, 2016). Finally, she sought effective ways to teach citizenship to

students to facilitate social and emotional learning through student collaboration and to build empathy toward their community (Allen & Stevens, 1998; Hamed, 2013; Sadler & Silber, 2007). It was also important for her to choose an intervention could also incorporate elements of culturally responsive teaching (CRT) practices, where "real education is about extending students' thinking and abilities" rather than mindlessly memorizing facts (Ladson-Billings, 2009, p. 135). PBL shares many elements of CRT in that it is student centered and an instructional method that fosters communication. Effective middle school pedagogy is where the teacher creates "facilitating environments in which students take responsibility for their own learning and contribute positively to the world around them" (Bishop & Harrison, 2021, p. 17).

The teacher-researcher primarily used Academic Search Premier in EBSCOhost and looked for academic journals. When she found a journal article that was especially useful, she looked at the source list at the end of the article and searched for those titles in EBSCO. While looking for books that fit her topics, she also cautiously searched the internet for online articles related to her framework of PBL, middle school pedagogy, constructivism, social studies education, and specifically, citizenship education.

This chapter first provides an overview of the background of the problem of practice (Brown & Knowles, 2014; Hazen, 1991; Howard, 2016; Schwab, 2013; Zhbanova et al., 2010). That section is followed by descriptions of the existing, foundational literature of five, primary frameworks that shaped PBL in the teacher-researcher's civics classroom: constructivism, effective middle school pedagogy, effective social studies pedagogy, learner-centered ideology, and integrated curriculum.

Background on the Problem of Practice

In the 21st century, innovative educators must seek to increase student engagement in the classroom. The traditional classroom model has become outdated and is unable to motivate students toward achievement and growth, as students do not see value in the mindless memorization of facts, especially with the emergence of the internet (Hazen, 1991). Value in education has shifted from acquiring knowledge to applying knowledge. Students, especially middle school students, are craving meaningful connections and authenticity in their learning to increase engagement, understanding, and value of learning in the classroom (Brown & Knowles, 2014). For learning to increase and be meaningful, students must see the connections among the disciplines through the integration of the subject areas and real-world applications. Regularly providing meaningful, authentic learning using problem-solving scenarios meets students' needs both academically and practically, while also preparing them for their chosen career, because most careers include the ability to solve problems. In the present academic climate, students are encouraged to think at a higher level so that they will be prepared for their future and moving toward "authentic knowledge opposed to 'choose the best answer' will help students prepare to be college and career ready" (Howard, 2016, p. 47). In a world where vast knowledge is easily accessible, the goal of education in the 21st century should be to encourage students to think deeply and critically.

In developing a curriculum, the emphasis should be on teaching students how to process, use, and organize information because of the vast amount of information that exists in the modern world due to the internet; it would be impossible to memorize. The problems and issues that may arise in the real world in the future for students may be

unknown to teacher and curriculum developers now. According to Schwab (2013), "practical problems do not present themselves wearing their labels around their necks" (p. 616). The programmed curriculum cannot adequately prepare students for every issue they will encounter in their future life and career. "Problem situations, to use Dewey's old term for it, present themselves to consciousness, but the character of the problem, its formulation, does not" (Schwab, 2013, p. 616). Rather than rote memorization, it is more beneficial to encourage students to develop higher-level thinking and problem-solving skills, so they can be prepared to overcome any problem they encounter. Learning is not merely about obtaining knowledge but "also about creating new knowledge collaboratively when addressing complex problems" (Iwamoto et al., 2016, p. 25). Zhbanova et al. (2010) advocated for an integrated curriculum rather than a traditional curriculum towards this end: the integrated approach proved to develop real world skills such as teamwork, planning, organizing, and sorting. Problem solving builds on constructivism; in that, it is integrative and experiential. PBL goes deeper because it incorporates students' intellectual and emotional intelligences to engage them in real-life scenarios to prepare them for their future (Iwamoto et al., 2016).

Problem-Based Learning (PBL)

Reasoning and question techniques can be traced back to the Greek philosophers, the realism of Aristotle, and the phenomenological connection of Kant by organizing and constructing knowledge through one's own experiences (Savin-Baden & Howell Major, 2004). Within the last century, however, beginning with the influence of John Dewey in the 1920s, there were influences of problem-solving teaching strategies in the business school at Harvard University. It differed from the modern, cyclical PBL method of today

because problem solving was not at the beginning of the learning process cycle (Servant & Schmidt, 2016). PBL "would not have transpired if the historical context of the 1960s had not supported radical innovation in education" (Servant & Schmidt, 2016, p. 701). Years later, PBL officially began in the field of medicine in the 1970s at McMaster University in Canada when medical instructors noticed that students learned more effectively in operating rooms through active, authentic problem solving compared to reading their medical textbooks (Delisle, 1997; Gallagher, 1997; Horak & Galluzzo, 2017; Lycke, 2002; Servant & Schmidt, 2016). Using observation and feedback, the instructors learned that asking good questions led to a doctor's success, because he or she would be prepared for unknown situations. Doctors in the field were more flexible in responding to situations rather than responding with learned, memorized facts (Gallagher, 1997). Once realized, the curriculum developed to include the premise that good doctors were also expert problem solvers.

According to Gallagher (1997), problem solving as a curriculum or mode of learning first developed with the following three tenants: (a) to be taught information in a way that they would remember it and apply it appropriately, (b) to learn to appreciate a good question as much as a good fact, and (c) to practice asking questions as a means of learning facts (p. 334). McMaster University realized that they needed to overhaul both the curriculum and the Instruction methods within the program; they decided to structure their courses around Jerome Bruner's educational philosophy of "discovery through problem solving" (Gallagher, 1997, p. 335). According to Lycke (2002), there was a shift in the last few decades where PBL focused on cognitive learning theory and reasoning skills. In 1985, Harvard medical school, inspired by McMaster, started a problem-based

curriculum called “New Pathway” (Servant & Schmidt, 2016). In more recent years, PBL seems to focus more on collaborative learning rather than on individual learning (Lyche, 2016).

Belland et al. (2015) explored the social interactions among middle school students to develop arguments and to support other group members through scaffolding supports. In this mixed methods study, the PBL groups of middle schoolers worked through the PBL process of defining “an ill structured problem, determine and find needed information, develop a solution, and justify the solution with evidence” (Belland et al., 2015, p. 326). Consistent with the PBL model designed by Hmelo-Silver (2004), students directed their own learning and teachers acted as facilitators. Part of effective teacher facilitation is to provide support through scaffolding to create an equitable environment for all students. Belland et al. (2015) also created authentic, experiential problem scenarios for student groups to address. The teacher included 67 students and divided them up into groups of three to four members. The group members proceeded through five stages of building their argument while using the scaffolds. The teacher used the following data collection instruments to collect data: pre and posttests, group argument quality rating, videotaped interactions, prompted interviews, student responses to scaffold prompts, log data, prior scores, and socio-economic data determined from free and reduced lunch status (Belland et al., 2015). Belland et al. (2015) found that students used the three types of scaffolding supports (computer-based, teacher, and group members) in different ways, but lower-achieving students found the most useful and helpful support was computer-based scaffolding. To ensure equity in the classroom, it is

important to provide support in the PBL process to struggling learners so that all students are equitable participants.

PBL across the curriculum fosters unity and inclusion while teachers and students collaborate to uncover solutions to community problems. According to Anna Carpenter (2013), those solutions can affect social change. Carpenter (2013) argued that PBL practices carry a significant social equity component in that an outcome of practicing problem-solving is also to seek solutions to community problems and social equity issues that exist in society. It is beneficial to the pedagogical process to include the social equity aspect of problem solving because it helps incorporate collaborative learning that fosters inclusivity within the group dynamic so that each student is included and even a passive, non-participatory student can "explain what has been done" (Quebec Fuentes, 2013, p. 94). Consequently, PBL provides an avenue to increase equity inside the classroom and foster productive school and community relations outside the classroom.

Constructivism

The constructivist theory of building on prior knowledge to obtain new knowledge (Henson, 2010) is the foundation of this PBL process. The integrated, progressive curriculum of PBL is one that challenges all students equitably and integrates more than one academic discipline during instruction, thus combining and building on prior knowledge simultaneously. An ideal teaching method is one that is both progressive and integrated, encompassing and utilizing the prior knowledge of the students and building on that foundational knowledge.

This constructivist perspective of building on curriculum integration and problem solving is applicable in civics education. Pagnotti and Russell (2015) explore using PBL

in civics education. “Firmly rooted in the theoretical framework of Constructivism, PBL requires students to construct their own perspectives and meaning from problem solving based in context” (Pagnotti & Russell, 2015, p. 282). The purpose of Pagnotti and Russell’s (2015) qualitative study was to explore the experience of using PBL as opposed to memorization in a middle school civics classroom. The participants were middle school students in an average-sized Georgia school where half of the school population were students of color. There was a rich make-up of both disadvantaged and gifted students. The methodology primarily included observations from the interactions within the student groups and with the teacher as facilitator; data was also collected from the student artifacts from the PBL process and teacher reflection. Pagnotti and Russell (2015) found that middle school students in a civics context need a teaching method in which they see relevance and authenticity to motivate them to learn. Using PBL in a middle school civics classroom gives students an engaging tool to link complex, higher-order thinking skills to a fun, relatable methodology to teach students about government in a practical way (Pagnotti & Russell, 2015).

Middle School Pedagogy

Every student can learn, and organizational and curriculum changes should be made to create an optimal educational environment (Deal & Peterson, 1999) that motivates active, experiential learning through problem solving techniques (Ellerton, 2013) that are “child-centered” (Null, 2011, p. 79). The “father of the middle school, William Alexander” advocated for a “flexible” and “exploratory” curriculum that included questioning techniques and active learning but also sought to meet middle school students’ unique social and emotional needs (Brown & Knowles, 2014, p.

76-77). The intervention chosen in this study, PBL, met all those needs because of its flexibility to serve as "an inquiry process that resolves questions, curiosities, doubts, and uncertainties about complex phenomena in life" (Barell, 2007, p. 3). Not only does a PBL intervention appeal to middle school learners because of its flexibility, but also because of its facilitation of group learning and socialization, which middle schoolers crave (Brown & Knowles, 2014; Hmelo-Silver, 2004). Specifically, David Sousa (2009) advocated for a "problem-solving approach" as an instructional strategy for learners who need real world activities to produce engagement (p. 126). Developing problem-solving skills helps middle school students learn more about themselves. "During this process, in which the cognitive, affective, and behavioral capacities of intelligence should be managed effectively, problem-solving skills will help the individual to understand himself/herself and others and allow him/her to coexist in harmony with others" (Saygili, 2014, p. 55). Middle school students are beginning to think about their futures as adults and are learning to relate to others. "Educators…must focus on ensuring learning opportunities that are appropriately challenging and meaningful for students, thereby promoting a sense of value and motivation in the learning environment" (Little, 2012, p. 702). The idea of citizenship may feel like a future aspiration, but it is important for civics teachers to help middle school students connect to the world around them and to help them discover ways to be good citizens and benefit their community.

Effective teachers go the extra mile to reach out to every student and try new teaching methods and strategies (Ritter & Jensen, 2010, p. 6). Effective educators value collaboration among students (Brubaker, 2004). The curriculum should be a creative

outlet for students to explore their awe and wonder of the world (Brubaker, 2004). Brown and Knowles (2014) noted that wise teachers include opportunities for social development in the curriculum. Lambros (2002) presented specific collaborative learning strategies for teachers and students as problem-based learning techniques are used in middle school classrooms as follows: (a) a PBL problem can be given at any time throughout a curriculum unit, (b) a PBL problem can vary in length, (c) PBL problems should be focused so that specific learning objectives can be achieved, (d) "seventh and eighth-grade students are attracted to PBL problems that give them the opportunity to demonstrate how they would handle a problem independent of adult decision makers," (e) student-driven independent research from a variety of sources should be included in PBL process, (f) students can teach other students during the PBL process, and (g) PBL can include service-learning projects as well as the discussion of current events and ethical issues at the seventh-and eighth-grade level (pp. 55-56). PBL is an ideal curriculum framework for middle school learners because it is active, flexible, and collaborative.

Social Studies Pedagogy

After about eight years of teaching social studies at the upper secondary level, the teacher-researcher made the transition to teaching middle school civics. As an insider and a daily classroom teacher, she noticed the lack of critical thinking skills among middle-schoolers. Quebec Fuentes (2013) presented the idea that teacher-researchers should "make the familiar seem strange" when conducting action research (p. 98). For this reason, the teacher-researcher became more purposely aware of her students' needs in her social studies classroom. At first her focus was to increase engagement through the

curriculum, but after time spent in self-reflection and after years working with middle schoolers at different schools, she began to realize that, more specifically, her students lacked problem-solving skills.

This PBL approach seemed to counteract the two main problems that she had observed among her middle school students, which are student apathy and the lack of critical thinking and problem-solving skills. She observed that most of her students wanted her to do many tasks for them; whether it was fixing a jammed stapler or finding the answer to a question in a primary source text, there was a lack of effort as well as a dependency on the teacher. If she urged them to begin the task, they became frustrated and did not seem to know where to start or how to proceed when they encountered obstacles. As she was reading Quebec Fuentes' (2013) study, the teacher-researcher shared in Quebec Fuentes' frustration when she stated that "the students clearly were not able to attempt the task without my assistance" (p. 93). Therefore, the teacher-researcher concluded that it would be beneficial for her to go beyond increasing engagement; she should purposely teach them problem-solving steps. She began to research PBL and its pedagogical process, and she discovered Hmelo-Silver's (2004) PBL steps, which simplified the scientific process so that it could be applied to any subject area. One of the advantages of PBL is that it is so inclusive; it is naturally integrative, including many subject areas.

In the study "'We want to learn:' Middle school Latino/a students discuss social studies curriculum and pedagogy," Busey and Russell (2016) studied the perceptions of Latino/a students in a social studies class. They performed semi-structured interviews of 12 Latino/a students to understand their experiences and perceptions of the learning

environment. The qualitative study relied on narratives and interviews that included a phenomenological approach. Busey and Russell (2016) uncovered three themes, which were "Banking concept, Lack of Cultural Diversity in the Curriculum, and the Need for Current and Global Perspectives" (p. 8). Banking concept is Paulo Freire's term for meaningless memorization in which students merely deposit facts in their brains rather than connect to learning in meaningful ways; banking concept does not rely on constructivism or CRT practices. Middle school Latino/a students found this teaching method "boring" and viewed social studies as having little value; they desired active and collaborative learning. These 12 middle school Latino/a students also noted the Eurocentric nature of the social studies curriculum; they wanted more Latin American history incorporated into the curriculum as well as pluralism in general. The final theme that Busey and Russell (2016) uncovered from the middle school Latino/a students' perceptions of their social studies class was the lack of globalism and multicultural learning. These students of color wanted to learn about the history of other countries, not just Europe; they also wanted to study global, current events and the global historicity of major American events (Busey and Russell, 2016). Social studies education should include CRT methods to meet the needs of middle school students of color in a social studies classroom; these methods should include student-centered teaching and curriculum grounded in cultural context (Ladson-Billings, 2009).

Equity in social studies education has evolved a long way from the Eurocentric model of past social studies and history classes; however, there is still progress that is necessary to make. Part of ensuring equity in social studies education is understanding the feelings and thoughts of students of color in a social studies classroom. Their

perspectives should be valued, and their voices must be included. Building on constructivism by using PBL is a way to provide equity in a social studies classroom because it gives African American and Latino middle school students a voice in the classroom. An inherent goal of PBL for it to be successful is a diversity of thoughts and perspectives; therefore, implementing PBL naturally encourages a more inclusive classroom, which also increases engagement.

Theoretical Framework

Middle school students need a specific curriculum plan that is engaging, integrated, and distinctive to facilitate active, collaborative, and self-directed learning. Constructing knowledge incorporates building on previous knowledge toward action that is nurtured by curiosity (Bevevino et al., 1999). Problem-solving as an instructional practice helps students "develop critical thinking, decision making, creativity, and other deeper learning outcomes" (Bishop & Harrison, 2021, p. 48). An instructional intervention was needed to effectively combine all of these outcomes to teach citizenship in a middle school civics classroom that incorporates meaningful experiences, problem-solving, and making connections to one's community.

Learner Centered Ideology

A successful curriculum should be student-centered; in that, students are given choices about the means and methods that are used to master the standards. Moreover, real-world applications should also be encouraged and included in order to guide students to prepare for their chosen career path. The learner-centered ideology focuses on the desires, needs, and interests of students. The student is the focus rather than institutions, the teachers, the principals, school subjects, parents, and society (Schiro, 2013, p. 105).

Children learn through experience and activity. The goal is not rigor but the natural development of the student. Students are viewed as individuals rather than as a classroom unit. The learner centered ideology views students as naturally good individuals who are curious and desire to interact with their world (Schiro, 2013). This ideology combined with constructivism is the foundational perspective of PBL.

All the elements of this PBL study, including the fact that it is an action research study, were grounded in the learner centered curriculum ideology. These elements of constructivism, CRT practices, effective middle school pedagogy, and PBL are all based in the learner-centered concepts of active, authentic learning where students "confront the real world" and students' needs are paramount (Schiro, 2013, p. 106). This learner-centered ideology is the foundation of PBL in a civics classroom where personal involvement is a key characteristic, and students learn with their whole self (i.e., their mind and their heart). Working together to solve authentic problems related to citizenship helps students connect with potential problems in their community, thus fostering empathy (Schiro, 2013). Through private online surveys at the end of each PBL cycle, students had an opportunity to convey their thoughts about PBL as an instructional method to help them understand their community's needs and the social inequities that occur around them. The study also included a phenomenological approach; in that, the teacher-researcher asked open-response questions to accurately uncover the students' experiences in the PBL process. A phenomenological approach "focuses on the experiences of participants and the meaning they make of that experience" (Seidman, 2013, p. 16). Therefore, the questions asked by the teacher-researcher to the students focused on their perceived experiences through each PBL cycle and if they built

meaningful empathy for the people in their community as they discussed the authentic scenarios.

Embracing a learner centered ideology should compel educators to make curriculum modifications to meet their individual students' needs; however, some educators are not fully aware of the unique learning needs of middle school students specifically (Brown & Knowles, 2007). "Educators…must focus on ensuring learning opportunities that are appropriately challenging and meaningful for students, thereby promoting a sense of value and motivation in the learning environment" (Little, 2012, p. 702). We as teachers must meet their unique needs by collaborating with others and building an engaging curriculum to bring them towards success. Overall, it is useful to explore the benefits of PBL because it can increase engagement, connect learning to the real world, encourage high-level thinking, promote self-directed learning, and foster understanding and reflection (Torp & Sage, 1998). The active, authentic learning of PBL naturally lends itself to constructivism; in that, students simultaneously "develop strategies and construct knowledge" (Hmelo-Silver, 2004, p. 236). The real-world strategies engage middle school learners and encourage their interests and buy-in while building on previous content knowledge. Using PBL to combine knowledge and application is an ideal way to promote learning among middle school students because it both fosters engagement and is challenging. In an age of popular strategies to foster engagement and increase comprehension through active learning, PBL supports those goals in middle school classrooms because PBL proactively engages learners and builds on previous knowledge through practical application.

Integrative Curriculum

Integration "is the view through an opera glass, providing a close-up of the details, subtleties, and interconnections within one discipline" (Fogarty, 1991, p. 61). For motivation to increase, students must see the connections among the disciplines through real-world applications. "The rationale for implementation of an integrated curriculum is to show how knowledge across disciplines is interrelated in a natural world" (Harrell, 2010, p. 146). To integrate curriculum effectively, one must define "integration;" it is simply defined as the equal incorporation of more than one academic discipline during instruction (Harrell, 2010, pp. 147-148).

Integrating curriculum is outlined in three distinct ways. First, accepting a constructivist philosophy is necessary to incorporate an integrated curriculum because new knowledge must be connected to previous knowledge if the internalization and utilization of learning is to take place (Zhbanova et al., 2010, p. 251). A student must experience knowledge to successfully engage in classroom learning, and that knowledge is more meaningful if it is combined across disciplines. Second, as students enter the workplace, they must learn how to apply knowledge to real life situations. Third, learned information from a variety of sources must be successfully synthesized if it is to be effectively applied to problems. Because society functions through the ability to use and apply integrated knowledge in various situations, it is important for students to utilize this practice in school (Zhbanova et al., 2010). "The pressures of an ever-increasing, crowded curriculum can be relieved by integrating learning experiences in an in-depth, holistic way, providing students with skills to generalize from one situation and apply that principle to another" (Zhbanova et al., 2010, p. 251). Even with the obvious benefits of

integrating a curriculum across disciplines, many teachers are resistant to this change. This resistance to curriculum integration is often because they see themselves as specific subject-area teachers (Zhbanova et al., 2010, p. 253). Despite these obstacles, teachers should still adopt an integrated curriculum because it "supports meaningful learning, …encourages student motivation, …is a more complex instructional arrangement, and…requires less behavior management than traditional curriculum" (Zhbanova et al., 2010, pp. 256-257). Through the brainstorming process, a naturally integrated teaching technique emerges through constructivism as students collectively draw from their knowledge in many areas to solve the problem.

All integrated curricula must assess the student as "an organic whole and engage the individual in focused learning experiences" (Harrell, 2010, p. 146). Educators should view their students as whole, complex individuals who possess unique talents and abilities. Teachers should combine their resources and brainstorm ideas to move every student toward success. This process can begin by integrating the curriculum, which is the "sifting related ideas out of subject matter content; the integration sprouts from within the various disciplines, and teachers make matches among them as commonalities emerge" (Fogarty, 1991, p. 64). PBL is naturally an integrated method; in that, students brainstorm solutions to the problems presented in the authentic scenarios. Students must access their background knowledge among all disciplines to present solutions; therefore, PBL is the solution to easily incorporate an integrated curriculum in any classroom.

Constructivist Theory and Other PBL Complementary Theories

Incorporating PBL strategies creates a rich learning environment, which would align with the philosophy of the constructivist theory of "acquiring new information and

changing it into meaningful knowledge" (Henson, 2010). This PBL process is embedded in the teaching philosophy of Aristotle who, opposed to Socrates' conversational system, emphasized deliberation, which goes beyond communication and discourse; moreover, Aristotle's philosophy of deliberation focuses on coming to a "decision" (Null, 2011, p. 23). PBL is also consistent with cognitive development theory in which curiosity and patterning are emphasized (Sergiovanni, 1994) and is a type of pragmatic curriculum, which views "curriculum as a process of fixing problems" (Null, 2011, p. 117). Furthermore, PBL is a part of the existentialist curriculum in which William Heard Kilpatrick expanded on Dewey's premise of "child-centered" teaching (Null, 2011, pp. 78-79). PBL is a type of equitable curriculum philosophy that also corresponds to a democratic educational system in which all people can learn, regardless of race, gender, and socio-economic factors (Null, 2011). Furthermore, Henson (2010) pointed out that the belief that "all students can and will learn" aligns the philosophies of both constructivism and multiculturalism (p. 5). "All students" includes students of color, and equitable teaching practices should be incorporated in a PBL classroom. The classroom PBL process will benefit from diverse learners as the unique perspectives of students of color will enhance the learning of all students.

Each person's experiences have value and benefit the curriculum (Brubaker, 2004; Sergiovanni, 1994). The classroom and school environment should be student-centered. Ted Sizer, a proponent of the pragmatic curriculum, believed in meeting the needs of all students and a "personalized learning and curriculum" (Null, 2011, p. 123). Teachers should structure the curriculum to seek to reach every student; this means allowing for student choice and allowing the curriculum to be student-driven in the

curriculum when possible. Student interests should be built upon to encourage students to dig deeper, ask questions, and find the answers. Appealing to student interests and providing student choice are CRT practices. Darling-Hammond (1997) advocated for a student-centered environment that gives students the power in their education; her two principles are to teach for understanding and to teach for diversity. Students must be given freedom to learn and grow in a way that is productive for them, and this process varies by student personality, learning style, and preference. She makes an effective criticism of authoritarian, administrative bureaucracy in the field of education and outlines how it destroys innovation and creativity in the classroom. PBL is an avenue for student-centered learning, self-expression, and individuality, which thrives in a culturally responsive environment that fosters meaningful connections, innovative productivity, and cooperative learning where diversity is valued and viewed as an asset.

Education can be transformative; societal problems and social issues can and should have an impact on our curriculum (Brinegar, Harrison, & Hurd, 2019; Schiro, 2013). Dewey points out this premise when he discusses the idea of service in the curriculum. Furthermore, Dr. Gipson, past president of the Association for Supervision and Curriculum Development (ASCD), also noted its importance of whole child education as a necessary part of global education but also, students need to "be prepared to live and contribute to a worldwide community of shrinking size and growing complexity" (Trybus & Gibson, 2015, p. 7). According to McCloskey (2011), parents need more clear guidelines as to what schools mean when they talk about community involvement. Also, while parents want schools to master the basics, they also want schools to encourage student interests. Furthermore, parents want their children to be

competitive globally, be “independent thinkers and collaborative problem solvers,” and focus on educating the whole child (McCloskey, 2011, pp. 80-81). Contributing to society both locally and globally with a social equity lens is an important aspect of whole child education.

Learning should be flexible because it “helps draw attention and motivate these students in each of their specific interests” (Swan et al., 2015, p. 314). Allowing student control not only engages students in learning but allows them to work at their own pace while facilitating peer collaboration (Swan et al., 2015). Schools should not fall into the trap of seeking to motivate students with contracts and rewards (transactional leadership), but rather, building community involves mutual ethics and ethical unity (Sergiovanni, 1994). It is important that middle school students are challenged through a curriculum that is student-centered, limitless, and encourages problem solving. Implementing a curriculum method that promotes a positive school community encourages students to develop positive character traits and stresses the importance and value of becoming life-long learners by uncovering solutions to problems. School community is not something that naturally occurs; it must be purposely planned and implemented to develop. The community of mind involves the unity of goals and beliefs about the purpose of school and people. PBL is collaborative (Hmelo-Silver, 2004) and combined with the culturally responsive practice of co-teaching (Emdin, 2016) can empower students in a civics classroom as they help solve real-world problems through brainstorming around authentic scenarios. PBL fosters a love of community, which will evolve to increase civic engagement and community service as students mature and put into practice their problem-solving skills.

Conclusion

As education moves further into the 21st century, there is a continual need for educators to move further away from a one-size-fits-all education. However, merely differentiating instruction is not effective enough for middle school learners. To obtain buy-in from middle school students, they must see relevance to their experiences as they move toward adulthood. Furthermore, middle school students crave socialization in the learning environment, which can also be an effective motivator that makes learning more meaningful. "The 'school gang' becomes a viable alternative to the street gang" (Ladson-Billings, 2009). Effective whole-child instruction incorporates intellectual stimulation as well as social-emotional learning in a collaborative environment. CRT promotes a student's whole self-concept that values each student's diverse perspective. Consistent with whole-child instruction, CRT advocates that learning is more than mere cognitive development; "moral, social, cultural, personal, and political developments are also important" (Gay, 2018, p. 15).

Learner-centered constructivism is an ideal ideology for middle school students to facilitate active learning. Utilizing PBL as a learning intervention helps middle school students engage in meaningful, authentic learning as they work together to solve societal problem scenarios. Constructivism is the foundation for active learning–- facilitated by the collaborative PBL process. Students question, discuss, research, and reflect as they systematically move through the PBL cyclical process. Likewise, critical teacher reflection promotes and grows CRT practices, which are also vital attributes throughout action research and the PBL process. PBL, founded on Constructivism, incorporates the CRT philosophy is that "students are allowed (and encouraged) to build upon their own

experiences, knowledge, and skills to move into more difficult knowledge and skills" (Ladson-Billings, 2009). Implementing CRT practices, especially in a middle school civics classroom, empowers students of color to bring their unique experiences into the conversation during PBL small group collaboration. Middle school pedagogy must break away from narrow, lecture-based, rote memorization elements as instructional methods. This combination of PBL, CRT, constructivism, and collaboration are foundational to effective middle school pedagogy. Students are motivated by active, integrated, and collaborative activities; student-empowered learning must be the focus to engage learners in a middle school context (Brown & Knowles, 2014).

CHAPTER 3

RESEARCH DESIGN

Middle school students have unique needs and are often disengaged in the classroom through the mindless memorization of facts through drills, lectures, and note-taking instructional practices (Brown & Knowles, 2014). The teacher-researcher implemented an instructional intervention method that was flexible and engaging and easily able to be incorporated in a civics classroom. Furthermore, her intervention incorporated tenets of culturally responsive teaching (CRT) practices and the recommended elements of effective middle school pedagogy from the Association of Middle Level Education (AMLE); in that, an effective middle school curriculum should be "responsive, challenging, empowering, equitable, and engaging" (Bishop & Harrison, 2021, p. 16-17).

Problem-based learning (PBL) is a way to utilize all these principles in an instructional intervention; furthermore, due to the problem-solving nature of PBL, it can be effectively incorporated into a civics curriculum. The purpose of this study was to evaluate the benefits of using PBL as an instructional method among middle school students in a civics classroom as well as identify the ways in which PBL can connect students to their communities and build empathy towards the social inequities around them by providing practical solutions for those in need.

Research questions for this study were the following:

RQ 1: What are the effects of using problem-based learning as an instructional method in a middle school civics classroom?

RQ 2: How does using problem-based learning to solve authentic, citizenship scenarios help middle school students make connections to their community?

Context and Researcher Positionality

PBL is a way for students to learn content and implement "thinking skills" simultaneously (Hmelo-Silver, 2004, p. 235). It also helps develop "flexible knowledge, effective problem-solving skills, self-directed learning skills, effective collaboration skills, and intrinsic motivation" (Hmelo-Silver, 2004, p. 235). PBL is focused more on working together to solve a problem that has no predetermined or "correct" answer, which is the ill-structured problem. PBL is a "learning by doing" curriculum model to help students retain the knowledge that they have learned by applying it in a real-life scenario (Hmelo-Silver, 2004). In PBL, the teacher's role is not to provide direct instruction, but rather facilitate students working together in a collaborative, self-directed manner to solve problems through group discussion, research, and reflection (Hmelo-Silver, 2004). PBL is grounded in constructivism that builds on the previous knowledge of the learner and facilitates growth by challenging every student regardless of his or her learning exceptionalities.

PBL facilitates an optimal educational environment (Deal & Peterson, 1999) that motivates active learning through problem solving techniques (Ellerton, 2013) that are "child-centered" (Null, 2011, p. 79). The PBL intervention is ideal to use as an

instructional method to meet the unique curriculum needs of middle school students. Middle school students need to build on their prior learning in elementary school but many of them are not ready for the focus that is necessary in lecture-style learning (Brown & Knowles, 2014). Furthermore, PBL is uniquely able to be an instructional method in a civics classroom because the civics standards can be used as a foundation to teach middle school students about the need for social equity in underserved populations in the United States. Students can explore meaningful citizenship experiences through the authentic practice of solving real world problems pertaining to American citizenship.

Creating meaningful, relevant learning opportunities is a common problem for teachers of middle school students. PBL solves that problem by guiding students step-by-step as they explore solutions to thought-provoking authentic scenarios. Exploring these engaging, authentic scenarios helps develop the intrinsic motivation of the students, which is a goal of PBL (Hmelo-Silver, 2004). "Intrinsic motivation occurs when learners work on a task motivated by their own interests, challenges, or sense of satisfaction" (Hmelo-Silver, 2004, p. 241). PBL provides an easy avenue for student choice within a self-directed, collaborative learning context.

PBL is a way to connect effective middle school pedagogy to a learner-centered ideology. Therefore, the theoretical framework for this study involved PBL grounded in middle school pedagogy and constructivist theory and enhanced by incorporating integrated learning and culturally responsive teaching practices. This framework was selected as the chosen intervention in a middle school civics classroom because of these engaging and transformative characteristics. The learner-centered ideology is the

philosophy that undergirds PBL in a middle school context but culturally responsive teaching practices, such as valuing diversity and cultural differences in learning and building "bridges of meaningful between home and school experiences," are also major tenets of this study (Gay, 2018, p. 37). The design and implementation of this action research study was designed and shaped by these influences.

Research Design and Intervention

Both PBL and action research seek to solve a problem: "action research is concerned with an agenda for social change that embodies the belief of pooling knowledge to define a problem in order for it to be resolved" (MacDonald, 2012, p. 36). A goal of the teacher-researcher was that the PBL strategies that she employed will help her students develop their problem-solving skills to increase engagement in collaborative PBL classroom tasks through teamwork and deepen their understanding of the civics citizenship standards by connecting them to authentic, real-world problem-solving scenarios (Delisle, 1997; Gallagher, 1997; Hmelo-Silver, 2004; Null, 2011). While other instructional models may seek to also foster engagement in the classroom, one reason that PBL was chosen was because of its holistic nature; in that, it engages the whole child and is student-centered. The child's learning style is incorporated; furthermore, the social and emotional needs of students are included in the collaborative learning process because enhancing affective skills is an essential part of PBL (Brown & Knowles, 2014). PBL was chosen because it can be used as a learning method to connect students in a civics classroom to authentic problem-solving opportunities related to citizenship, which will provide an avenue for students to connect to their local community and recognize social

inequities in the world around them (Delisle, 1997). PBL is a way to incorporate the CRT practices of active learning, coteaching, and giving students of color opportunities to communicate their unique experiences to their white classmates (Emdin, 2016). Finally, PBL was chosen among other curriculum models because of its flexible nature and emphasis on active learning (Delisle, 1997) which distinctively engages middle school students to enhance their learning and provide meaning within their learning experiences (Brown & Knowles, 2014).

The teacher-researcher employed a mixed methods study to identify effective ways of using PBL as an inquiry model in a rural middle school in Florida to increase collaborative engagement and civics content knowledge related to American citizenship within the Florida Social Studies Next Generation Sunshine State Standards. She explored what supports and scaffoldings were needed for middle school students to be able to carry out PBL independently through a three-cycle process prior to a final, summative assessment. She also examined the community connections that can be made and the empathy that can develop as middle school students learn about active citizenship.

The teacher-researcher used both qualitative and quantitative methodologies to assess the level of collaborative engagement and learning that occurred by implementing PBL as a learning model in a middle school civics classroom. She also identified the respondents' feelings through self-reflection after performing selected PBL tasks related to American citizenship. The quality criteria that applied to this mixed methods action research study was first, content-validity (Fraenkel et al., 2015). This study measured

what it was supposed to be measuring; in that, the final culminating assessment was independent PBL, which was modelled by the teacher and practiced throughout the study with decreasing levels of supports. Student respondents researched unknown, background supporting information needed to find the best solution to the proposed problem. They also planned, organized, and sorted the information they found through internet research on the paper packet provided to them by the teacher-researcher. At the end of each PBL cycle, the groups produced a real world, final assessment that incorporated professional skills and related to each PBL scenario; these final abstractions at the end of each PBL cycle included designing a chart (timeline), writing a speech, writing a legal brief (letter), and writing a blog/newspaper article.

The teacher-researcher performed a valid mixed methods study and ensured that mixing (both qualitative and quantitative) occurred at all phases of the study (Creamer, 2018). In this convergent parallel design study, she collected both qualitative and quantitative data simultaneously (Merriam & Tisdell, 2016). For example, in a survey given to the students after they performed a PBL task, she asked them both Likert-scale questions and open-response questions. She analyzed data through a transcendental phenomenological approach, which views respondent experiences through a non-judgmental lens; "it is useful to use when the researcher has identified a phenomenon to understand and has individuals who can provide a description of what they have experienced" (Moerrer-Urdahl & Creswell, 2004, p. 23). She examined this data to reveal her students' thoughts and feelings as they proceeded through the PBL process.

Participants

The study was carried out among about 17 eighth grade students enrolled in a required, daily, 58-minute civics course in a rural, public middle school in northeast Florida. The middle school population is made up of 16% of students of color, and 80% of the student population is considered economically disadvantaged by the Florida Department of Education. Even though the teacher-researcher could have included all of her 100 students in her study, it was not necessary because Efron and Ravid (2013) noted that action research does allow for a smaller sample as a type of convenience sample for practical reasons. In action research the focus is on getting usable data (Efron & Ravid, 2013). The civics class population was a mixture of girls and boys, including students who were gifted as well as some students with various learning disabilities. This representative sample of her classes and school population will be useful if her cyclical research reveals a connection between a certain subpopulation of students and PBL.

Because some students were absent on some of the PBL days and other students chose not to participate in some aspects of PBL, the sample was a volunteer sample with elements of a purposeful sample to include a diverse population of students. She collected a sub-sample of the larger sample; she selected one of her five class periods that she teaches each day. She chose to include a variety of students from various backgrounds and achievement levels to measure the effectiveness of PBL among special populations such as race and gender as well as students with exceptionalities (IEP/504/gifted). The third period class was selected because it was an accurate, representative sample of the student population at her school, and it is the most diverse group of students compared to

the other class periods. In the third period class, there are 17 students: 7 girls and 10 boys, 5 students of color, 11 white students, 4 students with IEPs, and 2 students who are classified as gifted. A unique component of action research is that the study of the teacher-researcher is from "the researcher's own setting"; this usually includes his or her own school and classroom (Efron & Ravid, 2013, p. 65).

The teacher-researcher was also a participant in her own study. The way she responds and reflects as well as the changes she made after each of the rounds of PBL greatly affected the quality of the data and the direction of the research. The concepts that were learned from reflection throughout the process and the students connecting with PBL were based in the flexible nature of action research (Herr & Anderson, 2015). As an insider, the teacher-researcher should understand that although he or she is in the same classroom environment continuously, there are still new ideas and strategies that reveal themselves as he or she analyzes the data. Researchers must be, "open to unexpected outcomes that emerge from engaging in practitioner action research" (Quebec Fuentes, 2013, p. 98). Action research that is grounded in constructivist theory lends itself to self-reflection and collaboration (Butterfield, 2009). Both the teacher-researcher and students reflected on the learning that occurred while they worked together to enhance the PBL learning process. Both self-reflection and collaboration are key attributes of action research and PBL, which makes action research the preferred research method when investigating PBL as an intervention in a middle school civics classroom.

Intervention

This study was focused on teaching one Florida civics standard through PBL in one social studies class. After the teacher spent one week evaluating each of the civics standards for its feasibility to be used in PBL, she settled on the topic of citizenship because the practical connection that could be made to the students' community. The chosen standard was Florida Civics Standard SS.7.C.2: "Evaluate the roles, rights, and responsibilities of United States citizens, and determine methods of active participation in society, government, and the political system" (cpalms.org, 2014). The teacher-researcher also chose this citizenship standard because of the wide range of citizenship topics that could be discussed as well as the meaningful nature of the scenarios that were designed to have an emotional impact on the students. The teacher-researcher then spent the next three weeks designing the PBL authentic scenarios that relate to different aspects of American citizenship. She purposely included meaningful topics that would spark the students' interest because they may hear about them happening in their community or watch these incidents on the nightly news. These engaging topics included a war veteran struggling with PTSD, an immigrant proceeding through the naturalization process, a person of color facing racial injustice, and a governor ignoring the constitutional mandate of trial by jury. During these three weeks, she also created the student mixed methods surveys in which they responded to questions about PBL as an instructional method.

After preparing for these four weeks, the teacher-researcher instructed the students to answer pre-PBL survey questions containing both closed-response and open-response questions. On this first day of implementing the PBL process, she sought to set

the foundation by obtaining data establishing each student's civics content knowledge, class engagement, and learning preferences. A pretest like this is a valuable tool to an action researcher whose study is grounded in constructivism because it makes the teacher-researcher aware of the starting point of learning. At the end of the first day, the teacher-researcher reflected on what she was looking for, what she was trying to do, and how to best implement PBL in a middle school civics classroom. A distinguishable attribute of an effective action researcher is the ability to reflect (Herr & Anderson, 2015), so after each time PBL was employed, she reflected on what occurred and adjusted accordingly after each round.

On the next day, she also learned what supports and scaffolds her middle school students needed to effectively engage in PBL as a learning method as she observed the students while she modeled working through the PBL cycle with an American citizenship-based problem. Even during the PBL modeling cycle, she was purposeful in implementing the CRT practices of coteaching and connecting content to context. Emdin (2016) noted that when the teacher connects the content to the context, the students will become engaged and begin asking questions, which is an expectation of PBL. "They begin to ask why and how things are happening and begin drawing connections between the content and other abstract concepts that the teacher may not have previously thought of" (Emdin, 2016, pp. 145-146). Students producing new ideas, even ideas that are new to the teacher, is consistent with PBL's ill-structured problem; in that, there is not one correct answer, but students are empowered in their own learning; the goal is for the teacher to be a co-teacher in the classroom, which is also a CRT method (Emdin, 2016;

Hmelo-Silver, 2004). Coteaching to a practical way to value all students; Howard (2015) pointed out how teachers should value the "cultural capital" that students of color bring to the classroom (p. 197). This idea is consistent with the basic idea of valuing diversity. Differences in the "dominant language, literacy, and culture" should not be viewed an obstacle to be overcome, but if diversity is included, it adds value and enhances the curriculum (Paris, 1993, p. 93).

Before the independent, small group PBL cycles began, the teacher-researcher showed the students a brief video about PBL that described it and distinguished it from project-based learning. She modeled the PBL process based on Hmelo-Silver's "ill-structured problem" (2004, p. 237), which is a PBL process that is flexible so it can be used in a variety of contexts. (See Figure 3.1).

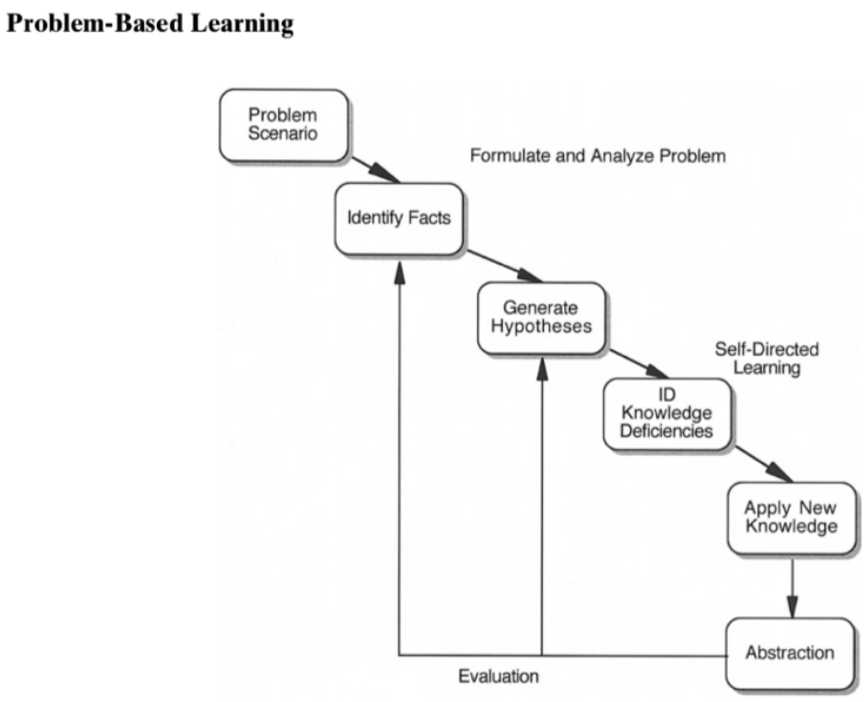

Figure 3.1 The Problem-Based Learning Cycle

Grounded primarily in constructivist theory, the cyclical nature of action research supports the similar process of problem-based inquiry (Efron & Ravid, 2013; Hmelo-Silver, 2004). In this mixed method, action research study, this cyclical research process consisted of independent, small group rounds that were spread out across eight school days with a few break days scattered in-between. Each round followed the pattern where both qualitative and quantitative data were collected. After the teacher-researcher modeled PBL for the students, they performed PBL in small groups of three or four students and answered teacher-selected, civics standard-focused questions in each round. The PBL authentic scenarios were used to teach the Florida Civics Standard 2: "Evaluate the roles, rights, and responsibilities of United States citizens, and determine methods of active participation in society, government, and the political system" (http://www.cpalms.org/PreviewIdea/Preview/807, first paragraph). At the end of the study, the teacher-researcher spent a few days reflecting on the PBL study and what changes and improvements could be made going forward.

Table 3.1 Pre-PBL Data Collection Steps of a Mixed Methods Study

Pre-PBL Teacher Reflection (in teacher notebook)	Pre-PBL Student Survey/Questionnaire (Google form sent to students through google classroom.)

Teacher reflection · What am I trying to do? · What am I looking for? · Which scaffolds will be most helpful to students?	1.After watching the video explanation of PBL, what questions do you have? 2. After Mrs. Rowland's PBL example, what questions do you have? 3. Do you think that solving problems is an important real-life skill? Not important 1 2 3 4 5 Very important 4. How would you rate your problem-solving abilities in your life? (’'m not just talking about math.) Very low 1 2 3 4 5 Very high 5. To what extent can being a good problem-solver help you be a better citizen? *Problem-Solving has no effect on being a better citizen.* 1 2 3 4 5 *Problem-solving skills helps you become a better citizen.* 6. What do you know about Citizenship and how someone becomes a citizen (the naturalization process)? (Please write everything you know.)

Part One: Model

The teacher modeled PBL for the students during whole group instruction with student participation. The scenario was outlined as follows:

> Amy Brown is a Gulf War veteran who suffers from PTSD. She lives in your county and does not receive trash collection because she lives outside the city. Taking her trash to the local dump triggers her PTSD. Help her find a solution to her problem. Question prompt to connect prior knowledge to citizenship: Which government and non-governmental organizations may be able to help her and how?

Part Two: Implementation

After the initial whole-class, model cycle of PBL, the three rounds of PBL implementation commenced among groups of two, three, or four students.

Procedures

In the paragraphs that follow, the teacher-researcher describes in detail the steps through which both the students and the teacher-researcher progressed. Students followed Hmelo-Silver's (2004) cyclical process in Figure 3.1 as they completed the PBL packets in small groups. The teacher-researcher observed the students and took notes in her reflection journal as they worked through the cyclical action research process (Herr and Anderson, 2016). After each daily PBL cycle, she encouraged them to reflect on the process and how it helped them understand citizenship by asking them to respond to questions on a google form.

Pre-Intervention PBL Overview Video and Survey

Students watched a short video showing PBL in action in a classroom. In the video, other teachers talked about why they believed that PBL is an effective instructional method. We discussed the video and the practical nature of PBL as a learning tool and the concept of the ill-structured problem (Hmelo-Silver, 2004). Students were encouraged to answer questions on a survey as they anticipate how they will engage in the PBL process and how it might help them better understand what it means to be a good citizen. The Pre-PBL Student Survey Google form sent to students through Google classroom was important as the students began the self-reflection process. Not only it is important they accessed prior knowledge of what it means to be a good citizen, but also how they learn and how they relate to the world and people around them. Another purpose of the pre-PBL student survey was to build community empathy, which connect to social equity issues. After the students completed the Pre-PBL Student Survey Google form, the video showed the students PBL in action. That modeling helped them be more comfortable with the process. After viewing the video, students followed Hmelo-Silver's (2004) cyclical process in Figure 3.1. The cycle was visible to students on the paper packets that they received to guide them through the PBL cycle. The teacher-researcher led the students through the first scenario as whole group instruction as a class. All the authentic scenarios were written on each packet for the small student groups to discuss. Each authentic scenario was carefully written by the teacher-researcher to illustrate the Florida standard on citizenship in practical ways and to facilitate community empathy. Fictional

people of color were included to provide examples of social inequities that do exist in America and could exist in the students' own community.

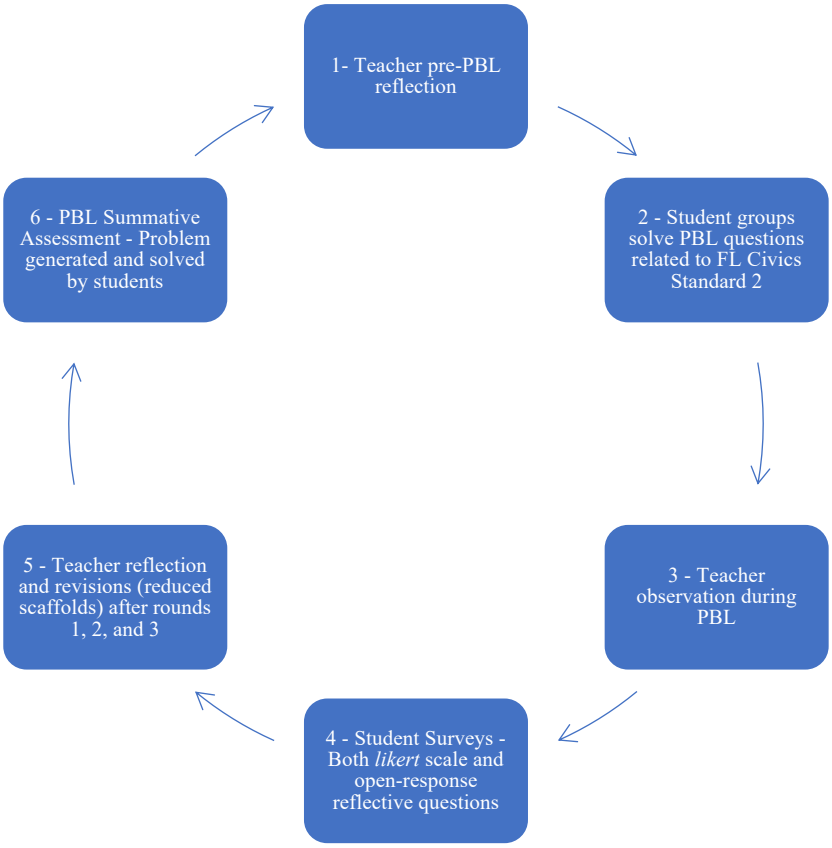

Figure 3.2 The Three Rounds of PBL

Action Research: Cycle One–- Authentic Problem Scenario #1

> Rosa Santos from Brazil has lived in the U.S. for six years and wants to become an American citizen. She works at a hotel and speaks very little English. She doesn't own a car but relies on public transportation to get from home to work. Help her become an American citizen.

Action Research: Cycle Two–- Authentic Problem Scenario #2

Regina Smith is an African American chef. While driving home from her restaurant, she was pulled over and detained by a police officer without cause (for no reason). It was later revealed that because she was a woman of color, the officer searched her car without her permission and found a small handgun. Even though she insisted that she had a gun permit, the officer arrested her on the spot and would not let her speak. He did not remind her of her rights, and it was not explained to her why she was being arrested. She was held in jail for months; she was not told what her crime was. When she finally stood before a judge, he told her that she could go home, but he informed her that her fine was two million dollars. How should she defend herself so that she can go free? As a U.S. citizen, which specific rights are being violated?

Action Research: Cycle Three–- Authentic Problem Scenario #3

The governor is proposing a law to help the state save money. He thinks that trials by jury are not necessary and are too expensive because the state must pay the jury members to report to jury duty and serve on a jury if selected. You are a constitutional lawyer hired by the PAC (Political Action Committee), "Americans for Freedom," to write a legal brief in the form of a letter to inform the governor of his mistake and that it violates the U.S. Constitution and previous court cases (precedents). Why is serving on a jury an important responsibility of citizens in our democracy?

What might happen if all cases were decided by judges? Which Constitutional amendments and court precedents (e.g., Duncan v. Louisiana) support the rights of citizens to play an active role in the judicial system by serving on juries?

After each round made up of an individual authentic problem scenario, the teacher-researcher reflected and revised the scaffolds and supports that were used; furthermore, she contemplated what she learned about PBL and what changes she would need to make for the next round. Some scaffolds and supports that she removed were tutorial links and supporting vocabulary. As the students progressed through the three PBL rounds after the first, model round, she employed an inverse correlation pattern; in that, as the cycle repeated, the scaffolds and supports for PBL decreased and the depth of knowledge and depth of problem solving increased. After each PBL cycle, she gathered both quantitative data and qualitative data to increase validity (Creamer, 2018). On the student survey, the quantitative data were comprised of the Likert scale questions, and the qualitative data were comprised of the open-response questions. She reflected on the study by writing her thoughts in a teacher journal both before and after each PBL cycle. During each PBL process, she observed the students as they worked in groups of two, three, or four. After each PBL cycle, the students completed a mixed methods survey that included both closed-response and open-response questions; the teacher-researcher concurrently collected both quantitative and qualitative data to obtain a complete perspective to inform the changes she made before implementing the next PBL cycle.

Part Three: Summative Assessment

For the culminating, summative PBL assessment (fourth and final PBL round), students completed the PBL process on their own without any scaffolding or supports. This final assessment was evaluated using a teacher-created rubric.

Action Research: Cycle Four–- Authentic Problem Scenario #4

> There are many rights of citizens that are protected in the Constitution, and as American citizens, we have obligations (duties) and responsibilities to make our society a better place. Think of a problem that exists in our community or school. Write a problem scenario that explains that problem and ends with a question. After you explain your problem, work through the PBL process to determine the best solution. Be sure to include any Constitutional amendments or court cases that deal with your problem.

Data Collection

The teacher-researcher used a variety of measures, instruments, and tools to collect both qualitative and qualitative data to ensure triangulation, which validates the outcome of the study (Efron & Ravid, 2013). The data collection methods helped answer both research questions: (1) What are the effects of using problem-based learning as an instructional method in a middle school civics classroom? and (2) How does using problem-based learning to solve authentic, citizenship scenarios help middle school students make connections to their community? During each data collection cycle, the teacher-researcher obtained data on student's thoughts and understanding; she also

looked for unique trends and evaluated the most effective ways that PBL could be used to teach citizenship in a middle school classroom.

Surveys: Likert Scale Survey Items and Open-Response Items

A pre-PBL survey on Google forms was sent to the students through Google classroom at the beginning of the study to provide information about the students' perceptions of the importance and usefulness of problem-solving in learning and in their future educational endeavors and careers. After each of the four cycles of PBL, the students answered questions on Google forms to reflect on how they connected to the PBL process as a learning method and its effectiveness in understanding the real-world rights, roles, and responsibilities of American citizenship. Students were encouraged to participate and share their thoughts and feelings about PBL as an instructional method and the connections they made to their community through the PBL process. The questions were asked from a phenomenological approach; meaning that, the questions sought to probe the experiences, opinions, and feelings from the student-respondent's point of view (Seidman, 2013).

Self-reflection and empowering and valuing students as co-teachers are elements of CRT practices (Emdin, 2016). Students were asked to discuss how PBL compares to direct instruction in the specific areas of content knowledge, engagement in learning, and civic engagement. This post-PBL questionnaire/survey on Google forms and the teacher-researcher's reflection on her observations during each PBL cycle informed the supports and scaffolds that she gave to her students on the subsequent PBL cycles. She used the data from the post-PBL surveys in order which guided supports to remove as the students

progressed through each PBL cycle; she made modifications based on her observations and post-PBL survey data. (See Appendices A-C)

Teacher reflection and observation

The teacher-researcher observed students as they engaged in the PBL process to assess changes that needed to be made to the supports and scaffolds after each PBL cycle. She moved around the classroom and observed the students' discussion and wrote some of their comments in her teacher observation journal. At the end of each day (and cycle of PBL), she reflected on her students' comments and recorded that reflection in her teacher journal as well. As a facilitator, the teacher-researcher assisted her students on a limited basis; she preferred that they rely on each other and think of solutions to the problems themselves; that move toward independent learning is part of the PBL process

Paper Packets for PBL Cycles 1-3

Students were given paper packets for each PBL cycle, which had the PBL cycle diagram printed on it (See Figure 3.1) and the problem scenario. The PBL cycle was broken down in the cyclical steps with helps and hints (scaffolds), which gradually removed as the PBL cycle was repeated (Appendices D-F). Before and after each PBL cycle, the teacher-researcher reflected on the methods that were effective and the ones that were not effective. A link to a tutorial that reviews the citizenship standard was provided in the first PBL packet. Students were encouraged to list and define unknown vocabulary in PBL cycles one and two. Question prompts will be provided in three packets given to utilize during the first three cycles to guide the group discussion. The teacher-researcher recorded in her observational notebook (teacher journal) which

scaffolds and supports (vocabulary, tutorial, question prompts) were most needed to facilitate the student-led, collaborative learning process in each PBL cycle. She will then reflect on these observations to inform changes and improvements that she should make before the next PBL cycle.

Summative Assessment–- PBL 4

For the summative process, students went through the PBL process in groups, independent of teacher assistance and with very few supports and scaffolds. The students submitted their work for the summative assessment (abstraction) on paper packets provided. The problem scenario was student generated and solved. The teacher-researcher graded the responses using a teacher-created rubric (See Appendix H).

Data Analysis

Because this study was a mixed methods study, the teacher-researcher collected and analyzed both qualitative and quantitative data. In analyzing the qualitative, open-response questions, the teacher-researcher's general mindset was to proceed through the following process with the data collected during each PBL cycle. First, she identified potential themes. Next, she began "examining the data in depth to provide detailed descriptions of the setting, participants, and activity" (Mills, 2018, p. 177). Third, she classified the data through "categorizing and coding pieces of data and grouping them into themes" (Mills, 2018, p. 177).

These organizational suggestions are also consistent with Creamer (2018) who encourages the researcher to use the MMER (Mixed Methods Evaluation Rubric) to help

the first-time researcher design and implement a quality mixed methods study. Creamer (2018) outlined four criteria in the rubric to evaluate the study (p. 152) as follows:

1. Transparency: Reasons for a mixed methods study must be evident, explanation of the value of a mixed method study;
2. Amount of mixing: mixing should occur in all phases;
3. Interpretive comprehensiveness: Inconsistencies and alternatives identified, examined, and explained; phases integrated; and
4. Methodological foundation: Over three references on the methodology included.

The four post-PBL surveys included both Likert-scale data and open-response questions that enriched the study as both qualitative and quantitative methods were integrated (Mills, 2018, pp. 194-195, 200). Organizing the Likert-scale data into a graph is easily accomplished in Google forms. The open-response questions on the Google form were evaluated for word frequency (how often the students use the same key words when answering the same questions) and themes. Furthermore, the teacher-researcher's observation data along with each post-PBL cycle survey data was combined to reveal themes among the student respondents. "During the process of reading and marking the transcripts, the researcher can begin to label the passages…What is the subject of the marked passages?" (Seidman, 2013, p. 127). In the thematic format, "research finders were organized thematically around the categories, themes, and patterns that were identified" (Efron & Ravid, 2013, p. 185). The final, summative assessment was graded using a teacher created rubric which will be provided to the student for their review

before the final, PBL summative assessment. The teacher-researcher used this data triangulation (Pre-PBL and Post-PBL survey data, teacher observation, teacher reflection, and final summative assessment) to evaluate student learning of both the citizenship standard, awareness of social equity, and community empathy.

The final PBL cycle was a summative assessment in which students identify an area of social inequity in their community. They identified a perceived problem in their community, proceeded through the PBL process, and then presented their solutions to that chosen problem as a letter to the editor of the local newspaper or a blog post on a community social media page. The teacher-researcher analyzed some of the data through statistical analysis to reveal trends and patterns (Mills, 2018, p. 197-199). Because this study was a mixed methods, convergent parallel data analysis study, it was important to evaluate both the quantitative and qualitative data simultaneously and understand both types of data together. Each type of data informed the other. The data sets are compared in a mixed methods study, not analyzed in isolation (Mills, 2018, p. 203).

Ensuring reliability and validity this study began with approaching the study in an ethical way (Merriam & Tisdell, 2016). Efron & Ravid (2013) also note that a unique aspect of action research is to be able to improve one's (the researcher's) own classroom practices and curriculum strategies. Action research evaluates this change process (Merriam & Tisdell, 2016). In addition, action research is not concerned about the transferability to other classrooms (external validity); the focus is on improving the teacher-researcher's practice (Efron & Ravid, 2013; Mills, 2018). As Herr and Anderson (2015) point out, the action research process is continual; in that, the collected data

moves and directs the study (p. 93), which is one reason why the teacher-researcher incorporated planned times for personal reflection after each PBL cycle. As the study progressed, the action researcher had unique concerns, specifically around validity and was concerned about "outcome validity, democratic validity, catalytic validity, and process validity" (Merriam & Tisdell, 2016, p. 258). The teacher-researcher planned to ensure outcome validity by responding to her problem of practice. She ensured democratic validity by making participation in her study optional; furthermore, the students were aware that their grades in the class would not be negatively affected if they choose not to participate. Catalytic validity was ensured by documenting through questionnaires and observations "how the participants and researchers changed their views in the process" (Merriam & Tisdell, 2016, p. 258). To ensure process validity, the teacher-researcher planned to follow this cyclical, reflective design as she used initial survey and observation data to guide the strategies that were implemented in the classroom. She used student and teacher reflection data to inform changes moving forward. As Creswell and Miller (2000) noted, that "second lens" to establish validity is "the participants in the study" (p. 125). The experiential reality (phenomenological approach) of the students in the study played a vital role in informing and shaping the study as it proceeded through the PBL cycles. The teacher-researcher incorporated this phenomenological approach throughout PBL cycles when she included perception-based questions in the reflection surveys at the conclusion of each of the four PBL cycles.

CHAPTER 4

PRESENTATION AND ANALYSIS OF DATA

Problem of Practice

In an age of popular strategies promoting career readiness, increased rigor and engagement while combining culturally responsive teaching (CRT) strategies such as student choice, scaffolding, and co-teaching, there is a need in a middle school classroom for an intervention to meet the unique needs of middle school students. Problem-based learning (PBL) is a strategy that combines all these traits and can be used to support these goals in middle school classrooms while also proactively engaging learners. Middle school students need a curriculum that is active and engaging but also flexible and learner centered. Teachers acting as authoritarian figures who dispense information do not meet middle schoolers where they are, nor do they foster critical thinking skills.

Effective middle school pedagogy should empower students to use and build on what they have already learned (constructivism) to provide meaningful experiences that will engage their problem-solving skills. Next level learning among middle school students should also incorporate social-emotional learning where students connect to the curriculum with a phenomenological lens. An effective intervention is needed to teach middle school students that American citizenship is more than just voting, paying taxes, and jury duties; good citizenship also includes being responsive to society's inequities

through empathy and advocating for social change. Implementing Hmelo-Silver's (2004) PBL cycle as a basis to merge all these instructional strategies is ideal because some structure and goals are provided, but also, students are given the freedom to think creatively, strategically, and empathetically to solve authentic scenarios that could exist in their community.

Significance of Study

As a civics teacher, the teacher-researcher recognized the need to move beyond instructing students to merely memorize the requirements of American citizenship. She wanted her students to be socially responsive and understand that major components of good citizenship are connecting to and having empathy for the people around them in their own community. There are many Florida civics standards that she could have chosen to focus on in this intervention study; however, because she knew that she wanted to facilitate a learning environment that empowered her students to think about meaningful, positive changes that they could make to their community, she chose the Florida civics standard related to American citizenship.

PBL is a way to incorporate all these effective middle school pedagogical strategies together with the study of American citizenship; furthermore, due to the problem-solving nature of PBL, it can be effectively incorporated into a civics curriculum. The purpose of this study was to evaluate the benefits of using PBL as an instructional method among middle school students in a civics classroom and explore the ways in which PBL can connect students to their communities and build empathy towards the social inequities around them by brainstorming practical solutions for diverse populations.

By employing a mixed methods study to identify effective ways of using PBL as an instructional model to teach citizenship in a middle school classroom, the teacher-researcher sought to increase collaborative engagement and civics content knowledge related to the American citizenship standard listed in the Florida Social Studies Next Generation Sunshine State Standards. She examined the effectiveness of supports and scaffoldings for her middle school students to be able to carry out PBL independently through a three-cycle process. Through asking the students to brainstorm and research solutions to the hypothetical but realistic community problems, the teacher-researcher hoped to build empathy for members of the community while simultaneously facilitating meaningful, problem-solving, and critical thinking skills related to active citizenship. She chose to incorporate both qualitative and quantitative data in this action research study with a phenomenological approach because she sought to combine the concrete, quantitative data with each students' feelings related to the authentic scenarios that could realistically exist in their community to build empathy for the social inequities that exist around them. In her convergent parallel design study, the teacher-researcher collected both qualitative and quantitative data simultaneously. Furthermore, using both a qualitative and quantitative approach will help her evaluate the level of collaborative engagement in learning that occurs by implementing PBL as a learning model in a middle school civics classroom. She will also identify the students' feelings through self-reflection after performing these selected PBL scenarios related to American citizenship.

Data Collection Methods

This PBL study is grounded in a learner-centered ideology and constructivism, while incorporating effective elements of social studies and middle school pedagogies. Because the teacher-researcher is also seeking to build empathy among the students for their community, she also incorporated elements that were designed to encourage students to view their community through a phenomenological lens to raise the students' levels of compassion and empathy for their neighbors. Data was collected through teacher reflection, teacher observations, student surveys, paper packets in which to work through the PBL process in small groups, and a final assessment. Students were empowered and encouraged to be creative within their problem-solving groups. Incorporating CRT practices was important to engage the diverse student population. The teacher-researcher's desire to engage her students and empower them rather than suppress them was her mindset as she sought to answer her research questions, which are as follows:

> RQ 1: What are the effects of using problem-based learning as an instructional method in a middle school civics classroom?
>
> RQ 2: How does using problem-based learning to solve authentic, citizenship scenarios help middle school students make connections to their community?

Data is presented chronologically in this convergent parallel design, mixed methods study. Thoughts are revealed regarding the teacher-researcher's decisions throughout the implementation of the PBL cyclical process. Results of surveys are revealed within the perspective of teacher reflections and observations. For the students'

final assessment, they chose a problem in their community on their own and brainstormed ways to solve it. The students participated in the first round of PBL and afterward completed a pre-PBL survey in google classroom. Next, the students worked in small, self-directed groups independent of the teacher to complete the three cycles of PBL. Each cycle focused on a different aspect of citizenship and intended to build empathy towards the hypothetical members of their community. Students completed PBL surveys after each round; the teacher-researcher collected observational data as she walked around the classroom while observing the groups. The final assessment asked the student groups to brainstorm a real problem in their community, identify ways to solve that problem, and finally, write a letter to the newspaper or post a blog article. The chronological description of the data collection process will follow the three cycles in Figure 4.1.

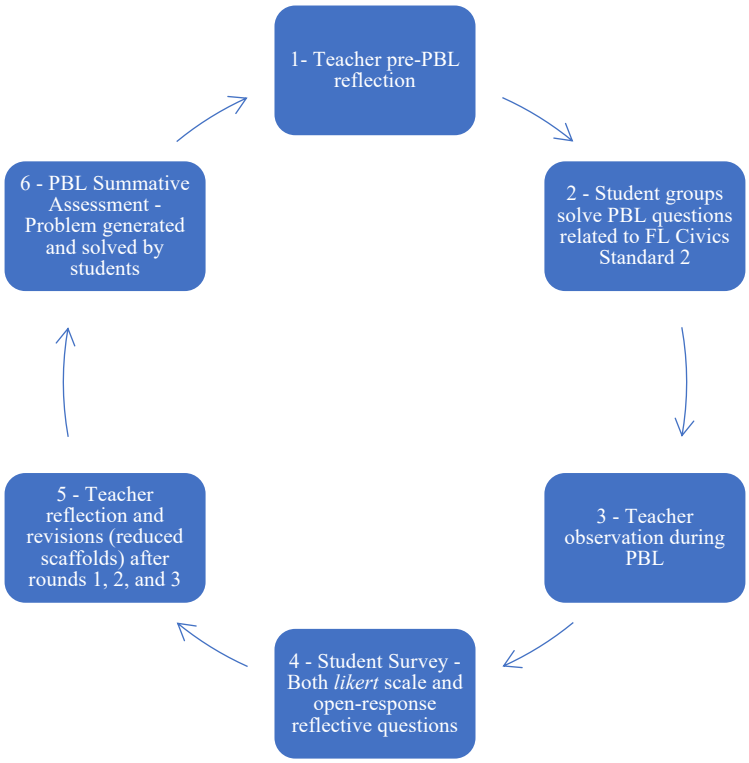

Figure 4.1 Three Cycles of Problem-Based Learning

General Findings and Results

Before beginning the PBL process, the teacher-researcher reminded herself of her research questions and her goals for this study. She wants her students to not only learn the content she teaches but be co-teachers with her. She is curious about which scaffolds and supports they will need and how effectively they will work as a group independently or with limited assistance from the teacher-researcher. Because a major tenant of CRT is co-teaching (Emdin, 2016; Gay, 2018), she hopes that empowering her students as co-teachers propels them towards all the following: buy-in and engagement in their own learning, motivating them to think more critically, exciting them to solve problems in their community, and increasing their sensitivity to the social inequalities that exist in their community.

PBL Modeling

After briefly defining and describing PBL, the teacher-researcher showed her students a video that modeled PBL in a similar classroom environment. After the video, she explained the difference between *problem*-based learning and *project*-based learning. She explained how there can be projects included in PBL, but they are not necessary. She also discussed how PBL is based on authentic real-world problems not fictional stories like aliens attacking from outer space. Next, she projected Hmelo-Silver's (2004) PBL cycle on the board so the students could see each step identified and described as they discussed the first PBL scenario together as a class (See Figure 4.2).

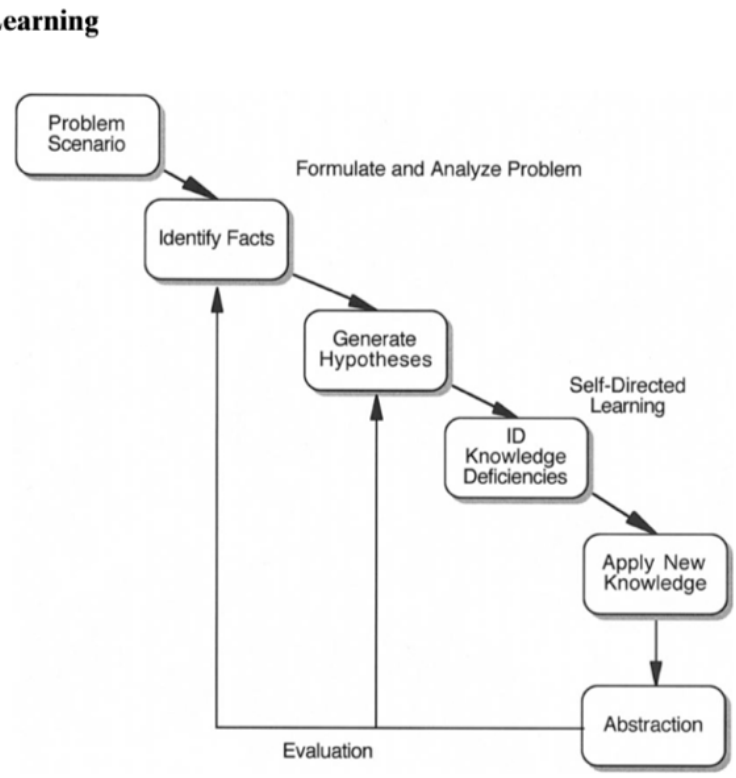

Figure 4.2 Hmelo-Silver's (2004) Problem-Based Learning Cycle

The teacher-researcher wrote the following PBL scenario model on the board at the front of the classroom:

> Amy Brown is a Gulf War veteran who suffers from PTSD. She lives in your county and does not receive trash collection because she lives outside the city. Taking her trash to the local dump triggers her PTSD. Help her find a solution to her problem. Question prompt to connect prior knowledge to citizenship: "Which government and non-governmental organizations may be able to help her and how?"

The teacher-researcher asked if there were questions about the problem scenario. One student wondered how far she lived from the city line.

Most students were able to easily identify the foundational facts from the authentic scenario; some of these facts included that she suffers from PTSD, served in the Gulf War, cannot go to the dump because it triggers her PTSD, lives outside of the city limits, does not get trash pick-up, lives in the country, and she is an older woman. (They determined that she was an older woman by how many years it had been since the end of the first Gulf War.) The following themes emerged as the teacher-researcher read and re-read her observational notes from this model PBL cycle: (a) empathetic community connection, (b) constructivism, (c) community action, and (d) engagement. Table 4.1 reveals the coding categories that developed after careful evaluation of her notes and looking for themes among the responses.

Table 4.1 Teacher's Observations During PBL Video and Whole Class Modeling

Coding Category	**Theme(s)**	**Notes from Teacher's Journal**
Empathetic community connection	Students identified ways that average citizens could help her.	Student: "People should volunteer to take it for her." Student: "People should step up and volunteer to help her." Student: "Someone could buy her some noise-canceling headphones." Teacher: "I was pleasantly surprised how sympathetic they were to the war veteran. None of the

		solutions were for her to get over it."
Constructivism	Students used their previous knowledge of an earlier lesson on government and non-government organizations and connected how they could be used to help this war veteran.	Student: "She should appeal to the city council to get the garbage men to stop by her house." Student: "She could get counseling for her PTSD from the Red Cross or a veteran's group." Student: "She could be given medication for her PTSD from the hospital." Student: "The county commissioners could make her house part of the city [annex] so she would get trash pick-up."
Community action (Awareness of social inequity/empathy for people with disabilities)	Student's reactions were for members of the community to assist her in some way.	Teacher: "Most of their hypotheses were for others to help her out." Student: "She should hire someone to take the trash for her." Student: "People should volunteer to take it for her." Student: "People should start a non-profit organization to help with this."

		Student: “If she’s in a mobile home, they could move her home to within the city limits.” Student: “A group could appeal to the city to send the garbage truck to her house anyway.”
Engagement	Students were engaged in the active, meaningful learning using the PBL process.	Teacher: “Students seemed interested in PBL.” Teacher: “Students were very engaged.” Student: “That was fun!” Student: “Why couldn’t we do this all year?” Teacher: “Students seemed to be eager to answer questions.”

After the students and the teacher-researcher watched the video that modeled the PBL process and worked through the first PBL cycle together as a class, she asked the students to go into Google classroom on their Chromebooks and take an individual survey about their PBL experience. The teacher-researcher was eager to learn their comfort level with the process and if they thought it was a beneficial technique for learning and for life. In Figures 4.3 through 4.5, students were asked to answer the questions on a 1 through 5 Likert scale. To increase engagement and buy-in to this new way of learning that the teacher-researcher introduced to the students, she wanted their feedback by asking them if they think that problem-solving skills are real world skills that will benefit them in their future careers. When she chose PBL as an intervention, the

teacher-researcher knew it was important for middle schoolers to see practical applications of what they are learning and doing in the classroom. In Figure 4.3, the respondents identify the usefulness of increasing their problem-solving skills. The result is important for the teacher-research to know that the students have buy-in in the PBL process; they see it as beneficial to their life and thus, a worthwhile skill to develop. This connection helped their engagement in this learning intervention.

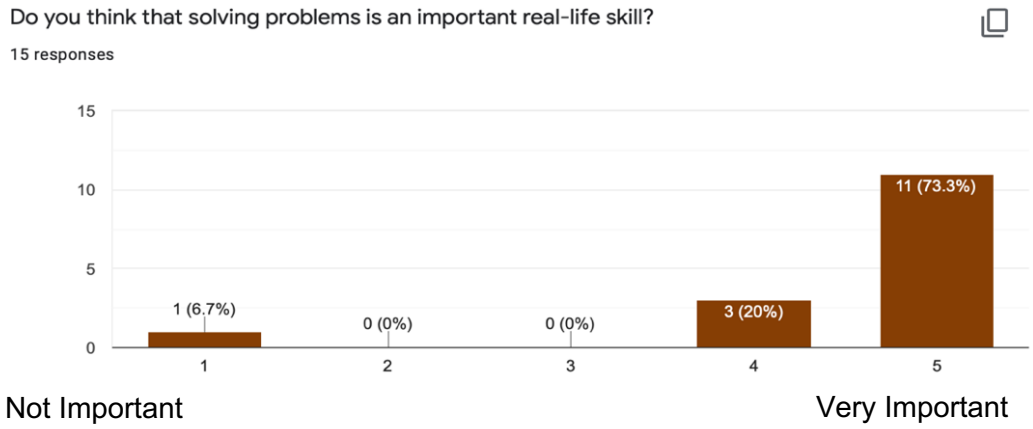

Figure 4.3 The Importance of Problem-Solving as a Skill

In Figure 4.4, most students seemed somewhat assured in their problem-solving abilities. Of the students, 40% perceived their problem-solving abilities as average. These results gave the teacher-researcher confidence to proceed with implementing PBL as an instructional strategy.

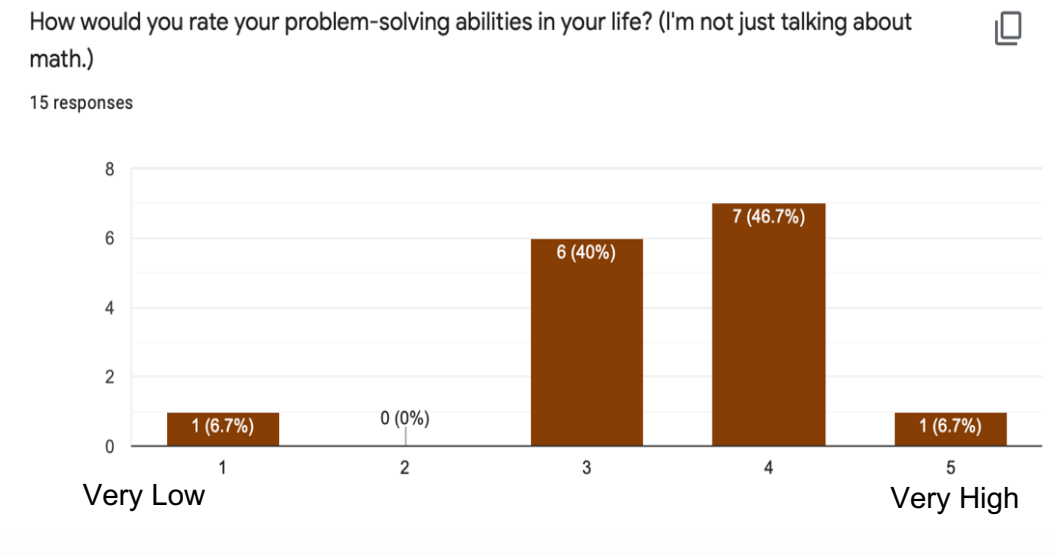

Figure 4.4 Personal Problem-Solving Rating

As noted in Figure 4.5, most students recognized a positive relationship between increasing their problem-solving skills to help them become better citizens. This relationship is encouraging because students were already recognizing the connection between becoming a better citizen and problem-solving skills.

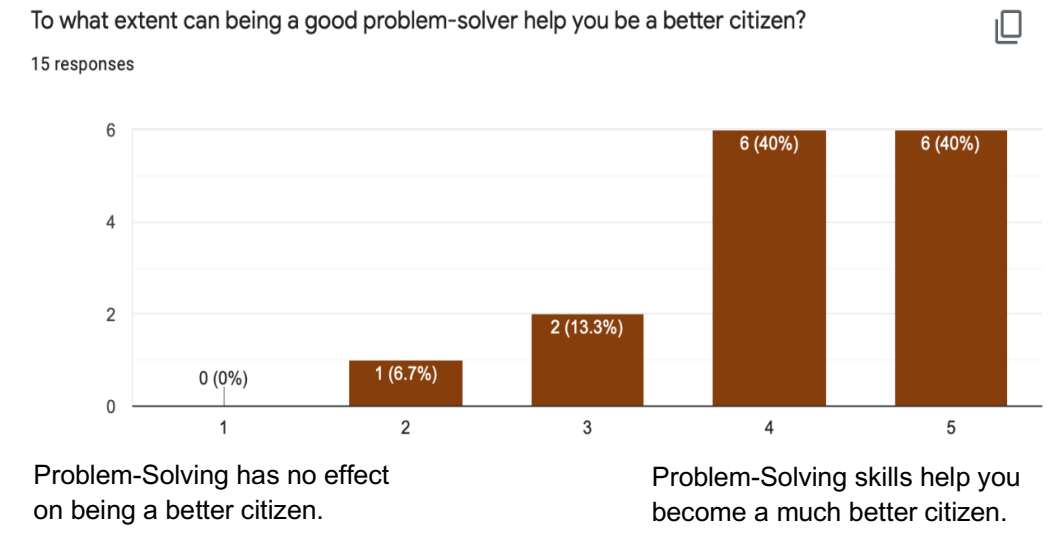

Figure 4.5 The Connection Between Problem-Solving Abilities and Becoming a Better Citizen

The second research question asks, “How does using problem-based learning to solve authentic, citizenship scenarios help middle school students make connections to their community?” Through these questions, the teacher-researcher hopes to start to build the relevance of PBL in her students’ own lives and help them begin to build on the importance of being a good citizen in their community.

Table 4.2 assesses the students’ understanding of the naturalization process by noting the number of naturalization steps each student was able to recall. In the survey, the question was asked as an open-ended response question. The teacher-researcher converted those written responses to the information in Table 4.2 where she identified the number of steps in the naturalization process the students were able to remember. Because constructivism is an important component of PBL, she chose to ask this question to assess each student’s ability to answer and engage with the next PBL authentic problem scenario. The purpose of this question is to see if the teacher-researcher needs to reteach the steps in the naturalization process, because it has been many months since she taught these steps to her students. Due to this study being grounded in constructivist theory, it is vital that the students have that foundation of knowledge.

Table 4.2 Steps of the Naturalization Process

Number of Naturalization Steps Recalled	Percent of Students Who Remembered Steps
1 step	33%
2 steps	27%
3 steps	20%
4 steps	7%
5 steps	13%

While the teacher-researcher wished her students remembered more of the steps in the naturalization process, she was encouraged that they were able to remember so much from the naturalization lesson that she taught them many months ago. Based on these responses, they were given access to a tutorial that reviewed those steps. Constructivist theory identifies the importance of having that foundation to build on for more meaningful learning to take place. The next PBL cycle will require students to incorporate those naturalization steps into an authentic scenario where students could help a member of their community become a naturalized citizen.

PBL Cycle One

For the first independent PBL cycle, students were asked to merge into groups of three or four students. Students were each given a paper packet that outlined each step in the PBL process. It also included question prompts to help guide the discussion. These scaffolding techniques such as the question prompts as well as the tutorial links were included to help guide the student groups through the PBL process. The Hmelo-Silver's (2004) PBL cycle was printed on the front of each paper packet (Figure 4.2) and then the following problem scenario was printed for the student groups:

> Rosa Santos from Brazil has lived in the U.S. for six years and wants to become an American citizen. She works in a hotel and speaks very little English. She doesn't own a car but relies on public transportation to get from home to work. Create a plan for Rosa to become an American citizen.

First, students were asked to identify at least five facts from the scenario. They were also prompted to define "naturalization." They had access to a Chromebook to use for research and as a resource. For the third step in the PBL cycle, students were asked to generate hypotheses to solve Rosa's problem. The teacher-researcher provided the following question to help stimulate conversation: "What steps and requirements will Rosa need to complete to become a citizen?" A link to an online tutorial by floridastudents.org was provided to the students for review of the steps in the naturalization process.

A major component of the PBL process is for students to do independent research to add to their knowledge (constructivism). A learner-centered ideology allows students to explore real world issues through self-directed learning. For the "identify knowledge deficiencies" step, students were prompted with the following questions: "Using your Chromebooks, research the steps to citizenship. Which steps has Rosa already completed? Which steps does she still need to complete?" The flexibility of PBL allows for accommodations of all student learning needs. Some students listed all the naturalization steps and checked off which ones she had already completed. Other students created two columns of steps that she had completed versus ones she still needed to complete. The versatile nature of PBL allows students to express their answers in ways that make sense to them.

For the next PBL step, "apply new knowledge," the teacher-researcher asked students (in their paper packet) questions as follows: "Look again at your hypotheses. Did you miss any steps or requirements for citizenship? In what order should Rosa complete the necessary steps?" These series of questions allowed students to think more critically about naturalization. They were going beyond merely recalling, identifying, and organizing information to now applying information to a fictional person's hypothetic scenario, but someone who could live in their community and be facing this authentic problem. By noting in what order Rosa should complete the steps, students are thinking about the naturalization process in a more meaningful way. PBL allows students to apply this information about citizenship in a practical and meaningful ways. Making learning active, flexible, and meaningful are tenants of both middle school pedagogy and a learner centered ideology.

The final step of the PBL cycle was to create an abstraction: "Create a timeline/plan (days, month, years) for Rosa to become a citizen. Draw a chart." This abstraction encourages students to think more empathetically about the practical steps of becoming a citizen. The hope is that they understand that naturalization is a difficult process and will become more aware of the social inequities around them. Finally, the teacher-researcher added the following additional step after the abstraction step to complete Rosa's journey to citizenship: "Now that Rosa is an American citizen, what are her rights, obligations, and responsibilities as a citizen?" Students were provided a website address on their paper packet that took them to a tutorial that reviews the rights, responsibilities, and obligations of citizenship. This second tutorial link was a support for them if they did not remember these aspects of citizenship from the citizenship lesson

months ago. This added step after the abstraction was included because it is directly correlated to the Florida Civics Standard SS.7.C.2, which is the standard as follows, which was taught during this PBL process: “Evaluate the roles, rights, and responsibilities of United States citizens, and determine methods of active participation in society, government, and the political system” (https://www.cpalms.org/PreviewIdea/Preview/807, first paragraph). On average, the 16 students identified six aspects of citizenship when asked to find specific rights, responsibilities, and obligations of citizenship.

Like the model PBL cycle after the first independent PBL cycle, students were provided with an individual survey that included both Likert scale and open-response questions. As revealed in Figures 4.6 and 4.7, most students did not need the support from the tutorials; however, about 43% of students used the first tutorial to review the naturalization process (Figure 4.6). About 36% of students used the tutorial link to review the rights, obligations, and responsibilities of citizenship (Figure 4.7). Most of the students did not need these supports, so they were removed in the next PBL cycle. However, students could still use their Chromebook for research.

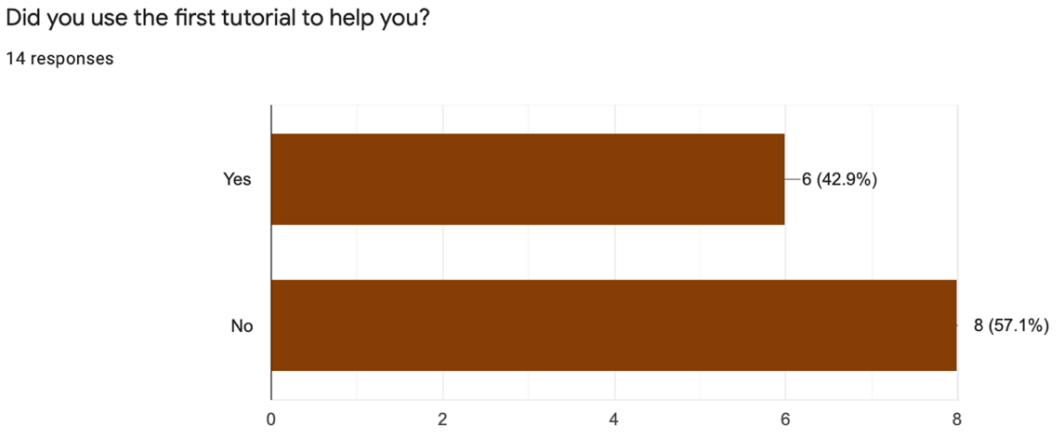

Figure 4.6 First Tutorial

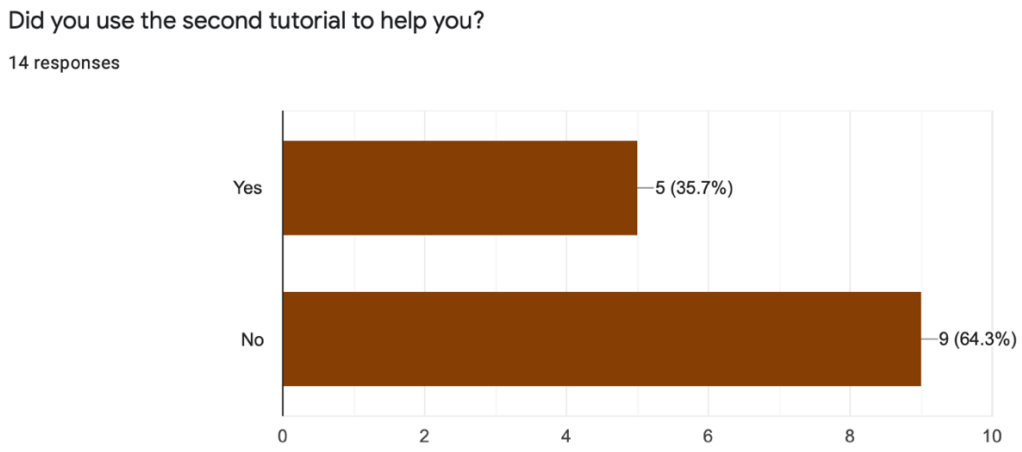

Figure 4.7 Second Tutorial

My first research question was as follows: "What are the effects of using problem-based learning as an instructional method in a middle school civics classroom?" A significant aspect of PBL is the collaboration among students. As with most group work, the teacher-researcher was hopeful that students would communicate effectively, work well together, and distribute work evenly. In PBL, teachers act as facilitators, so she gave these groups independence as they worked to solve the authentic problem scenario. Over half of the students emphatically believed that their voice was heard, and none of the students identified that their opinion was ignored, as represented in Figure 4.8.

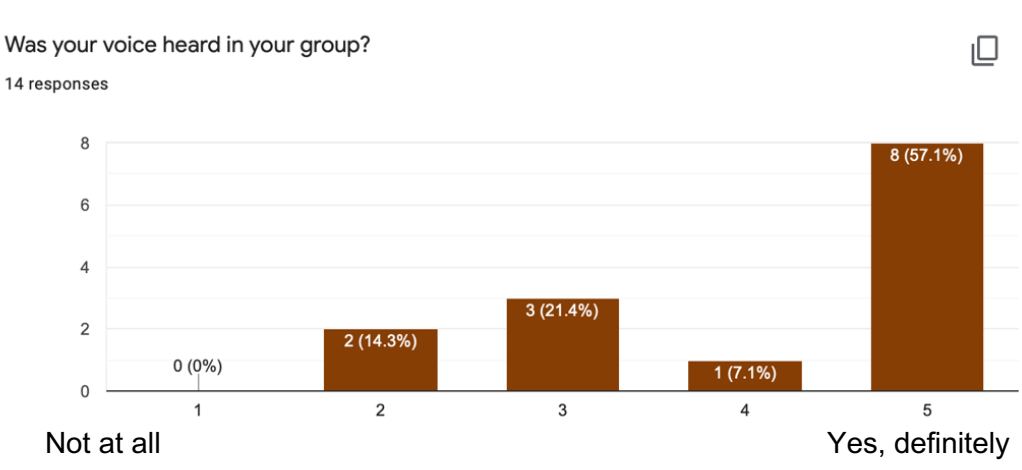

Figure 4.8 Inclusion of Diverse Voices

One of the teacher-researcher's concerns about implementing PBL as an instructional intervention among diverse groups is that all opinions would be validated, and everyone's voice would be heard. The social equity aspect of this study is not only applicable to the students' community in their city and county, but also applies to their classroom community.

The student groups chose to approach their groups' structure and responsibilities differently. Figure 4.9 shows that some groups chose to divide responsibilities while others shared responsibilities in the group. In keeping with a learner-centered ideology, the flexible aspects of middle school pedagogy, and the student choice tenant of culturally responsive teaching practices, students have the freedom to structure their group's interaction in a way that is efficient and beneficial for them. While most students shared responsibilities, some students chose to be more structured to ensure that all students were contributing. The level of structure varied, while most students opted for a more fluid group structure to work through the PBL scenario. This flexibility is one of the many reasons that the teacher-researcher chose PBL as an intervention.

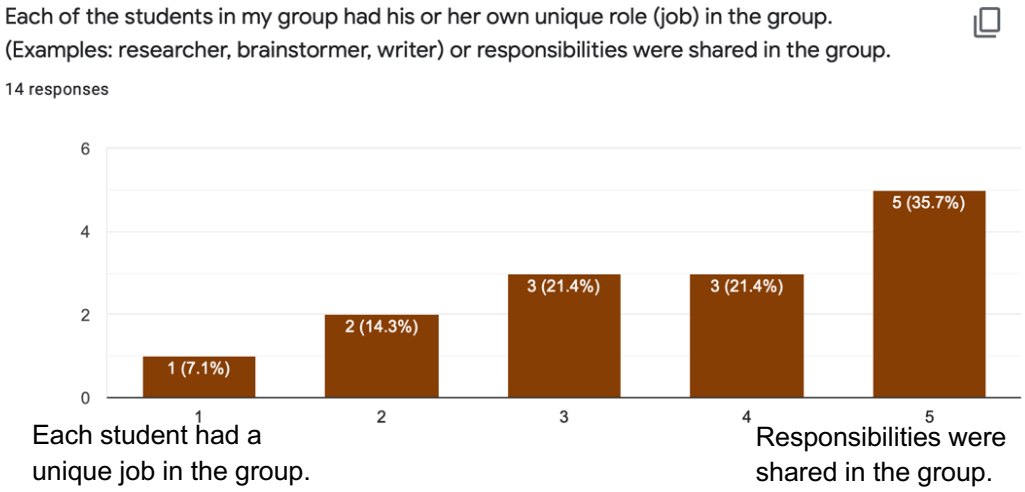

Figure 4.9 Shared Responsibilities of Students in Collaborative Learning

Figure 4.10 communicates the variation of the amount of work contributed by the group members. Almost one-third of the respondents strongly agreed that their group member contributed equality. The teacher-researcher reflected on ways that she could increase that number before implementing the next PBL cycle, shown in Table 4.3. She also understands that it is normal for some middle schoolers to be more outspoken that others; there is much variation in social, emotional, and physical development of middle school students (Brown & Knowles, 2014). This diversity of maturation is considered in middle school pedagogy and is thus accommodated in the flexibility of PBL.

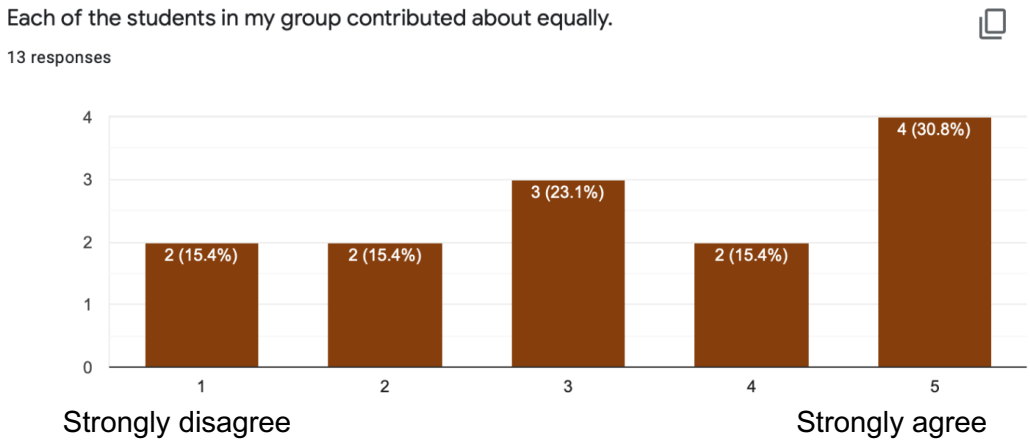

Figure 4.10 Equality of Contributions

To better understand how students engaged in problem-based learning, the teacher conducted observations throughout the cycle. The observations revealed the overarching themes of incorporated other civics standards (constructivism) within the PBL authentic scenario, used scaffolding supports (provided in paper packets), and made real world connections (through empathy).

Table 4.3 Teacher's Observations During the First Independent PBL Cycle

Coding Category	**Theme(s)**	**Notes from Teacher's Journal**
Incorporated other civics standards (Constructivism)	Students' research and discussion led them to learn information related to other civics standards.	Teacher: "Students were talking about the Bill of Rights." Teacher: "Students wanted to understand the difference between natural rights and constitutional rights." Teacher: "It was encouraging to hear good, meaningful discussion and connections being made. I was pleasantly surprised that even though I focused on one civics standard, the students' discussion referenced previous knowledge related to other students." Student: "Where do you do to get naturalized?" (Student researched and located on a map the U.S. Citizen and Immigration Services offices in Florida.)
Use scaffolding supports	Students use the scaffolding supports that were provided for them in the paper packets when needed.	Teacher: "Students googled and defined 'naturalization' before they started their research."

		Teacher: “Providing the tutorial links on their paper packets seemed helpful.”
Community connection (Build empathy)	Students will perceive Rosa as a real person and want to help her. (Building empathy)	Teacher: “Students relate to Rosa as a real person very quickly.” Teacher: “There was discussion if she had enough English knowledge to pass the English test.” Student: “Do you need to drive to become a citizen?” Teacher: “A student was concerned about Rosa’s ability to complete the naturalization process without speaking English very well.” Student: “She needs to start taking English classes immediately.” Student: “She is a good person since she has a full-time job.” Student: “She is a permanent resident because she has a good job.” Student: “She is not a criminal because she has not been deported.”

Even though the literature overwhelming suggested that PBL is an ideal intervention for middle school students because it is engaging, flexible, and authentic, the

teacher-researcher wanted to learn about her students' opinions. Figure 4.11 shows that her students overwhelmingly favored PBL to traditional learning. Almost 79% indicated that they favored PBL learning while about 21% preferred traditional learning.

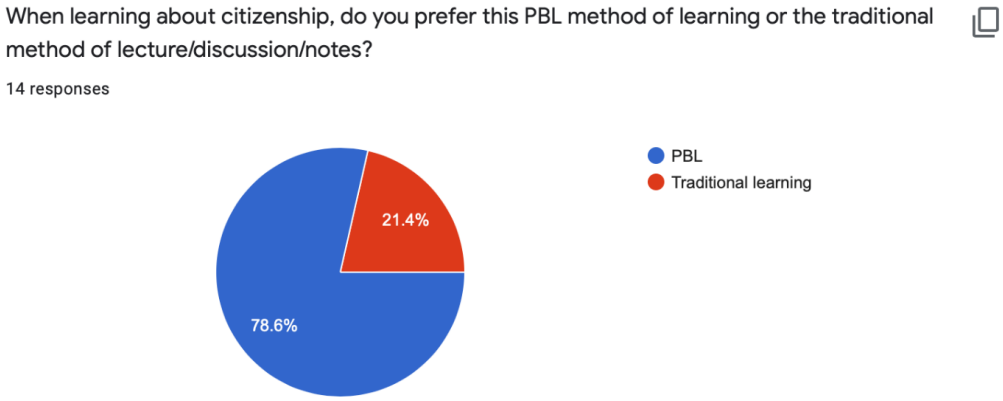

Figure 4.11 Preference of Problem-Based Learning vs. Traditional Learning

The traditional teaching methods of lectures and rote memorization do not appeal to middle school students, who desire active and meaningful learning experiences. Figure 4.12 reveals that all students agreed that PBL is superior learning strategy for them; therefore, at least from the students' perspective, every student's understanding of the citizen process increased because of the PBL activity.

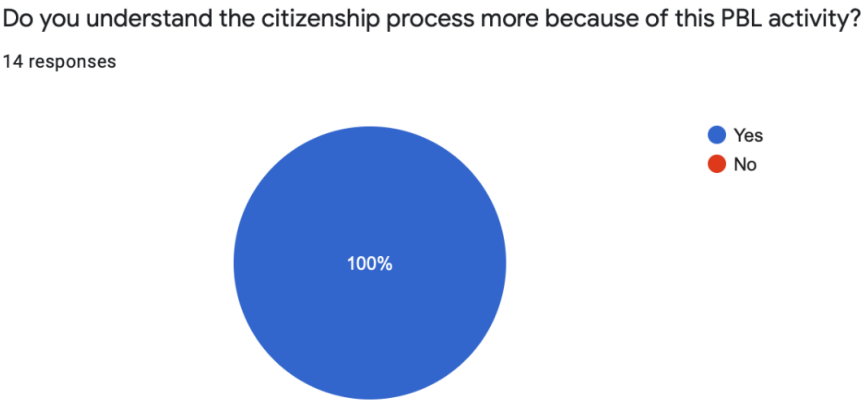

Figure 4.12 Effectiveness of Problem-Based Learning vs. Traditional Learning

In Figure 4.13, students communicate why PBL is a better way to learn information. The teacher-researcher sough to build empathy within the students as they learned about the challenges that individuals in their community could face. It is also interesting to note that they perceive the benefits of collaborative learning, which is an essential component of PBL, as well as the ways in which the engaging aspects of PBL help them learn. The process held their interest, was more interactive, and the examples were engaging. One student noted how it made him or her feel connected to the person in the authentic scenario; incorporating emotions and perspectives was part of the phenomenological approach that was important in this study. The open-response comments from the students seemed to support the goals of the teacher-researcher. The students were more attentive to details and valued collaboration and other students' perspectives. Figures 4.12 and 4.13 support the implementation of PBL as an effective, active learning method to teach citizenship to middle school students.

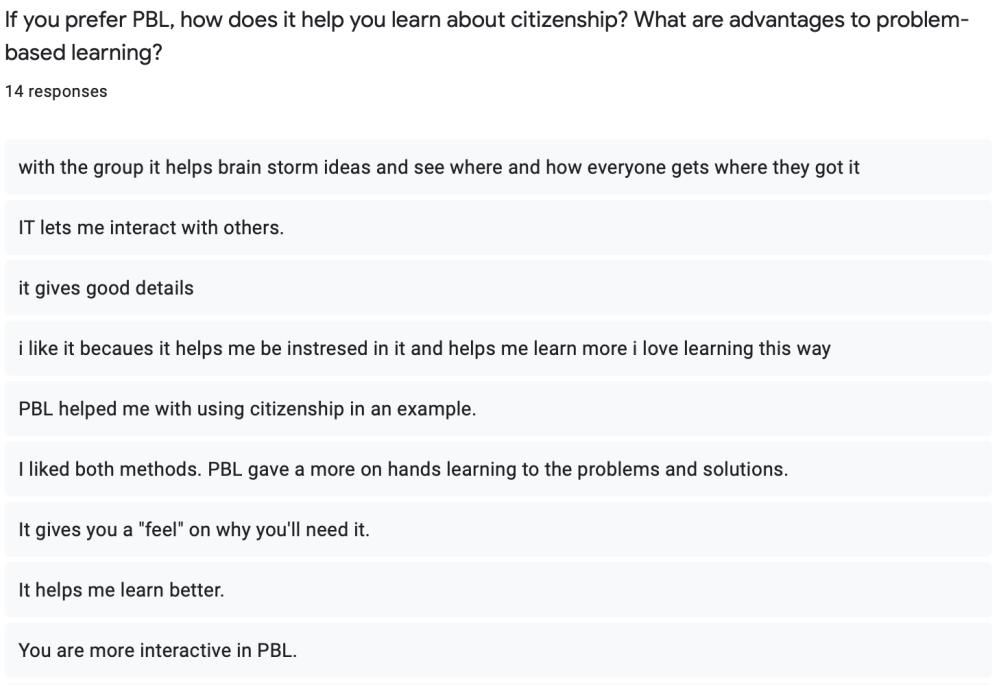

Figure 4.13 Advantages of Problem-Based Learning

PBL Cycle Two

The second independent PBL focused on the rights of citizens, which is consistent with the standard that this study is based on: Florida Civics Standard SS.7.C.2: "Evaluate the roles, rights, and responsibilities of United States citizens, and determine methods of active participation in society, government, and the political system" (cpalms.org, 2014). Students received a similar packet to the first independent PBL cycle. For this second independent PBL cycle, the teacher-researcher scaled back and removed some of the supports. Her goal was for her students to be able to work through Hmelo-Silver's (2004) PBL cycle on their own and without any scaffold supports like tutorial links and guiding questions. This next PBL did not contain any tutorial links; however, definition prompts and guiding questions continued to be provided. As conveyed in Figure 4.14, the post-PBL survey via Google classroom revealed that most students did not miss the tutorials. About 77% of students reported that they did not miss the tutorials as indicated by selecting a response on the "I Didn't Miss Them" scale of the question.

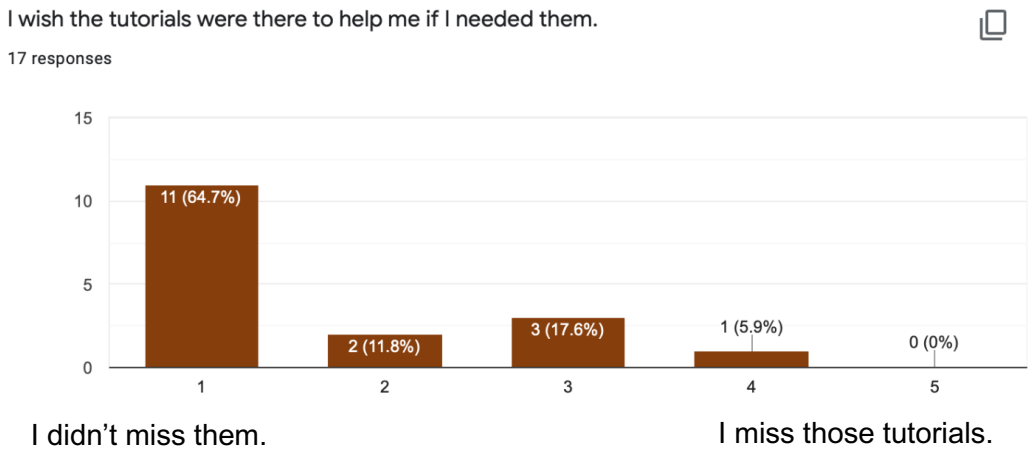

Figure 4.14 Students' Opinions of Tutorials

Identical to the previous PBL paper packet, Hmelo-Silver's (2004) PBL cycle was printed on the front of it (Figure 4.2); the following problem scenario was presented:

> Regina Smith is an African American chef. While driving home from her restaurant, she was pulled over and detained by a police officer without cause (for no reason). It was later revealed that because she was a woman of Color, the officer searched her car without her permission and found a small handgun. Even though she insisted that she had a gun permit, the officer arrested her on the spot and would not let her speak. He did not remind her of her rights, and it was not explained to her why she was being arrested. She was held in jail for months; she was not told what her crime was. When she finally stood before a judge, he told her that she could go home, but he informed her that her fine was two million dollars. How should she defend herself so that she can go free? As a U.S. citizen, which specific rights are being violated?

Students were prompted in their paper packet to identify at least eight facts from the authentic scenario. As displayed in Table 4.4, most students identified eight facts; there was only a small standard deviation of students who identified less than eight facts. Being able to break down information is a necessary skill in PBL; it is also foundational to constructivism and part of the active and interactive nature of middle school pedagogy.

Table 4.4 Identification of Facts From PBL Authentic Scenario Narrative

Number of Facts Gleaned From the PBL Scenario	**Mean**	**Median**	**Mode**	**Standard Deviation**
7.5	7.5	8	8	1.03

Students were then prompted to define “detain” and “violate.” An important aspect of PBL is that it is versatile; in that, it is accommodating and inclusive for a variety of students learning styles with varying exceptionalities. However, it is important to include the scaffold supports to ensure equity among students.

The next step in the PBL cycle is to “brainstorm and generate hypotheses.” The teacher-researcher added the following guiding question in case the students needed a conversation starter: “You are Regina’s friend. What advice would you give Regina as she prepares to defend herself to the judge?” One of the research questions is as follows: “How does using problem-based learning to solve authentic, citizenship scenarios help middle school students make connections to their community?” In this authentic scenario, students are building empathy by relating to a hypothetical friend who is in legal trouble. When asked about sympathy or empathy for her, most students responded that they did feel for her and her situation. Figure 4.15 provides examples of these empathic responses of students who conveyed a strong sense of connection to Regina after working through the PBL cycle and trying to solve her problem. Even though Regina is a fictional character, some of the students felt strong emotions for her and her situation. This emotional connection to the plight of a fellow citizen was a goal of the teacher-researcher, who desired that these hypothetical scenarios would be authentic and meaningful to her students.

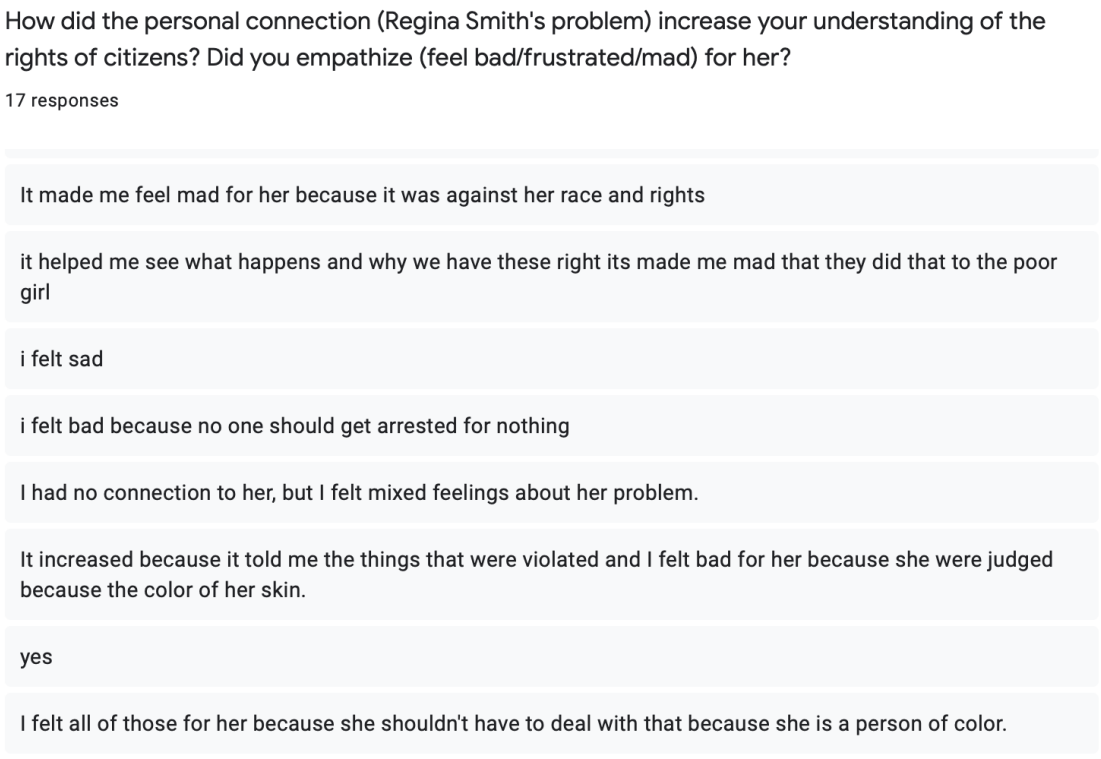

Figure 4.15 Personal Connection/Empathy

In Table 4.5, the teacher-researcher categorized their responses into a simple chart of "yes" or "no" when asking them about empathizing with Regina and her situation. The teacher-researcher also observed that the racial discrimination against Regina bothered some of the students.

Table 4.5 Empathy and Racial Discrimination

Number of Student Respondents	**Number of Students Who Empathized With Regina**	**Number of Students Who Did NOT Empathize With Regina**	**Number of Students Who Noticed the Racial Discrimination That Regina Faced**
17	13	4	3

After students brainstormed solutions for Regina, they were asked to "identify knowledge deficiencies" by researching the specific American rights that were violated in Regina's situation. For the next step, "apply new knowledge," students were asked if they missed any specific amendments to the U.S. Constitution. Finally, students were asked which Supreme Court cases related to Regina's case.

Almost half of the students (47%) responded that they could identify five or more than five rights of citizens thar related to Regina's case, and about one-third of students (35.3%) were able to identify three or more court cases related to Regina's problem. Figures 4.16 and 4.17 show how students were able to recall and research both Constitutional amendments and Supreme Court cases that Regina should be aware of to defend herself. Table 4.6 presents the teacher's observations during the second independent PBL cycle.

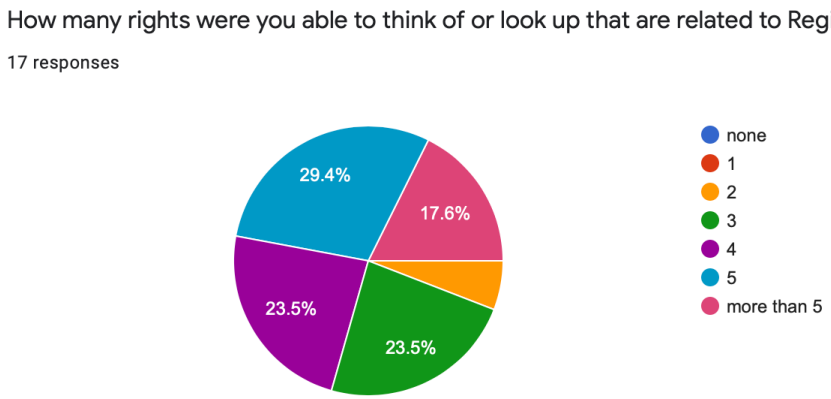

Figure 4.16 Rights of Citizens

In Figure 4.17, students are combining previous knowledge and creating new knowledge as they combine the Supreme Court cases that they had already learned, and they are researching Supreme Court cases that could apply to this situation. One of the

unique aspects of PBL is the “ill-structured problem” (Hmelo-Silver, 2004). Because there is no defined right answer, learning is limitless.

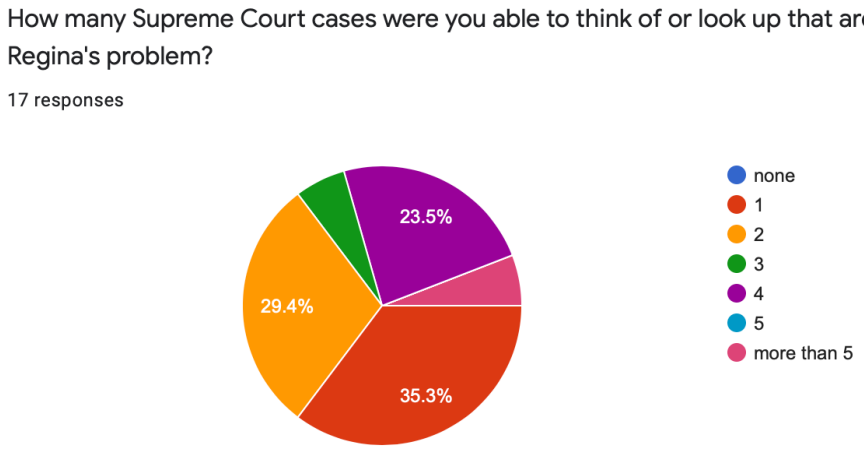

Figure 4.17 Supreme Court Cases

During the second, independent PBL cycle, the two themes emerged during the observations from the teacher-researcher. The first theme was that students were able to recognize the social inequalities that exist around them. The second theme is the acquisition of knowledge through critical thinking, which also aligns with constructivism. The students will apply what they know to the PBL problem scenario.

Table 4.6 Teacher’s Observations During the Second Independent PBL Cycle

Coding Category	**Theme(s)**	**Notes from Teacher’s Journal**
Recognizing social inequalities	Students will recognize the social inequalities that exist around them.	Teacher: “A student talked about how her dad was pulled over because he is Mexican.” Student: “The officer was racist.”

		Teacher: “Another student noticed the racial discrimination”"
Application of Knowledge (Critical Thinking)	Students will integrate and apply many laws and constitutional amendments to this scenario.	Student: “Is the 3rd Amendment about police?” Student: “Can include the 13th Amendment about abolishing slavery?” Teacher: “There was discussion about if search and seizure applied to car as well as homes.” Teacher: “One student later remembered that the 14th Amendment was about due process.” Teacher: “Students were wondering about gun laws. The 2nd Amendment was discussed by the students.”

An important component of PBL is the collaboration; however, because the teacher-researcher approached this study from a learner-centered ideology, she was concerned about the equity among each group and each student having his or her voice heard as the groups discussed the authentic scenarios. Figure 4.18 reveals the inequality of contributions among the group members after the two rounds of PBL. The teacher-researcher wondered if groups of four students were too many voices to facilitate an enriched discussion. The teacher-researcher noticed that some students became distracted and off-topic during some of the group discussions. Furthermore, because some students

were more outspoken than other students, the teacher-researcher decided to reduce the group size to two students instead of three or four students.

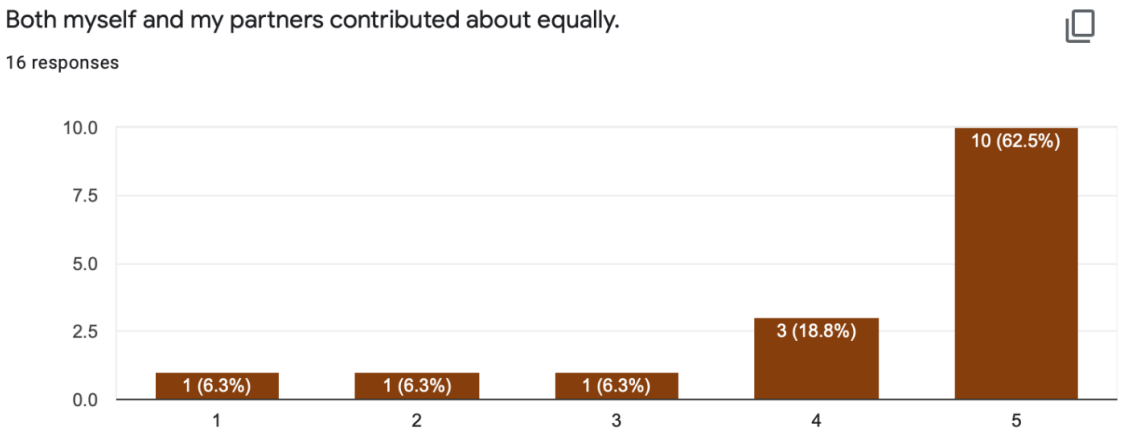

Figure 4.18 Equality of Student Contributions Within Groups

Although there was improvement, there were still some students who were not fully engaged; therefore, in the next PBL cycle, the teacher-researcher put the students in pairs instead of small groups of three or four students.

PBL Cycle Three

The third independent PBL cycle focuses on the judicial system and the obligations of citizens to serve on juries:

> The governor is proposing a law to help the state save money. He thinks that trials by jury are not necessary and are too expensive because the state has to pay the jury members to report to jury duty and serve on a jury if selected. You are a constitutional lawyer hired by the PAC (Political Action Committee) "Americans for Freedom" to write a legal brief in the form of a letter to inform the governor of his mistake and that it violates the U.S. Constitution and previous court cases (precedents). Why is

serving on a jury an important responsibility of citizens in our democracy? What might happen if all cases were decided by judges? Which Constitutional amendments and court precedents (Duncan v. Louisiana, etc.) support the rights of citizens to play an active role in the judicial system by serving on juries?

For this round of PBL, the teacher-researcher did not outline the number of facts that the students should write. The first step after explaining the problem scenario merely stated to "identify facts" without any supports, prompts, tutorial links, or guiding questions. However, students were prompted on the paper packet to use dictionary.com to research the definitions of any words in the authentic scenario or related to the authentic scenario that they did not understand.

For the next step, "brainstorm and generate hypotheses," students were instructed to answer the three questions in the problem prompt. They were not provided any supporting guiding questions to prompt their thought process. For the "identify knowledge deficiencies" step, the teacher-researcher reminded students to think, "What don't I know?" and "What do I need to research?" For the "apply new knowledge" step, she prompted students to "list the information that should be included in my letter to the governor." For the final abstraction, students were required to write a legal brief in the form of a letter where students identify why the governor cannot end trial by jury and other laws and rights that the governor is violating.

Based on teacher observations, the following five key themes were identified during the third cycle of PBL:

- Students' research and discussion led them to learn information related other civics standards;
- Students collaborated to effectively solve PBL authentic scenarios;
- Students participated in becoming more career ready by using real world skills;
- Students' thinking was at a higher, more critical level; and
- PBL causes students to review information and use it in a way that helps the student remember the information.

Table 4.7 reveals the notes from the teacher's journal. During the third round of PBL, students worked in pairs instead of groups of three or four. The discussion of the students rose to discussions on the rights of citizens, recalling specific Supreme Court cases, constitutional law and amendments, historical events, and career aspirations.

Table 4.7 Teacher's Observations During the Third Independent PBL Cycle

Coding Category	**Theme(s)**	**Notes From Teacher's Journal**
Incorporated other civics standards (constructivism)	Students' research and discussion led them to learn information related to other civics standards	Teacher: "Topics included the Holocaust, various constitutional amendments, gun rights, checks and balances, and the importance of trial by jury. Student: "He can't ban juries." Students: "It's a constitutional right to be tried by one's peers."

		Student: “He’s trying to get a law passed, so that starts with a bill.” Student: “The judge might be bias [sic] against juries.”
Collaboration	Students collaborated to effectively solve PBL authentic scenarios.	One student asked another: “Which amendment is trial by jury?” Two students responded, “The Sixth Amendment.” Teacher: “One student was verbally paraphrasing a court case while another student was writing it down on the paper packet.” Teacher: “One student was reading the facts of the case to his partner.” Students: “We’re gonna have to find and list the amendments about juries.” Teacher: “Some students decided to create a Google Doc and type their answers on there instead of their paper packets. Because of this, students were able to work better simultaneously.”
Career connections	Students participated in becoming more career ready by using real world skills.	Teacher: “Students were instructed to write a legal brief for this cycle of PBL.”

		Teacher: “A student wanted to recite to me the speech he wrote to the judge.” Student: “I’m thinking about going to law school.”
Increased critical thinking	Students’ thinking was at a higher, more critical level.	Student: “PBL makes [me] have to work harder so [I] think I learn more.” Student: “I’m thinking about what’s happening and what I need to know.” Student: “You’re working through it in a different point of view.”
Increased retention of information	PBL causes students to review information and use it in a way that helps the student remember the information.	Student: “It requires you to look back at your notes.” Student: “It’s audio and I can learn more through audio than writing.” Student: “This one [PBL cycle] reminded me about the 7th Amendment.”

Surveys administered during the third cycle indicate that equal collaboration and discussion seemed to increase by change the size of groups of three or four students to two students. Over 80% of students agreed or strongly agreed that they and their partner contributed equally. In Figure 4.19, 75% of the students noted that they worked together equally.

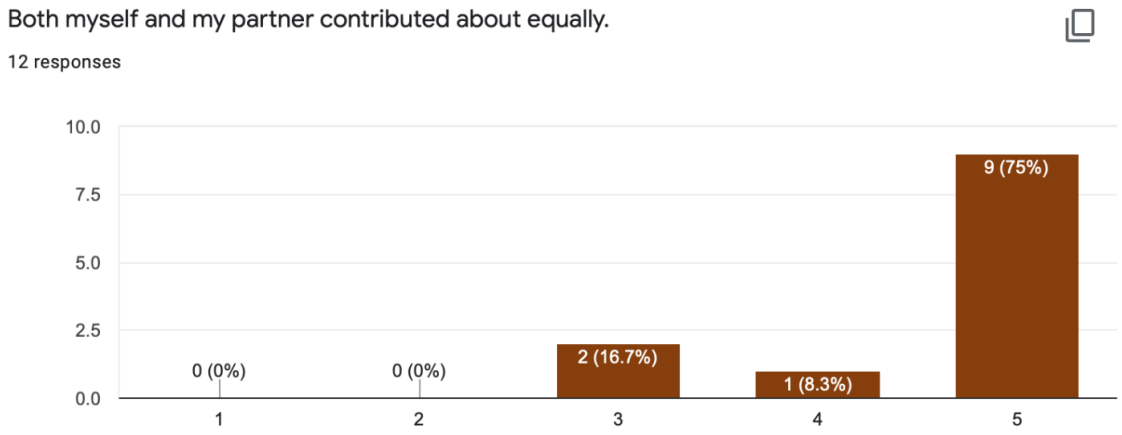

Figure 4.19 Equality of Student Contributions in Pairs

For Figures 4.19 to 4.23, 1 is “strongly disagree” and 5 is “strongly agree.” Although the students performed the first two PBL cycles in groups of three or four, Figure 4.20 shows that most students even enjoyed working together more as pairs rather than small groups. This change allowed students to voice their opinions more directly.

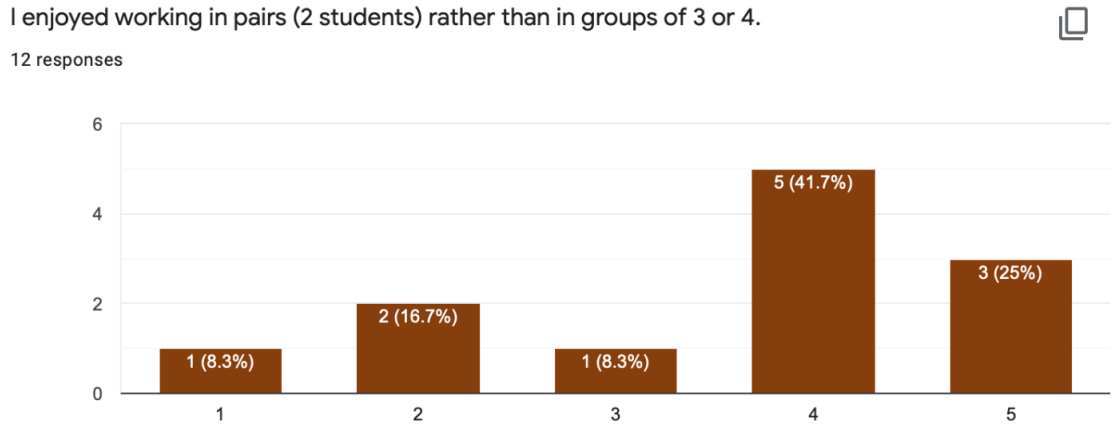

Figure 4.20 Student Preferences of Pairs vs. Small Groups

Figure 4.21 focused on discussion, which is an essential part of collaboration. Two thirds of students strongly agreed that discussion increased when students were working in pairs.

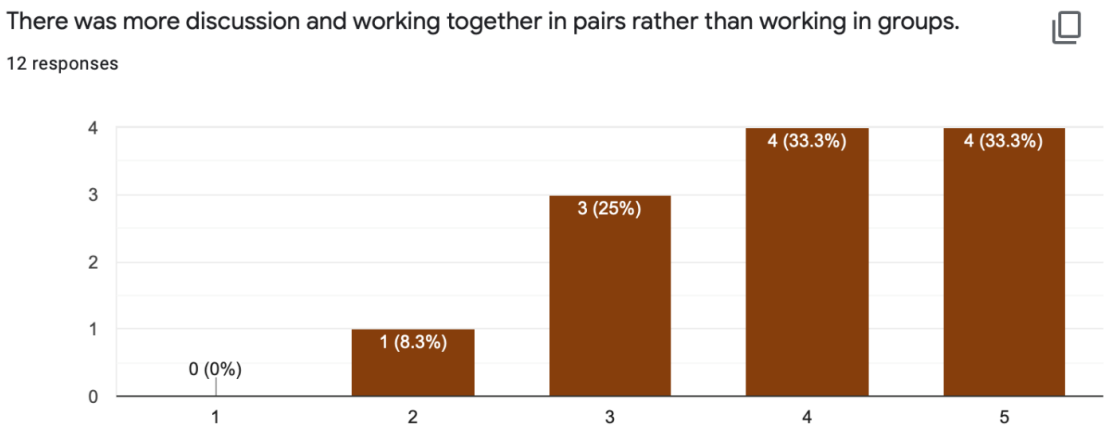

Figure 4.21 Discussion Levels of Pairs vs. Small Groups

An essential part of PBL and middle school pedagogy is providing meaning learning experiences for students. Making learning matter to middle school students can be challenging. However, the personal connection of perceiving the information as a lawyer and helping a friend, seemed to appeal to middle school students and increase their understanding as highlighted in Figure 4.22.

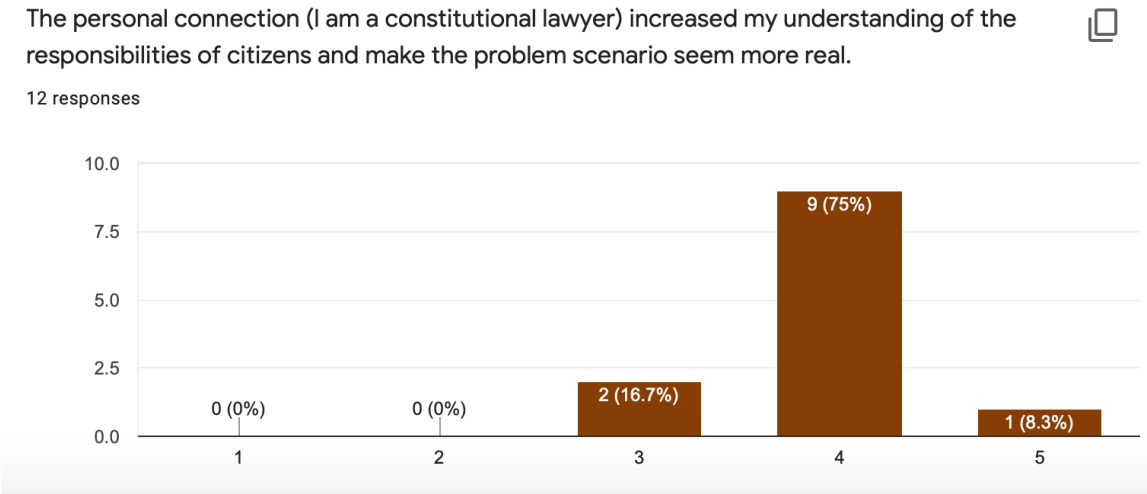

Figure 4.22 Personal Connection and Authenticity of Problem Scenario

While it is important to provide meaningful and engaging learning opportunities for students, the teacher-researcher wanted to know if PBL was also helping them learn

and retain the information, so she asked if they thought that PBL helped them retain information. Table 4.9 reveals the "Yes" or "No" open responses to the question, "Do you think that learning using the PBL process helps you retain (remember) information? Why or why not?" According to Table 4.8, students overwhelmingly believed that working through the PBL process helped them remember information. Finally, Figure 4.21 shows that 91.7% of students believed that their understanding of the responsibilities of citizens increased because of this PBL cycle.

Table 4.8 Student Response to Learning More Based on PBL Process

Yes	No
11	1

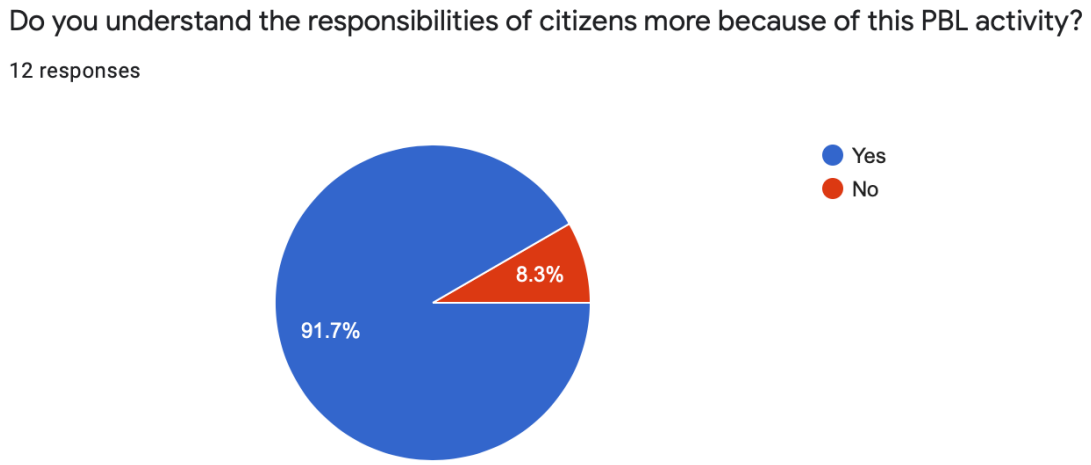

Figure 4.23 Responsibilities of Citizens

Furthermore, in an open response question, students were asked about the same subject. Table 4.9 shows that not only did understanding about the responsibilities of citizens increase, but also, students responded that the real-world application helps them see the impact that citizens cane make in their community.

Table 4.9 Students' Answers to Open Response Questions on the Post-PBL 3 Survey

Coding Category	**Theme(s)**	**Students' Responses on Survey**
Increased critical thinking	Students thought critically about the responsibilities of citizens and made new connections.	"I made a few new connections." "I learned more about responsibility of citizens." "I understood the topic a bit better." "It helps me see more stuff thab when we just run through it." (mindless memorization of facts)
Community impact/Responsibilities of citizens	Students understood how citizens have responsibilities in our representative democracy.	"It showed how citizen's rights were presented in daily life." "It helped because it showed me how citizens have a big impact." "It seemed more real because it gave me a realistic situation that could probably happen." "It helps me see in different people's perspectives."

PBL Cycle Four

For the final PBL cycle, some students wanted to work in groups of three or four while others liked working in pairs. Because student choice is a main component of a learner-centered ideology, the teacher-researcher chose to let students decide with whom

they would work best. Some students liked having the input from more than one other person, while others preferred working in pairs because there were fewer distractions. The final independent PBL cycle prompted student pairs and groups to invent their own problem scenario and then solve it together. Students worked through all steps of Hmelo-Silver's (2004) PBL cycle without any supports other than general questions that could apply to any problem scenario. The prompt was the following:

> There are many rights of citizens that are protected in the Constitution, and as American citizens, we have obligations (duties) and responsibilities to make our society a better place. Think of a problem that exists in our community or school. Write a problem scenario that explains that problem and ends with a question. After you explain your problem, work through the PBL process to determine the best solution. Be sure to include any Constitutional amendments or court cases that deal with your problem.

After students worked through the problem, they were presented with this final abstraction to create the following:

> Community involvement is a responsibility of citizenship. Write a blog article or newspaper article in which you describe your problem, outline the best solution, and urge members of your community to join you in solving the problem. Be sure to mention any specific amendments to the U.S. Constitution and/or previous court cases (precedents) that relate to your problem so that your reader will understand the importance of solving this problem.

Because students were instructed to create their own authentic problem scenario, the teacher-researcher was curious to see what problems might be important to them as

middle school citizens in their community. She wondered what topics they will discuss. Table 4.10 identifies some of the problems and topics that were discussed when students were solving the problem that they had identified.

Table 4.10 Civics Topics

Coding Category	**Theme(s)**	**Notes from Teacher's Journal**
Constitutional Amendments	Students recalled and applied various amendments to their own authentic scenario.	The First Amendment The Second Amendment The Sixth Amendment The First Amendment
Supreme Court Cases	Students recalled and applied various Supreme Court cases to their own authentic scenario.	*D.C. v. Heller* *Miranda v. Arizona* *Tinker v. Des Moines*

Table 4.11 reveals the notes from the teacher's journal. During the fourth round of PBL, students were able to choose if they worked in pairs or in groups of three or four. The themes that emerged from the teacher-researcher's observations were student choice in learning, collaboration, and increased critical thinking skills.

Table 4.11 Teacher's Observations During the Fourth Independent PBL Cycle

Coding Category	**Theme(s)**	**Notes From Teacher's Journal**
Student choice in learning	Students expressed excitement when being about to provide direction in their learning.	Student: "I like picking our problem. It makes it more fun." Teacher: "One student asked to work through a second problem because it was so fun."

		Teacher: “Some students did lots of research. Others wanted to see what they remembered on their own.”
Collaboration	Students collaborated to effectively solve PBL authentic scenarios.	Teacher: “Most groups of all sizes seemed to work well together.” Teacher: “There seems to be good discussion in the groups.”
Increased critical thinking	Students’ thinking was at a higher, more critical level.	Student aloud to themselves: “How do I know what I don’t know?” Teacher to student: “What parts of your scenario do you need to research and find out more information?”

Table 4.12 Students’ Answers to Open Response Questions on the Post-PBL 4 Survey

Coding Category	**Theme(s)**	**Students’ Responses on Survey**
Real-World Meaningful Connections	Students understood how the rights and responsibilities of citizens are exemplified in daily life.	“It showed how citizens’ rights were presented in daily life.” “It gave me a more in depth look in by working though this PBL cycle.” “I can’t picture it more so there is more for me to see and remember it more often than when I just read stuff.”

		"It seemed more real because it gave me a realistic situation that could probably happen." "It seems more real."
Community Impact of Citizens	Students realized that they can influence their community in a positive way because of working through this PBL cycle.	"It helps me see in different people's perspectives." "It helped because it showed me how citizens have a big impact."

Giving students a choice in their group's size created a positive learning environment where students could learn in a situation that they preferred and met their needs. In Figure 4.24, where 1 is "strongly disagree" and 5 is "strongly agree," 76.9% of students chose 4 or 5, signifying they agree that choosing their own groups helped them stay engaged.

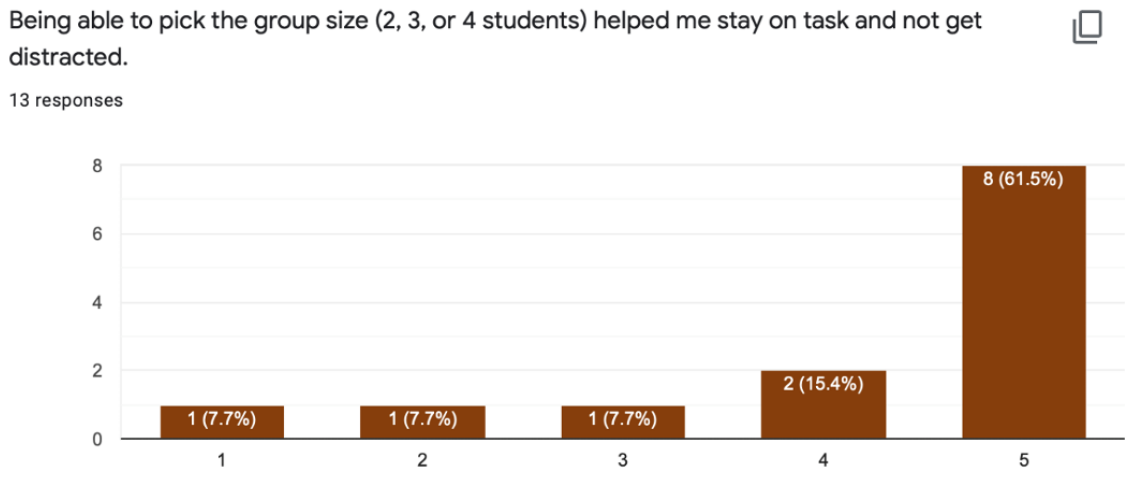

Figure 4.24 Student Choice in Group Size

Overall Satisfaction of PBL

After every round of PBL, the teacher-researcher asked her students if they preferred learning using PBL or the traditional lecture, notes, and memorization model. In Table 4.13, the results revealed that after every PBL cycle, students preferred PBL above traditional learning practices.

Table 4.13 Comprehensive Data: PBL vs. Traditional Practices

PBL Cycle	Percentage of Students Who Said They Preferred PBL Over Traditional Practices
1	78.6%
2	76.5%
3	66.7%
4	61.5%

After each PBL cycle, the teacher-researcher also asked her students if PBL helped them learn more about citizenship. Table 4.14 communicates that PBL is an effective learning tool to use for middle schoolers.

Table 4.14 Comprehensive Data: Understanding of Citizenship Because of PBL

PBL Cycle	Percentage of Students Who Said They Understood More About Citizenship Because of PBL
1	100%
2	94.1%
3	91.7%
4	76.9%

Summary

Chapter 4 presented a detailed explanation and analysis of the teacher-researcher's data collection process while also revealing the themes and data that emerged from this mixed methods study. First, a short rationale was reviewed from the previous chapters to explain the purpose of the study. Next, a detailed narrative conveyed

the process in which she modeled the PBL cycle for her students. In keeping with the nature of a mixed methods study, and more specifically, a convergent, parallel design study, qualitative tables were organized with the quantitative figures to reveal the data that emerged from each PBL cycle. Furthermore, both qualitative and quantitative data was mixed in the surveys and collected concurrently from the student surveys after each PBL cycle. In keeping with the perspective of a learner-centered ideology, both the students' learning process and the students' opinions about the learning process were equally valued. Finally, data were compared in each PBL cycle and included questions about understanding the citizenship standard as well as student learning preferences.

Within the data collection process, the teacher-researcher approached the study with a phenomenological lens in which the authentic problem scenarios were presented in such a way to the students to encourage them to have empathy for others that could be in their community. In keeping with a phenomenological perspective, the feelings of the students about their community, the fictional people in the authentic scenarios, and the students' own feelings about the PBL process as a learning method were all revealed in this study and throughout the data collection process. The students were very positive toward using PBL as an instructional method in a middle school civics classroom. While many aspects of active and engaging learning emerged from the data, the four major themes that were revealed overall in the data collection process are constructivism (accessing prior knowledge), building empathy, effective collaboration, and developing critical thinking skills.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Overview of Study

Problem of Practice, Research Questions, and Purpose Statement

After teaching in a middle school civics classroom, the teacher-research noticed that her students were not making connections to the real-life implications of citizenship in the United States. Her middle school students were struggling to understand the reality of their position in society as American citizens. As part of a comprehensive citizenship education, middle school students should be able to recognize the injustices around them as well as the contributions that they can make toward equity in their community. Teachers must move beyond mundane practices like lecture-based teaching and rote memorization. At first, the teacher-researcher thought about incorporating more project-based learning strategies into the curriculum, which was popular among some of the other social studies teachers at her school. For example, one teacher had students create a model of an Aztec temple. However, project-based learning is more limited and individualistic (Grant, 2002). The teacher-researcher desired an intervention that was more diverse, collaborative, and emphasized critical thinking skills.

Both project-based and problem-based learning are grounded in constructivism. Project-based learning is centered more on the needs and experiences of the learner; whereas problem-based learning is focused more on critical thinking and collaboration, working together to solve a problem that has no predetermined or “correct” answer. Even

though both are considered “learning-by-doing” strategies, one of the main differences between problem-based learning and the project-based-learning is the hands-off approach of the teacher; in problem-based learning, the teacher does not provide direct instruction, but rather facilitates learning (Hmelo-Silver, 2004). However, both strategies are based on constructivism that builds on the previous knowledge of the learner and facilitates growth by challenging every student regardless of his or her learning exceptionalities. The teacher-research desired to select an intervention that was learner-centered. Because she taught middle school students, she also wanted it to be more collaborative and challenging, which are both components of middle school pedagogy (Brown & Knowles, 2014). Problem-based learning is a way for students to learn both content and thinking skills; it also helps develops “flexible knowledge, effective problem-solving skills, self-directed learning skills, effective collaboration skills, and intrinsic motivation” (Hmelo-Silver, 2004, p. 235). These components of problem-based learning make it the obvious choice to implement as an intervention in the teacher-researcher’s middle school civics classroom.

Problem-based learning was the intervention that was chosen by the teacher-researcher because it is active and engaging for her middle school students and appeals to the needs of a variety of learners. It is naturally inclusive because the more voices that are heard makes it more interesting and engaging. It is a learning method that values diversity because more perspectives make the conversation richer. PBL is a way to facilitate culturally responsive teaching practices; since there is an “ill-structured problem” presented, there is not one finite correct answer (Hmelo-Silver, 2004). There are many correct answers that evolve out of problem-based learning; this flexibility

allows for cultural inclusion, which creates inherent value by including multiple outcomes. Correctly identifying and establishing a curriculum that includes problem-solving skills is an important component of helping students succeed in correctly understanding the many aspects of citizenship. Problem-based learning (PBL) strategies can be utilized to be simultaneously engaging and challenging for students from varying backgrounds.

This study is significant because through action research and the identification of a problem of practice, it allows the teacher-researcher to reflect on her own practice. Even though action research is not generalizable, there are elements that may be useful and helpful to other educators in a similar educational context with a similar population (Herr & Anderson, 2013). Because PBL is grounded in constructivism, the starting point can vary, so students with various backgrounds and learning needs can be both challenged and supported as they move through the PBL cycles. They are supported because of the scaffolding that the teacher provided but also through input from their peers in their collaborative groups. They are challenged because every student can learn and help solve the problem. Students who are gifted or advanced can do more extensive research and are not limited to one right answer. Because PBL was so successful in the teacher-researchers' middle school classroom, other educators should be encouraged to implement this intervention in their own classrooms, especially if they are looking for an intervention that is inherently inclusive, adaptive, and engaging.

The research questions for the study were:

RQ 1: What are the effects of using problem-based learning as an instructional method in a middle school civics classroom?

RQ 2: How does using problem-based learning to solve authentic, citizenship scenarios help middle school students make connections to their community?

The teacher-researcher used a mixed-methods approach to assess her students' achievement and engagement as well as identify their feelings and perspectives after performing selected problem-based learning tasks. These problem-based learning strategies helped develop the students' problem-solving skills to increase their engagement in classroom tasks and enhance their affective skills to order to solve real world problems as members of their community. Student interests were built upon to encourage students to dig deeper, ask questions, and find the answers. Problem-based learning was an avenue for student-centered learning; in that, students focus on their interests and solve problems that are meaningful.

Theoretical Framework

Problem-based learning is connected to cognitive development theory in which curiosity and patterning are emphasized (Sergiovanni, 1994). It is also a type of pragmatic curriculum, which guides students to fix problems as part of their learning. Problem-based learning is consistent with equitable curriculum philosophy, which also corresponds to a democratic educational system in which all people can learn, regardless of race, gender, and socio-economic factors (Null, 2011). The inclusion of all students and the belief that all students are capable of learning aligns with the tenants of constructivism and multiculturalism (Henson, 2020). However, it should be noted that not every student learns the same way or at the same pace. An effective teacher-leader should encourage his or her students' unique *inner curriculum* through self-awareness and self-

reflection; every person's experiences have value and can benefit the curriculum (Brubaker, 2004; Sergiovanni, 1994). Accessing one's inner curriculum is especially important during problem-based learning because it is necessary to enrich the discussions and brainstorming process to include diverse perspectives and experiences.

The learner-centered ideology embraces the individuality of each student; during the learning process, the student should be the focus over all others: institutions, teachers, principals, school subjects, parents, and society (Schiro, 2013, p. 105). Students, especially middle school students, learn through active and engaging experiences (AMLE); middle school learning should be "challenging, exploratory, integrative, and diverse" (2021, p. 44). The natural development of the student should be the focus of learning. The learner centered ideology emphasizes the naturally curiosity of the students and their desire to interact with those around them (Schiro, 2013). Problem-based learning is established on the foundation of constructivism and the learner-centered ideology.

Not only should the classroom and school environment be student-centered, but the curriculum should be integrated. Student needs should be met through "personalized learning and curriculum" (Null, 2011, p. 123). Teachers should structure the curriculum to seek to reach every student; this means allowing for student choice in the curriculum when possible. Student choice in the curriculum and students as change agents are also consistent with CRT (Brinegar, Harrison, & Hurd. 2019; Gay, 2018). According to Wesley Null (2011), "a pragmatic curricular philosophy is held together by a commitment to achieving goals such as affecting change, making a difference in students' lives" (p. 117). Using their knowledge from all subjects as database of sorts to

glean from enriches the PBL process and aids students' engagement. PBL is a method to appeal to student strength and interests across all subjects. When students see the relationship among the disciplines through real-world, active learning situations, it helps them see the value in learning. "The rationale for implementation of an integrated curriculum is to show how knowledge across disciplines is interrelated in a natural world" (Harrell, 2010, p. 146). Curriculum integration through student choice grounded in constructivism and diversity allow PBL to be effective, active, and engaging for middle school learners.

Research Site and Participant Selection

The study was carried out in the teacher-researcher's local middle school where she had been teaching for over four years. Of the middle school population, 16% is students of color, and 80% is considered economically disadvantaged by the Florida Department of Education. The teacher-researcher decided to collect a sub-sample of the larger sample; she selected one of her five class periods that she teaches each day. Because Efron and Ravid (2013) noted that action research does allow for a smaller sample as a type of convenience sample for practical reasons, the teacher-researcher's decision to carry out the study among one class period was acceptable. She chose the 17 students in her third period class, because they were the most diverse group of students compared to the other class periods. The 17 students included 7 girls and 10 boys, 5 students of color, 11 white students, 4 students with IEPs, and 2 students who were classified as gifted. No ELL students were included in the study. A unique component of action research is that the study of the teacher-researcher is from "the researcher's own

setting," which is the teacher-researcher's own school and classroom (Efron & Ravid, 2013, p. 65).

The civics class population was a mixture of genders and exceptionalities. Because some students were absent on some of the PBL days and other students chose not to participate in some aspects of PBL, the sample was a volunteer sample with elements of a purposeful sample to include a diverse population of students. The teacher-researcher chose to include a variety of students from various backgrounds and achievement levels to ensure diverse populations were represented in the data; these diverse groups included students of various backgrounds, such as race and gender and also including students with exceptionalities (IEP/504/gifted).

Data Collection Methods

Students followed Hmelo-Silver's (2004) cyclical process as they completed the PBL packets. The teacher-researcher observed the students and took notes in her reflection journal as they worked through the cyclical action research process (Herr & Anderson, 2016). She encouraged them to reflect on the process and how it helps them understand citizenship by asking them to respond to questions on a Google form. Students were encouraged to answer questions on a survey as they anticipate how they will engage in the PBL process and how it might help them better understand what it means to be a good citizen. The Pre-PBL Student Survey Google form sent to students through Google classroom was important as the students began the self-reflection process. After the students completed the Pre-PBL Student Survey Google form, the video showed the students performing PBL in action. That modeling helped them be more comfortable with the process. After viewing the video, students followed Hmelo-

Silver's (2004) cyclical process in Figure 3.1. The cycle was visible to students on the paper packets that they received to guide them through the PBL cycle. After each round (each authentic problem scenario), the teacher-researcher reflected and revised the scaffolds and supports that were used; furthermore, she thought about what she learned about PBL and what changes she would need to make for the next round. After each PBL cycle, she gathered both quantitative data and qualitative data through a student survey to increase validity (Creamer, 2018); this Google form survey included a mixture of both Likert-scale (quantitative) and open-response (qualitative) questions. She reflected by writing her thoughts in a teacher observation journal both before and after each PBL cycle. During each PBL process, she observed the students as they worked in groups of two, three, or four. After each PBL cycle, the students completed a mixed methods survey; the teacher-researcher concurrently collected both quantitative and qualitative data to obtain a holistic perspective to guide the changes she made before implementing the next PBL cycle. For the culminating, summative PBL assessment (fourth and final PBL round), students completed the PBL process in their group or pairs without any scaffolding or supports. This idea of group assessments, where "the entire groups rises and falls together," is consistent with CRT (Ladson-Billings, 2009). This final assessment was evaluated using a teacher-created rubric.

Results

The teacher-researcher performed a mixed-methods, convergent parallel design study with a phenomenological approach that emphasized the students' experiences with the learning method as well as their emotional connection to their community (Savin-Baden & Howell Major, 2004; Selvi, 2008). Both qualitative and quantitative data were

collected simultaneously during each PBL cycle from post PBL surveys, students' paper packets, and teacher observational and reflection data. Ultimately, there were five PBL cycles where data was collected, made up of (a) the whole-class pre-PBL cycle, in which all students contributed to the PBL process as one large group; (b) the three collaborative PBL cycles, in which students worked independently from the teacher-researcher in small groups of two, three, or four students, and scaffolds and supports decreased during each round of PBL; and (c) the fifth and final PBL cycle, which served as the final assessment where students identified their own PBL problem and its solution.

The first research question that guided this study was as follows:

RQ 1: What are the effects of using problem-based learning as an instructional method in a middle school civics classroom?

During the modeling PBL cycle (pre-PBL survey), four effects of using problem-based learning as an instructional method were revealed as the themes identified in Table 4.1; those effects were building an empathetic community connection, accessing previously learned information (Constructivism), wanting to help members of their community, and engagement in learning. In the first independent PBL cycle (PBL 1 survey), more effects using PBL in a middle school civics classroom are revealed in Table 4.3; these were other civics standards that were naturally incorporated in the students' learning through research and collaborative discussions, scaffolded supports were effectively used, and real-world connections were made through empathy. Additional effects of implementing PBL that came out during the second independent PBL cycle (PBL 2 survey) are outlined in Table 4.8; these are recognizing social inequalities and the application of knowledge through the development of critical

thinking skills. During the third PBL cycle (PBL 3 Survey), the themes of constructivism, critical thinking skills, inclusion of other civics standards also emerged as they did in the previous PBL rounds (Table 4.9). Also, additional themes of collaboration and career readiness were present. Table 4.11 (PBL 4 Survey) reveals that students were able to build on their previous knowledge (Constructivism) when they recalled constitutional amendments and Supreme Court cases. The themes that emerged from the final PBL cycle were student choice in learning, collaboration, and increased critical thinking skills.

The four major effects of PBL that emerged during multiple PBL cycles were (a) accessing prior knowledge (constructivism), (b) building empathy, (c) examining effective collaboration, and (d) developing critical thinking skills. These four major effects of PBL that were observed by the teacher-researcher were supported though quantitative research. Figures 4.3 and 4.5 reveal that most students recognized the benefit of problem-solving, both in helping them become good citizens and as a useful skill in real-life. Critical thinking is foundational to effective problem-solving; in that, effective problem-solving requires critical thinking skills. According to Figure 4.4 and Table 4.2, most students have some foundational knowledge in both problem-solving and the citizenship process. In keeping with the constructivist theory, it is important for students to have some knowledge in these areas to build and create new knowledge.

During the first independent PBL cycle, it was revealed that effective collaboration emerged in both the qualitative and quantitative data. Collaboration was one of the four major themes that was revealed though the teacher-researcher's observational data, but also, it occurred in the Likert scale question in the online student survey. In Figures 4.8, 4.9, and 4.10, most students agreed that their voice was heard in

their small group, responsibilities were shared, and contributions were equal. This distribution of labor is an important aspect of effective collaboration. Collaborative learning becomes ineffective when one person is completing most of the tasks.

In the second PBL cycle (PBL 2 Survey), Table 4.5 reveals the mean; the standard deviation was very low when students were asked to identify facts from the narrative. Gleaning key facts from a narrative requires critical thinking skills. One of the four major effects of PBL is building empathy, which is also consistent with the phenomenological approach of this study. Table 4.7 notes that most students felt empathy for the fictional person, Regina, and some recognized the racial injustice that she experienced. Students were able to respond to this racial injustice (community connection) by access their prior civics knowledge (constructivism) and conduct research (critical thinking skills) to help Regina (Figures 4.14 and 4.15).

The third PBL cycle (PBL 3 Survey) also supported identifying collaboration as one of the four major effects of implementing PBL as an instructional method in a middle school civics classroom. Working in collaborative pairs rather than small groups of three or four students was preferable for students (Figure 4.20) and seemed to foster more meaningful collaboration (Figures 4.19 and 4.21). The students had some understanding of the responsibilities of citizenship, but Figure 4.22 shows that engaging in this PBL cycle increased that understanding (Constructivism). Other themes that emerged during the 3rd PBL cycle were increased critical thinking skills and community impact/responsibilities of citizens.

The final PBL cycle was an assessment where the student groups chose the size of their groups (2, 3, or 4 students). They chose their community problem and then worked

though the PBL cycle to identify solutions to that problem. Students worked through all steps of Hmelo-Silver's (2004) PBL cycle without any supports other than general questions that could apply to any problem scenario. The problems that the students identified related to active citizenship, but they also incorporated other civics standards, which reveals the naturally inclusive nature of problem-based learning (Hmelo-Silver, 2004). Specifically, as seen in Table 4.11, students incorporated various constitutional amendments and Supreme Court cases when solving their problem. These standards included the following Florida civics standards: (a) "Distinguish how the Constitution safeguards and limits individual rights" (Standard #: SS.7.C.2.5), (b) "Evaluate Constitutional rights and their impact on individuals and society" (Standard #: SS.7.C.3.6), and (c) "Analyze the impact of the 13th, 14th, 15th, 18th, 24th, and 26th amendments on participation of minority groups in the American political process" (Standard #: SS.7.C.3.7) (Floridastudents.org). Students noted the potential reality of the PBL authentic scenarios when they said: "It showed how citizens' rights were present in daily life" and "It seemed more real because it gave me a realistic situation that could probably happen." Finally, the students realized the positive impact that students can have in their community: "It (PBL) helped because it showed me how citizens have a big impact." The themes that emerged from the final PBL cycle were student choice in learning, collaboration, and increased critical thinking skills.

Th second research question that guided this study was:

RQ 2: How does using problem-based learning to solve authentic, citizenship scenarios help middle school students make connections to their community?

Students primarily build connections to their community by having empathy for others and recognizing social inequities that could exist around them through examining the authentic scenarios. During the model PBL cycle where the whole class participated with the teacher, students had empathy for the military veteran who suffered from PTSD. The teacher-researcher wrote in her reflection, data collection journal, "I was pleasantly surprised how sympathetic they were to the war veteran. None of the solutions were for her to just get over it." Students also made connections to their community by incorporating other civics knowledge both through building on previous knowledge and researching new knowledge to work together to help solve the problem.

During the first independent PBL cycle, the teacher-researcher noted that the "Students relate to Rosa as a real person very quickly," which builds empathy. Even though the literature overwhelming suggested that problem-based learning is an ideal intervention for middle school students because it is engaging, flexible, and authentic (Brown & Knowles, 2014), the teacher-researcher wanted to understand her students' opinions. An essential aspect of CRT is to value the students' opinions about learning and the "nature of the curriculum" (Ladson-Billings, 2009). Figure 4.11 shows that the students overwhelmingly favored PBL to traditional learning. All the students agreed that PBL was a superior learning strategy and helped them understand citizenship more (Figures 4.11 and 4.12). In Table 4.6, the comments from the students revealed that they felt mad, sad, and bad for Regina. The students were feeling real feelings when proceeding through the PBL cycle about a fictional person's problem. The effectiveness of the phenomenological approach that was incorporated in this study was revealed through the students' emotions. Their feelings of empathy helped make the learning more

engaging, which is a tenant of middle school pedagogy (Bishop & Harrison, 2021; Brown & Knowles, 2014). This empathy led to students recognizing injustice in the authentic scenario.

During the second, independent PBL cycle, some students were sharing injustices that they observed around them. In the teacher-research's observational journal, she wrote, "A students talked about how her dad was pulled over because he is Mexican." During the third independent PBL cycle, most students noted that the personal connection of the PBL scenario "I am a constructional lawyer" gave the students more understanding about citizenship but also make the situation seem more real. Meaningful learning helped increase student understanding, which helped middle school students' engagement during the PBL process.

After every round of PBL, the teacher-researcher asked her students if they preferred learning using PBL or the traditional lecture, notes, and memorization model. In Table 4.12, the results revealed that after every PBL cycle, students preferred PBL above traditional learning practices. After each PBL cycle, she also asked students if problem-based learning helped them learn more about an aspect of citizenship. Table 4.13 communicates that PBL is an effective learning tool to use for middle schoolers.

Results Related to Existing Literature

After the students viewed the modeling video of PBL, the teacher-researcher wanted the "self-experiences and perceptions" of the students (Selvi, 2008), which is how a phenomenological approach was incorporated into the study's design. She thought it would be helpful for her students to see PBL in action to help them understand the process. After four rounds of PBL with data collected though online surveys after each

cycle as well as observational data collected in the teacher-researcher's observation and reflection journal, the overall feedback from the students was very positive towards using PBL as an instructional method. This mixed method study with a phenomenological approach aimed at collecting both qualitative and quantitative simultaneously through the post PBL surveys. The paper packets were used to guide students through each PBL cycle. The final abstraction in each paper packet provided an opportunity for students to show what they learned in a meaningful way through identifying their own problem and finding solutions to that problem.

The four major effects of PBL that emerged during multiple PBL cycles were constructivism (Bevevino et al., 1999; Carpenter, 2013; Henson, 2010; Hmelo-Silver, 2004; McCloskey, 2011; Pagnotti & Russell, 2015; Quebec Fuentes, 2013; Schiro, 2013; Trybus & Gibson, 2015; Zhbanova et al., 2010), building empathy (Farber & Bishop, 2018; Schiro, 2013; Seidman, 2013), effective collaboration (Belland et al., 2015; Brown & Knowles, 2014; Brubaker, 2004; Busey & Russell, 2016; Hmelo-Silver, 2004; Iwamoto et al., 2016; Lambros, 2002; McCloskey, 2011; Null, 2011; Pagnotti & Russell, 2015; Quebec Fuentes, 2013; Sergiovanni, 1994; Schiro, 2013), and developing critical thinking skills (Bevevino et al., 1999; Iwamoto et al., 2016; Little, 2012; Pagnotti & Russell, 2015; Schwab, 2013; Torp & Sage, 1998; Zhbanova et al., 2010).

Pre-PBL Cycle – Modeling

During the modeling PBL cycle, four effects of using problem-based learning as an instructional method were revealed in the themes identified in Table 4.1; those effects are building an empathetic community connection (Brown & Knowles, 2014; Brubaker, 2004; Farber & Bishop, 2018; Harrell, 2010; Ohn & Wade, 2009: Pagnotti & Russell,

2015; Seidman, 2013; Sergiovanni, 1994; Schiro, 2013; Torp & Sage, 1998), accessing previously learned information (Constructivism) (Bevevino et al., 1999; Carpenter, 2013; Henson, 2010; Hmelo-Silver, 2004; McCloskey, 2011; Pagnotti & Russell, 2015; Quebec Fuentes, 2013; Schiro, 2013; Trybus & Gibson, 2015; Zhbanova et al., 2010), wanting to help members of their community (Farber & Bishop, 2018; Ohn & Wade, 2009), and engagement in learning (Bishop & Harrison, 2021; Brown & Knowles, 2014).

PBL Cycle One

In the first independent PBL cycle, more effects using PBL in a middle school civics classroom are revealed in Table 4.3; these were other civics standards that were naturally incorporated in the students' learning through research and collaborative discussions (Belland et al., 2015; Brown & Knowles, 2014; Brubaker, 2004; Busey & Russell, 2016; Hmelo-Silver, 2004; Iwamoto et al., 2016; Lambros, 2002; McCloskey, 2011; Null, 2011; Pagnotti & Russell, 2015; Quebec Fuentes, 2013; Sergiovanni, 1994; Schiro, 2013), scaffolded supports were effectively used (Belland et al., 2015; Morgan, 2014) and real-world connections (Brown & Knowles, 2014; Brubaker, 2004; Harrell, 2010; Ohn & Wade, 2009; Pagnotti & Russell, 2015; Seidman, 2013; Sergiovanni, 1994; Torp & Sage, 1998) were made through empathy (Brown & Knowles, 2014; Farber & Bishop, 2018; Schiro, 2013).

PBL Cycle Two

Additional effects of implementing PBL that came out during the second independent PBL cycle are outlined in Table 4.8; these are recognizing social inequalities (Busey & Russell, 2016; Carpenter, 2013; Emdin, 2016; Ladson-Billings, 2009); Schiro, 2013) and the application of knowledge through the development of critical thinking

skills (Bevevino et al., 1999; Iwamoto et al., 2016; Little, 2012; Pagnotti & Russell, 2015; Schwab, 2013; Torp & Sage, 1998; Zhbanova et al., 2010).

PBL Cycle Three

During the third, independent PBL cycle (Table 4.9), the themes of constructivism (Bevevino et al., 1999; Carpenter, 2013; Henson, 2010; Hmelo-Silver, 2004; McCloskey, 2011; Pagnotti & Russell, 2015; Quebec Fuentes, 2013; Schiro, 2013; Trybus & Gibson, 2015; Zhbanova et al., 2010), critical thinking skills (Bevevino et al., 1999; Iwamoto et al., 2016; Little, 2012; Pagnotti & Russell, 2015; Schwab, 2013; Torp & Sage, 1998; Zhbanova et al., 2010), inclusion of other civics standards also emerged as they did in the previous PBL rounds (integrated curriculum) (Fogarty, 1991; Harrell, 2010, Zhbanova et al., 2010). Also, additional themes of collaboration (Belland et al., 2015; Brown & Knowles, 2014; Brubaker, 2004; Busey & Russell, 2016; Hmelo-Silver, 2004; Iwamoto et al., 2016; Lambros, 2002; McCloskey, 2011; Null, 2011; Pagnotti & Russell, 2015: Quebec Fuentes, 2013; Sergiovanni, 1994; Schiro, 2013) and career readiness (Howard, 2016) were present.

PBL Cycle Four

Table 4.11 reveals that students were able to build on their previous knowledge (constructivism) when they recalled constitutional amendments and Supreme Court cases. The four major effects of PBL that emerged during multiple PBL cycles were student choice in learning (Brown & Knowles, 2014; Brubaker, 2004; Emdin, 2016; Hmelo-Silver, 2004), effective collaboration (Belland et al., 2015; Brown & Knowles, 2014; Brubaker, 2004; Busey & Russell, 2016; Hmelo-Silver, 2004; Iwamoto et al., 2016; Lambros, 2002; McCloskey, 2011; Null, 2011; Pagnotti & Russell, 2015; Quebec

Fuentes, 2013; Sergiovanni, 1994; Schiro, 2013), and developing critical thinking skills (Bevevino et al., 1999; Iwamoto et al., 2016; Little, 2012; Pagnotti & Russell, 2015; Schwab, 2013; Torp & Sage, 1998; Zhbanova et al., 2010).

Limitations of Study

In this mixed-methods, action research study, there were three main limitations. Two of the limitations were outside of the teacher-researcher's control because they involved the location of the school where the study occurred and the demographics of the class population. The location of the middle school is in a small, rural environment where people are already sensitive to needs in their community; many of the people are related or grew up together. There is only one middle school in the entire county. Another limitation is that while the cohort of students was diverse in gender, race, and learning disabilities, there were no ELL (English-language learner) students in the selected class period. In fact, during the school year during which the teacher-researcher conducted the study, there were no ELL students in any of her class periods. The third limitation of the study was outsider teacher input. Because all the civics teachers had their planning periods scheduled during the same period, the teacher-researcher was not comfortable asking her colleagues to neglect their own students for a few days to observe and provide feedback on the study as it was happening.

Action Plan

Teacher Leadership

Many teachers, especially veteran teachers, are resistant to change. Changing one's teaching method is uncomfortable, but the results of this study support the research that middle-school students are not motivated to learn by lecture-style, rote

memorization, authoritarian teaching methods but need to be actively engaged in their own learning. This teacher-leader will be an agent of change and plans to promote problem-based learning as an instructional method in her school by offering professional development training in PBL after school. “Leadership is a process by which a leader influences others toward (collective) goal attainment” (Hamstra et al., 2014, p. 643). The teacher-researcher’s leadership philosophy focuses on being a transformational leader by creating a positive school community in many ways. First, she believes that every student can learn, and school leaders should make organizational and curriculum changes to create an optimal educational environment (Deal & Peterson, 1999) that motivates active learning through problem solving techniques (Ellerton, 2013). One change that she would make as a curriculum leader is to incorporate more problem-based learning strategies, which would align with the philosophy of the constructivist theory of since “a major source of student empowerment is the constructivist belief that the only way to really understand is through solving problems, thereby creating new understanding” (Henson, 2010, p. 7).

The teacher-researcher plans to be a curriculum leader who incorporates some of Hamstra’s (2014) principles of transformational leadership, which includes setting a long-term vision with high expectations, communicating with optimism about the future, and encouraging others to take risks. She will be a servant leader by modeling best practices and helping her colleagues with mundane tasks to earn their trust. Furthermore, Chanhoo et al. (2015) found that servant leadership increased the “knowledge sharing climate” (p. 1757). Through servant leadership, an effective leader can facilitate improvement and cohesion through collaboration (Vincente, 2017) and self-assessment

(Kyrgiridis et al., 2014). Regardless of the level of experience of a teacher, he or she can and should improve to become more a more effective educator. A school leader can encourage growth and improvement at any level. Caires and Almeida (2007) referred to an effective leader as a promoter and guide as well as an emotional support person, which is consistent with Goleman's (2001) assertion that possessing a "high degree of emotional intelligence" is a commonality among most effective leaders (p. 5). As an effective leader, the teacher-researcher sought to provide emotional support for her fellow educators while encouraging them to implement PBL strategies in their classroom.

Integrative PBL

The teacher-researcher has implemented Hmelo-Silver's PBL process more often in her classroom because it is integrative, easy to scaffold, and able to be applied to a diverse array of students regardless of their background experiences or learning abilities (i.e., special needs, learning disabilities, gifted). Her hope is that through the engaging, inclusive nature of PBL, students of diverse backgrounds will feel valued, will become engaged in solving problems collaboratively, and will understand and be able to apply problem-solving steps. The action plan will be to repeat the steps of PBL with various groups among her student population and encourage other educators to incorporate PBL as well.

As a classroom teacher-leader who is involved in curriculum planning and mapping for the school, the teacher-researcher seeks to empower both her students and teacher colleagues to solve problems and become life-long learners and risk-takers. This PBL perspective is in alignment with social constructivist grounded theory, which combines data analysis and qualitative reflection to allow for more expansive conclusions

(Butterfield, 2009). Creative collaboration should take place among school leaders and teachers, and creative leadership is a key element in fostering community (Brubaker, 2004). Through this collaboration, the teacher-research will seek to use problem-based learning to incorporate brainstorming and questioning techniques to facilitate limitless and integrated learning. The problem of practice highlights a need for an instructional method that is both challenging and engaging in a middle school classroom. By encouraging collaboration among teachers, the teacher-researcher will guide her colleagues to incorporate PBL in their curriculum. Teachers, students, and administrators should be working towards the same goal, and that destination is developing a curriculum that fosters the learning and success of all students, regardless of their background or curricular needs. In this study the teacher-researcher learned that PBL is naturally integrative with multiple civics standards, but teachers can also work together to create PBL authentic scenarios that integrate subject areas within PBL problem scenarios.

Student Choice in Learning

Hmelo-Silver's (2004) problem-based learning cycle also can be applied to school problems; teachers and administrators can work together to uncover solutions to school, classroom, and curriculum problems for the mutual benefits of everyone. Middle school student engagement has become an issue in the modern classroom as many distractions exist for middle school students. Problem-based learning is a meaningful, instructional method that engages students in active learning experiences that captures their attention. Students are empowered through student choice in their learning. Going forward, the teacher-research will look for ways to incorporate more opportunities for student choice

in learning and provide leadership and training to encourage her teacher colleagues to do likewise.

Reflection

The teacher-researcher plans to incorporate reflective practices and implement more action research studies to evaluate her teaching practices. If positive changes are to be made in education, teachers must be reflective about their practices; they should be open to innovation in education and engage in their own research to improve their methods (Goodnough, 2006). According to Efron and Ravid (2013), action research employs teachers themselves as the researchers, and they study their own practice to make improvements. The principle of constructivism lends itself to action research because of its reflective and cyclical nature (Butterfield, 2009). Quebec Fuentes (2013) noted, "One of the unique aspects of action research is the repeated cycles of planning, acting, observing, and reflecting" (p. 94); action researchers should make appropriate modifications and then repeat the cycle. As an insider, a teacher-researcher should understand that although he or she is in the same classroom environment continuously, there are still new ideas and strategies that may reveal themselves as he or she analyzes the data. Action research that is grounded in social constructivist theory lends itself to reflection and collaboration (Butterfield, 2009). Teacher-researchers must be, "open to unexpected outcomes that emerge from engaging in practitioner action research" (Quebec Fuentes, 2013, p. 98) and be willing to make improvements in their practices.

PBL in the community

Communicating the ongoing processes and results of the PBL projects in the classroom will be a goal of the teacher-research as she plans to connect the school with

its community. Feedback will be continual and sought from all stakeholders in order to make the problem-solving process more relevant to meeting the needs of the community. The teacher-researcher's plan, as an effective school leader, will be proactive to speak and volunteer in various civic and religious organizations in the community to learn about their needs and perspectives. She will thereby be able to understand the needs and concerns of the community and communicate to them the vision and purpose of the PBL activities in the classroom. Encouraging this relationship helps maintain open communication and fosters mutual support. To increase the diversity of influence on the topics studied in the PBL curriculum, she will reach out to underserved communities so that their perspectives are heard, and the problems that are important to those stakeholders will be incorporated in the PBL authentic scenarios. The goal is that instead of the teacher-researcher creating fictional scenarios to challenge her students, teachers and students will be so connected to the needs in their community that they will seek to solve those real problems.

Recommendations of Future Research

An area of research that is needed to enhance our understanding of instructional methods is to compare PBL strategies to other engaging learning strategies to uncover the efficacy of PBL among middle school students. Through the cyclical and expansive nature of action research, the teacher-research also plans to research the best strategies when implementing PBL in elementary and high school classrooms. The teacher-research will seek to expand the PBL curriculum and work with the school's leadership and the district's school and community relations' office to incorporate PBL to help solve school problems and provide possible solutions to community issues. Problem solving is a

diverse skill and is worth including in the curriculum as a pedagogical process because it is a skill that will aid the learner throughout his or her life in many areas and teach the learner to have an activist perspective of pursuing positive changes in society.

The teacher-researcher hopes that her findings will encourage other educators to incorporate problem-based learning (PBL) strategies in their classrooms. Because PBL can be easily adapted, it can be incorporated into any subject area's curriculum plan. The flexibility of PBL also can be used as a tool to scaffold the learning standards for any type of learner; this flexibility makes it a useful tool to meet the engaging and academic needs of all learners, including students with disabilities. Additional research could focus on using PBL as an intervention for students of varying exceptionalities and to evaluate which supports would be needed for these populations. The hope of the teacher-researcher is that PBL will become an accepted practice and a common strategy to use in diverse classrooms to engage learners. Other areas of research could be to explore using PBL as a foundational structure for a curriculum framework of civics education, including other subject area standards in the PBL authentic problem scenarios, expanding PBL to elementary and high school classrooms, and focusing research on group size in PBL collaborate learning groups.

Furthermore, since PBL is highly adaptive, additional research could investigate how to use PBL most effectively during a pandemic, such as strategies to facilitate instruction during an economic lockdown like the one that occurred in March of 2020 because of the covid pandemic. PBL is flexible because it is viable in both a classroom and virtual learning context. It could be highly effective as an online instructional method during a pandemic because students can engage in the strategy independently and direct

their own learning. Student can meet in small groups or pairs virtually and work through the PBL authentic scenarios together. The ability to meet and learn independently of a teacher allows students to progress in their learning even of their teacher becomes ill. Moreover, research could be carried out to see how PBL can best be used during a pandemic in other subject areas.

Summary

Excellent teacher-leaders strive to collaborate with fellow teachers, reach out to every student, and try new teaching methods and strategies (Ritter & Jensen, 2010). Effective educators value collaboration among students as well as among teachers and their students (Brubaker, 2004). The curriculum should be a creative outlet that facilitates student choice for students to explore their awe and wonder of the world (Brubaker, 2004).

As the chosen intervention, the teacher-researcher utilized Hmelo-Silver's (2004) PBL plan as the steps in which her students proceeded though as they explored solutions to authentic problem scenarios. First, students were given a problem. Second, they identified the applicable facts that were related that problem. Next, the students brainstormed possible solutions. Fourth, they researched areas of deficiencies. Finally, the students reflected on the new knowledge obtained (Hmelo-Silver, 2004) and created an abstraction that provided solutions to the problem that combines both previous and new knowledge. The constructivist theory of building on prior knowledge to obtain new knowledge (Henson, 2010) was the foundation of this problem-based learning process. The teacher-researcher predicted accurately that her students may be uncomfortable at first, but they will be more engaged in learning through PBL. She also was accurate when

she predicted that most of the students would prefer PBL to more traditional learning methods. The teacher-researcher observed that PBL was more collaboratively engaging for her students, increased their content knowledge in American citizenship and other civics standards, and encouraged the students to become more civic-minded and advocate for social equity among underserved populations.

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APPENDIX A

POST-PBL 1 SURVEY

Did you understand the problem scenario?

Yes

No

Did you use the first tutorial to help you?

Yes

No

Did you use the second tutorial to help you?

Yes

No

Defining "Naturalization" first helped me in the rest of the PBL process.

Strongly disagree

1

2

3

4

5

Strongly agree

Each of the students in my group contributed about equally.

Strongly disagree

1

2

3

4

5

Strong agree

Each of the students in my group had his or her own unique role (job) in the group. (Examples: researcher, brainstormer, writer) or responsibilities were shared in the group.

Each student had a unique job in the group.

1
2
3
4
5

Responsibilities were shared in the group.

All group members contributed to the PBL relatively equally.

One or two students did all the work.

Work was shared equally.

Was your voice heard in your group?

Not at all

1
2
3
4
5

Yes, definitely

Do you understand the citizenship process more because of this PBL activity?

Yes

No

When learning about citizenship, do you prefer this PBL method of learning or the traditional method of lecture/discussion/notes?

PBL

Traditional learning

If you prefer PBL, how does it help you learn about citizenship? What are advantages to problem-based learning?

Your answer

Were you able to make new connections through PBL? What are new connections/understandings about citizenship you made by going through the PBL process?

Your answer

How did the personal connection (Rosa Santo''s problem) increase your understanding of the citizenship process?

Your answer

What are the disadvantages to problem-based learning?

Your answer

When learning about the rights and responsibilities of citizens, do you prefer this PBL method of learning or the traditional method of lecture/discussion/notes?

PBL

Traditional learning

Reflect on the PBL process: How did it help you understand the citizenship process? Did the process seem more real? If so, why? What would you change about the PBL process?

Your answer

APPENDIX B

POST-PBL 2 SURVEY

Did you understand the problem scenario?

Yes

No

I wish the tutorials were there to help me if I needed them.

I didn't miss them.

1

2

3

4

5

I need those tutorials.

Defining "Detain" and "Violate" first helped me in the rest of the PBL process.

Strongly disagree

1

2

3

4

5

Strongly agree

Both myself and my partner contributed about equally.

Strongly disagree

1

2

3

4

5

Strong agree

I enjoyed working in pairs (2 students) rather than in groups of 3 or 4.

Strongly disagree

1

2

3

4

5

Strongly agree

There were less distractions working in pairs.

Strongly disagree

1

2

3

4

5

Strongly agree

I participated more and learned more in pairs compared to performing PBL in a group of 3 or 4 students.

Strongly disagree

1

2

3

4

5

Strongly agree

There was more discussion and working together in pairs rather than working in groups.

Strongly disagree

1

2

3

4

5

Strongly disagree

Do you understand the rights of citizens more because of this PBL activity?

Yes

No

When learning about the rights of citizens, do you prefer this PBL method of learning or the traditional method of lecture/discussion/notes?

PBL

Traditional learning

Compare and contrast working in pairs versus groups. What are the benefits and drawbacks to each?

Your answer

When going through the PBL process, which do you prefer (pairs or groups) and why?

Your answer

Were you able to make new connections through PBL? What are new connections/understandings about the rights of citizens you made by going through the PBL process?

Your answer

How did the personal connection (Regina Smith's problem) increase your understanding of the rights of citizens? Did you emphasize (feel bad/frustrated/mad) for her?

Your answer

What are the disadvantages to problem-based learning?

Your answer

When learning about the rights of citizens, do you prefer this PBL method of learning or the traditional method of lecture/discussion/notes?

PBL

Traditional learning

Reflect on the PBL process: How did it help you understand how citizens have rights? Did the process seem more real? If so, why? What would you change about the PBL process?

APPENDIX C

POST-PBL 3 SURVEY

Did you understand the problem scenario?

Yes

No

I wish the tutorials were there to help me if I needed them.

I didn't miss them.

1

2

3

4

5

I need those tutorials.

Being able to pick the group size (2, 3, or 4 students) helped me stay on task and not get distracted.

Strongly disagree

1

2

3

4

5

Strongly agree

I was able to work through the PBL process comfortably without Mrs. Rowland providing the guided questions for each PBL step.

Strongly disagree

1

2

3

4

5

Strong agree

Do you understand the responsibilities of citizens more because of this PBL activity?

Yes

No

When learning about the responsibilities of citizens, do you prefer this PBL method of learning or the traditional method of lecture/discussion/notes?

PBL

Traditional learning

If you liked picking the size of your groups, why did you like it? How was it helpful?

Your answer

List some topics that you discussed out loud as a pair or group.

Your answer

Were you able to make new connections through PBL? What are new connections/understandings about the responsibilities of citizens you made by going through the PBL process?

Your answer

The personal connection (I am a constitutional lawyer) increased my understanding of the responsibilities of citizens and make the problem scenario seem more real.

Strongly disagree

1

2

3

4

5

Strongly agree

Did you become aware of any new advantages or disadvantages to problem-based learning? If so, what?

Your answer

When learning about the responsibilities of citizens, do you prefer this PBL method of learning or the traditional method of lecture/discussion/notes?

PBL

Traditional learning

Do you think that learning using the PBL process helps you retain (remember) information? Why or why not?

Your answer

Do you wish I had used the PBL process as a teaching method more throughout this school year?

Yes

No

Do you think that going through the PBL process before you took the Civics EOC EXAM would have helped you answer the types of questions that are on the exam? Why or why not? (Please do not reveal any specific information from the exam.)

Your answer

Reflect on the PBL process: How did it help you understand how citizens have responsibilities in our representative democracy? Did the process seem more real? If so, why? What would you change about the PBL process?

APPENDIX D

PBL 1

Group members names:

Period:

Problem-Based Learning

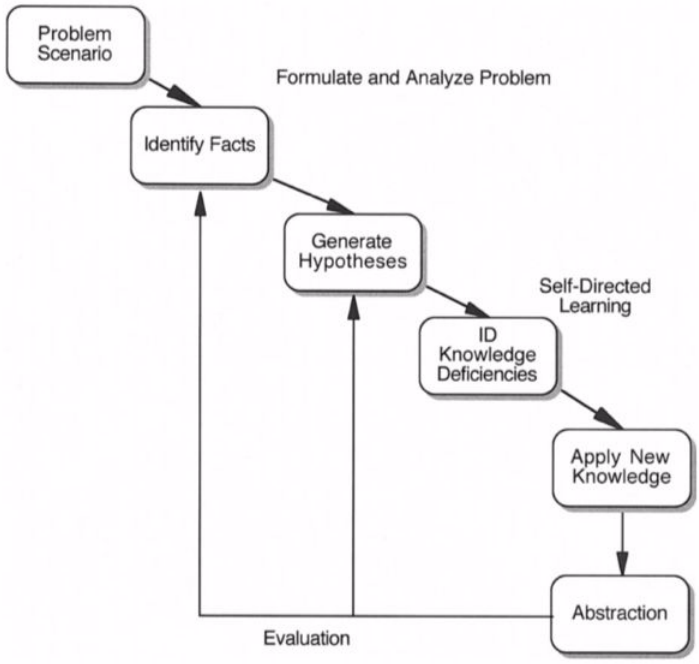

Fig. 1. The problem-based learning cycle.

1. Problem scenario

Rosa Santos from Brazil has lived in the U.S. for 6 years wants to become an American citizen. She works in a hotel and speaks very little English. She doesn't own a car but relies on public transportation to get from home to work. Create a plan for Rosa to become an American citizen.

2. Identify facts

· Fact 1:

· Fact 2:

· Fact 3:

· Fact 4:

· Fact 5:

3. Define the following term:

· Naturalization:

4. Brainstorm and Generate Hypotheses: What steps and requirements will Rosa need to complete to become a citizen?

(Need Help? Go to this Tutorial: https://floridastudents.org/PreviewResource/StudentResource/116268)

5. Identify knowledge deficiencies: Using your chromebooks, research the steps to citizenship. Which steps has Rosa already completed? Which steps does she still need to complete?

6. Apply new knowledge: Look again at your hypotheses. Did you miss any steps or requirements for citizenship? In what order should Rosa complete the necessary steps?

7. Abstraction: Create a timeline/plan (days, months, years) for Rosa to become a citizen.
Draw a chart.

8. Now that Rosa is an American citizen. What are her rights, obligations, and responsibilities as a citizen?

(If you need help, go to this tutorial: https://floridastudents.org/PreviewResource/StudentResource/120333)

APPENDIX E

PBL 2

Group members names:
Period:

Problem-Based Learning

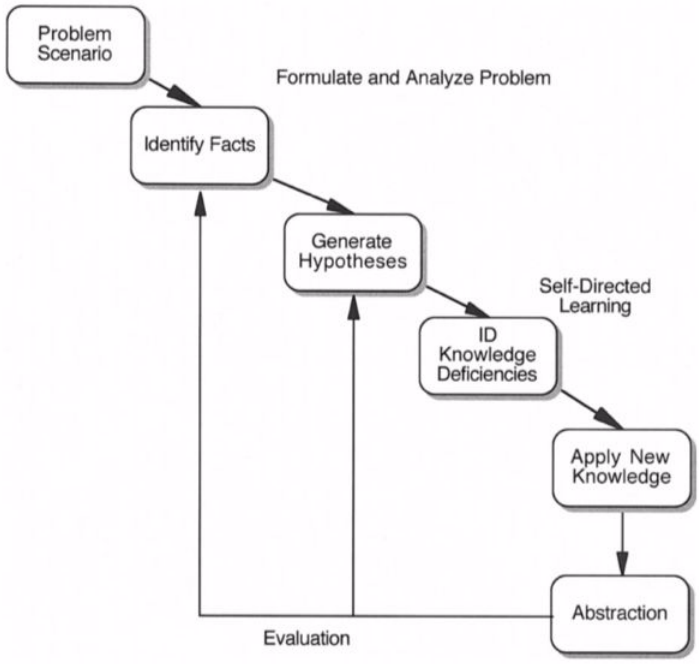

Fig. 1. The problem-based learning cycle.

1. Problem scenario

Regina Smith is an African-American chef. While driving home from her restaurant, she was pulled over and detained by a police officer without cause (for no reason). It was later revealed that because she was a woman of color, the officer searched her car without her permission and found a small handgun. Even though she insisted that she had a gun

permit, the officer arrested her on the spot and would not let her speak. He did not remind her of her rights, and it was not explained to her why she was being arrested. She was held in jail for months; she was not told what her crime was. When she finally stood before a judge, he told her that she could go home, but he informed her that her fine was 2 million dollars. How should she defend herself so that she can go free?

2. Identify facts

· Fact 1:

· Fact 2:

· Fact 3:

· Fact 4:

· Fact 5:

· Fact 6:

· Fact 7:

· Fact 8:

3. Define the following terms:

· Detain:

· Violate:

4. Brainstorm and Generate Hypotheses: You are Regina Smith's friend. What advice would you give Regina as she prepares to defend herself to the judge?

5. Identify knowledge deficiencies: Using your chromebooks, research the specific American rights that were violated in Regina's situation.

6. Apply new knowledge: Look again at your hypotheses. Did you miss any specific amendments to the U.S. Constitution that were violated in Regina's situation? Be sure to include the amendment number.

7. Abstraction: Write a speech to the judge in which you defend Regina and remind the judge of her Constitutional rights.

8. Which Supreme Court cases are related to Regina's case?

APPENDIX F

PBL 3

Group members names:
Period:

Problem-Based Learning

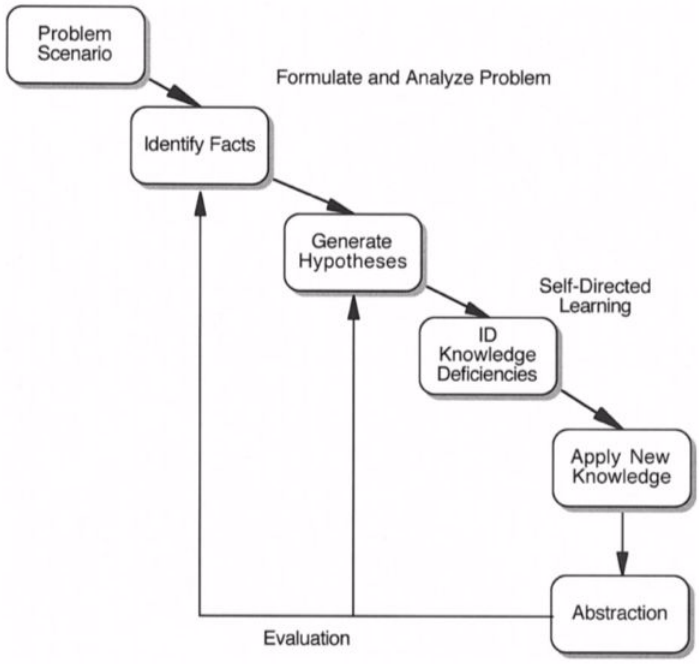

Fig. 1. The problem-based learning cycle.

1. Problem scenario

The governor of Louisiana is proposing a law to help the state save money. He thinks that trials by jury are not necessary and are too expensive because the state has to pay the jury members to report to jury duty and serve on a jury if selected. You are a constitutional lawyer hired by the PAC (Political Action Committee) “Americans for Freedom” to write a legal brief in the form of a letter to inform the governor of his mistake and that it

violates the U.S. Constitution and previous court cases (precedents). Why is serving on a jury an important responsibility of citizens in our democracy? What might happen if all cases were decided by judges? Which Constitutional amendments and court precedents (Duncan v. Louisiana, etc.) support the rights of citizens to play an active role in the judicial system by serving on juries?

2. Identify facts:

3. Define any terms you don't understand:

4. Brainstorm and Generate Hypotheses:

5. Identify knowledge deficiencies:

6. Apply new knowledge:

7. Abstraction: Write a legal brief in the form of a letter to inform the governor that he can't get rid of trials by juries because it violates specific amendments to the U.S. Constitution and previous court cases (precedents) such as Duncan v. Louisiana.

8. What other rights and responsibilities of citizens are an important part of our democracy?

APPENDIX G

PBL 4 – FINAL ASSESSMENT

Group members names:
Period:

Problem-Based Learning

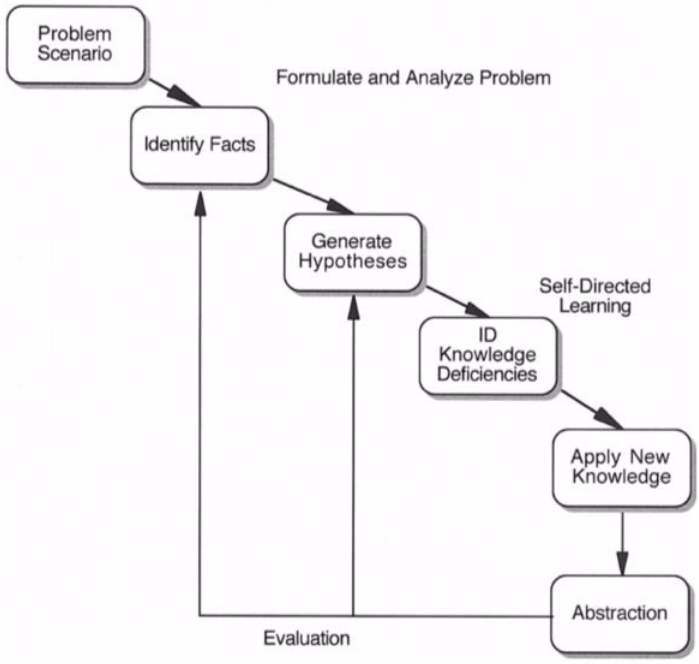

Fig. 1. The problem-based learning cycle.

1. Problem scenario

There are many rights of citizens that are protected in the constitution, and as American citizens, we have obligations (duties) and responsibilities to make our society a better place. Think of a problem that exists in our community or school. Write a problem scenario that explains that problem and ends with a question. After you explain your problem, work through the PBL process to determine the best solution. Be sure to include any Constitutional amendments or court cases that deal with your problem.

The right/obligation/responsibility that my problem focuses on is

2. Identify facts:

3. Define any terms you don't understand:

4. Brainstorm and Generate Hypotheses: (Before you start your research, think of possible solutions to your problem.)

5. Identify knowledge deficiencies: (What facts don't you know that would help you find the best solution to your problem?)

6. Apply new knowledge: (After researching on the internet, what are some of the best solutions to your problem?)

7. Abstraction: Community involvement is a responsibility of citizenship. Write a blog article or newspaper article in which you describe your problem, outline the best solution, and urge members of your community to join you in solving the problem. Be sure to mention any specific amendments to the U.S. Constitution and/or previous court cases (precedents) that relate to your problem so that your reader will understand the importance of solving this problem.

APPENDIX H

LETTER TO THE EDITOR/BLOG POST RUBRIC

	Poor 1 pts	Fair 2 pts	Good 3 pts	Excellent 4 pts
Focus	Poor Attempts to take a position on a community problem, but the position is unclear. Provides minimal support.	Fair Takes a position on a community problem, but is underdeveloped. Provides uneven support or may be repetitive.	Good Takes a clear position on a community problem supports it with some relevant reasons and/or examples. Good development of ideas.	Excellent Takes a clear position on a community problem and supports it consistently with well-chosen reasons and examples.
Details	Poor There are no specific details from experiences to support your claim.	Fair One or two details from experiences support your claims. Details may be repetitive.	Good Three or four details from personal experiences are used to support your claim.	Excellent Five or more specific details from personal experiences are used to support your claims throughout the letter.
Structure	Poor Writing did not have the look of a "letter" and was not a page long.	Fair Writing either did not look like a "letter" or was not a page long.	Good Writing was in the letter format and was the correct length of one page.	Excellent Writing was in complete "letter" format and was longer than one page.
Conventions	Poor Errors in grammar, spelling and punctuation prevent the reader from fully understanding the writing.	Fair Errors in grammar, spelling, and punctuation sometimes interferes with the reader's abililty to understand.	Good Any errors in grammer, spelling or punctuation do not interfere with the reader's ability to understand the writing.	Excellent Almost no errors in grammar, spelling and punctuation. None of those erros interfere with reader's ability to understand the writing.

Revised from Rcampus.com

APPENDIX I

POST-PBL 4 SURVEY

I enjoyed creating my own problem scenario.

Strongly disagree

1

2

3

4

5

Strongly agree

If you enjoyed creating your own problem scenario, please tell me why.

Your answer

I wish the tutorials were there to help me if I needed them.

I didn't miss them.

1

2

3

4

5

I need those tutorials.

If you worked through the PBL process in google docs with your partner/group, did you prefer it to paper? Why or why not?

Your answer

Being able to pick the group size (2, 3, or 4 students) helped me stay on task and not get distracted.

Strongly disagree

1

2

3

4

5

Strongly agree

I was able to work through the PBL process comfortably without Mrs. Rowland providing the guided questions for each PBL step.

Strongly disagree

1

2

3

4

5

Strong agree

The more times we worked through the PBL process - the easier it was, and I was more comfortable doing it.

Strongly disagree

1

2

3

4

5

Strongly agree

Do you understand the rights, responsibilities, and obligations of citizens more because of this PBL activity?

Yes

No

When learning about citizenship, do you prefer this PBL method of learning or the traditional method of lecture/discussion/notes?

PBL

Traditional learning

If you liked picking the size of your groups and your group members, why did you like it? How was it helpful?

Your answer

List some topics that you discussed out loud as a pair or group.

Your answer

Were you able to make new connections through PBL? What are new connections/understandings about citizenship you made by going through the PBL process?

Your answer

Did you become aware of any new advantages or disadvantages to problem-based learning? If so, what?

Your answer

Do you think that learning using the PBL process helps you retain (remember) information? Why or why not?

Your answer

Do you wish I had used the PBL process as a teaching method more throughout this school year?

Yes

No

Do you think that going through the PBL process before you took the Civics EOC EXAM would have helped you answer the types of questions that are on the exam? Why or why not? (Please do not reveal any specific information from the exam.)

Your answer

Reflect on the PBL process: How did choosing your problem scenario help you understand how citizens have rights, responsibilities, and obligations in our representative democracy? Your answer