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# A Test Of Project-Based, Learner-Centered Pedagogy In A High-Needs, Urban Charter School

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A TEST OF PROJECT-BASED, LEARNER-CENTERED PEDAGOGY  
IN A HIGH-NEEDS, URBAN CHARTER SCHOOL

by

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A capstone submitted in partial fulfillment of the  
requirements for the degree of Master of Arts in Teaching.

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To my mother, Debra, my father, Jack, and my love, Chelseanne.  
Thank you for all of your unconditional love and support these past few years.  
Special thanks to Joe Lewis and Joey Cienian, whose mentorship has been invaluable.

*“We shall not cease from exploration,  
and the end of all our exploring  
will be to arrive where we started  
and know the place for the first time.”*  
- T.S. Eliot, *Four Quartets*

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## CHAPTER ONE

### Introduction

The education system in the United States operates like a pendulum- like so many things in our society, it swings and pulls, to the left and to the right, forwards and back, with each and every new attempts to fix, improve and/or revolutionize it. The education system is almost always in motion, swinging from one side to the other, back and forth, in various directions, decade by decade. However, when gravity eventually centers it, the pendulum finds equilibrium. Without gravity, the pendulum would cease to be a pendulum at all- it would be directionless and motionless, unless it was forcibly pulled toward or pushed away from one particular direction. And if multiple forces take hold, exhibiting their power upon the pendulum at the same time, the pendulum would be in a constant state of chaos- an absolute and constant state of disequilibrium. That is, until gravity takes effect.

To think of it another way, learning is an innate human experience. We all experience the process of learning, whether it is conscious or subconscious. This is akin to breathing, another innate human experience. But what happens if an influential group of people decide that breathing in a particular way is the best method for your health and well-being? That is, if you don't breathe their way, you're likely not breathing properly? Now apply this thinking to the typical American public school classroom. The teacher has their students learning in ways that the teacher, the school and/or the school district have decided is best practice. But best practice, regardless of what the practice is, simply



hasn't worked in all classrooms across the United States. In the same way that constant deep breathing may be good for your health, engaging solely in deep breathing hinders what should be a natural and subconscious process.

This notion, that the education system in the United States is perpetually and unnaturally affected by external forces, is integral in understanding the purpose of this research project. There are many approaches toward teaching and education that contain value and are proven effective in their own respect. Yet, in order to effectively execute each approach, it has been my experience that strict adherence to the approach's principles is required to obtain success. Sometimes those principles are contradictory in nature, and require one to outright accept the principle and reject all other principles, be they valid or not, based upon faith-based trust. However, in my experience, the more principled the approach, the more likely it is to face contradiction. And it is in the face of such contradiction that the validity of each approach is truly tested. In the case of this study, the project-based, learner-centered learning movement will be put to the test. For this study, the following question will be addressed: *How does a project-based, learner-centered pedagogical approach affect the learning, classroom experience and overall academic engagement of traditionally-marginalized and disadvantaged high school students?*

## **Context**

Within our society, and throughout my life, moral, social and political issues have been presented, debated and decided upon in ways where there are only two seemingly-acceptable outcomes: you're either with us or against us. This rhetoric of and

excluded middle has always vexed me. Centrism, or the desire to seek a judicial, pragmatic and realistic understanding of the world, just isn't all that sexy. In many cases, weighing the good with the bad is seen as trying to "split hairs." It's viewed as tedious, even contentious, and leads to people walking away from the table out of frustration when their belief system is shown to be flawed, incomplete or contradictory.

Recently I had the pleasure of attending an educational conference hosted by an organization whose mission it is to build a network of educators across the United States who share a passion and interest in project-based, learner-centered education. Their ultimate goal, as they explained it, was to revolutionize education for the better by inspiring grassroots, bottom-up movements around the country. It's a positive, bold and interesting approach toward affecting systemic educational changes. But what I discovered after spending some time at this conference was that, despite their overwhelmingly-positive and good-natured approach, the conference featured many instances of contradiction, especially as it pertains to their beliefs not matching their actions, and requests that attendees "just trust us" when asked to engage in role play-type activities. And as many of us have learned in these past few years, hearing the phrase "trust me" or "believe me" from a figure of authority and power has become a very good reason to engage in skepticism and question their process.

This experience, however, was not all bad. Returning home, I felt a renewed sense of purpose in my role as a humanities educator at a rather ambitious and forward-thinking urban charter school. Project-based, learner-centered education has many intriguing qualities about it, such as the concept of open-walled learning, or that learning can, and

will, take place anywhere at any time, therefore teachers should embrace seeking learning opportunities outside the walls of their classroom. This leads one to consider the purpose of the classroom and whether learning is best done sitting behind a desk at the discretion of the teacher. Another intriguing quality regarding project-based, learner-centered education is the notion that students bring with them experiences, ideas and interests that are as valuable, if not more so, than the content that is being taught. Being able to channel your students' talents, experiences and interests into the classroom is supposed to improve student engagement and learning, as well as improving the classroom culture and trust that is so paramount to any effective learning environment. Clearly, project-based, learner-centered education appears to be a good way to go- maybe even in contention for best practice. And I'm no stranger to project-based, learner-centered education, myself. But I hesitate to believe that there is simply one approach toward education, particularly in high school, that effectively works for all students.

Since the earliest days of my master's program, being "learner centered" was heralded as a progressive, positive approach toward education. Pitting "teacher-centered" against "learner-centered" formed a unique and worthwhile juxtaposition of two extremes, wherein there are successes and failures to each. And most, if not all, of the educators I've worked with implement a mixture of both teacher-centered and learner-centered pedagogy. But if one is to believe that project-based, learner-centered education, is best practice, that may lead to their dismissal of other viable and useful educational concepts and styles that may, in fact, work with students when project-based, learner-centered education does not. What I am suggesting, and where my motivation for

this study lies, is within dispelling the notion that we live in a black and white world- that one approach toward education surpasses all others.

When I was in my early twenties, I had a discussion with my father, who had recently rediscovered his sense of spirituality through religion. When I stated that I was agnostic, he dismissed the thought, stating that if I didn't believe in God then I was an atheist. Rebutting, I stated that I had not experienced God in my life, therefore I could not say that God existed. However, I never denounced the existence of God, since doing so would implicate me into believing God did not, and never did, exist. My stance was simply that I'm unable to confirm or deny the existence of God, and was fully content going through life open-minded but skeptical. His response: "You can't stand for nothing all your life."

Yet I do, in fact, stand for something. I stand for the right to put ideas to the test; to take what is presented, strip away the glory and politics, and actually see if it does what it says it does. Ideas, in and of themselves, are constantly weaponized, being used to convince others to believe in something. But belief can be dangerous if the ideas that were used to create the belief is not matched with real-world experiences or proven action. Returning to the case of the pendulum, the ideas, in this case, are the forces being exerted upon the pendulum absent from gravity's consent, and gravity is the scientific method required to ensure that those ideas are, indeed, valid and reliable. Without gravity, one single push or pull of the pendulum would send it flying only in the direction of which it was pushed or pulled. It takes gravity to hone the movement of the pendulum from one side to the other, or from one direction to another direction that may not even be

the counterbalance of the direction it was going. It takes gravity to ensure that the pendulum continues to move until it finally reaches the equilibrium that brings balance. And by finding such balance, I believe our education system can thrive like it never has before.

### **Summary**

As it was stated previously, education is in a constant state of flux- pushed and pulled by efforts to fix, improve and/or revolutionize it. Those that seek to claim their educational approach often must reject viable and worthwhile ideas and principles of other educational approaches if they are to effectively and wholeheartedly implement their pedagogy. And this, for more reasons than one, is a problem. The belief that there is no middle ground - that “you’re either with us or against us” - has run its course in educational, political and social discourse. It’s time to dispel those notions.

For this study, I will apply the project-based, learner-centered educational approach to a classroom of traditionally marginalized and disadvantaged students in an urban charter school environment. Research into the learner-centered movement shows promising results, and seems like it would benefit students who have long struggled to find success in more teacher-centered, traditional classroom environments. However, I question the effectiveness of applying a project-based, learner-centered approach and nothing else. If learner-centered education doesn’t work for some students, namely the population targeted in this study, then there needs to be further evaluation of where project-based, learner-centered education is successful and where it falls short. This ensures that those calling for learner-centered education on a national level are grounded

in pragmatic truth- that gravity's effect over the pendulum still holds true, even if the swing is proven strong enough to generate a paradigm shift in education.

Throughout this study, I am steadfast in my efforts to determine what benefits there are to project-based, learner-centered education, as well as what setbacks, issues and/or complications may arise from its implementation. My current stance is that education must be balanced between multiple pedagogical forces, and that any hardlined educational approach is not going to work for everyone. However, my stance is malleable. As the study progresses, and as I spend more time learning about and practicing principled project-based, learner-centered education, I am well-aware that I may become, in some ways, an advocate for the movement. But in order to answer the question, *“How does a project-based, learner-centered pedagogical approach affect the learning, classroom experience and overall academic engagement of traditionally-marginalized and disadvantaged high school students?”* I've decided to set out as skeptical and see where the study takes me.

## CHAPTER TWO

### Introduction

Within this chapter, I have evaluated relevant research regarding the topic of project-based, learner-centered education to better understand how to approach answering this study's question, "*How does a project-based, learner-centered pedagogical approach affect the learning, classroom experience and overall academic engagement of traditionally-marginalized and disadvantaged high school students?*" The research in this chapter is organized and analyzed in three distinct ways: the need for project-based, learner-centered education, how project-based, learner-centered education is understood, and how project-based, learner-centered education can be implemented in the classroom.

In studying the need for project-based, learner-centered education in the United States, several interesting and important themes emerge. These themes generate a compelling argument for an educational paradigm shift and suggests that research into project-based, learner-centered education could be a viable solution to issues regarding our current education system. The bulk of the research in this chapter is focused around developing a deeper understanding of what project-based, learner-centered education is, what its attributes are, and what current research suggests about it. It is in this section that I will explain project-based, learner-centered education and discuss its components and attributes. Lastly, I will use research to explain how to implement a project-based, learner-centered pedagogy into the classroom and what practical application of this educational approach may look like within this study.

## **The Need for Project-Based, Learner-Centered Education**

The current state of education is outdated, ineffective and harkens back to the times of the industrial age, despite the fact that we are living in an information-age society. The current educational model standardizes education across the United States, leaving students who are unable to learn the required content and skills in the time allotted to fail in their learning, acquire learning deficiencies and increase their likelihood of dropping out of school (Watson, 2011). Additionally, this standardized educational system fails to account for the multitude of individual factors that affect and often impede the learning process for students, such as the socioeconomic status of a student or their cultural background. Simply put, students who cannot conform to the current education system and keep pace with its stress upon learning in a time crunch are likely to see themselves being left behind or left out entirely.

Organizations such as the American Psychological Association have called for a shift toward learner-centered education in particular, arguing that learners should be treated as co-creators in their learning and should hold a key role in the decision-making processes of their education (Watson, 2011). Additionally, researchers have called for, “Customization and personalization in instruction for each individual learner and the creation of environments that support self-regulated learners who take control of their own learning” (Watson, 2011, p. 1518). But this cannot come from mere reforms to the current educational system. As Aslan & Reigeluth (2015) suggest, “Only a paradigm change -- from teacher-centered instruction, time-based student progress, and norm-referenced assessment to learner-centered instruction, competency-based student



progress, and criterion-referenced assessment -- can meet the needs of all students and truly leave no child behind” (p. 68). Specifically with learner-centered education, the education paradigm generates a healthy separation from the traditional, rigid and outdated system in place now and moves toward a system that works for it’s 21st century learners (Aslan & Reigeluth, 2016).

Attempts to create change with disadvantaged students, in particular, has had little to no success in recent decades, as the belief in high competency standards and expectations for higher test scores has not generated meaningful changes for at-risk students and fails to promote learning to all students (Watson, 2011). This leads to students weighing and engaging in dropping out of school, with nearly one-third of all high school students dropping out of high school altogether, further perpetuating the rate of disadvantage within their community (Watson, 2011). And as the rate of disadvantaged students continues to rise, the degree of disadvantage faced by these students will rise as well, especially when the educational system caters toward those who are capable of finding success within a rigid and standardized system (Watson, 2011). This is, in part, due to the bureaucratic systems in place which dictate how education should exist in the United States, as well as several other factors which comprise the makeup of the American education system.

The current state of education in the United States holds three key assumptions close to its vest: meritocracy and instrumentality, competition and standards, and control and the necessity of bureaucracy, which all restrict the development of project-based, learner-centered schools and has proven to hinder the academic development of many

students (Astuto & Clark, 1995). Meritocracy believes that individuals earn benefits based on their abilities and talents, and that they get what they deserve. This leads to assumptions within education that, “absolves schools of their responsibility to adapt to the needs of students, distracts attention from school processes that promote student failure, and excludes large numbers of students from meaningful learning opportunities,” particularly poor children and children of color (Astuto & Clark, 1995, p. 247).

Disadvantaged youth are further disadvantaged by schools which exclude them from meaningful opportunities due to meritocracy, which contributes toward intergenerational patterns of poverty and deprivation. Children are merely seen as potential contributors for the workforce rather than individuals with unique value, and disadvantaged youth are often instructed using curricula that leads to low-skills and low-pay employment opportunities.

Consequences of standards and competition in the education system are exacerbated by three factors: inequity between affluent and low-income students, the acceptance of a meritocratic school environment, and standardized testing, which is an insufficient measurement of achievement (Astuto & Clark, 1995). Competition leads to gaps in learning, skill development and other critical educational elements for many students in the education system. In addition, the bureaucratic system of education is rigid, leading to a system which disempowers its learners through overbearing control. It would seem that bureaucratic educational systems exist due to the underlying skepticism and suspicions about the motivation, initiative and talent of teachers and students. Because of these assumptions held by the current educational system in the United States,

the community for which these teachers and students live is further divided, harmed and ultimately seems unable to reach its full potential.

Society is composed of various parts, and when one part falters, it is felt throughout society. In the case of education, disadvantaged and “at risk” youth face incredible odds to overcome the obstacles and limitations which further perpetuate their disadvantage. Being disadvantaged refers to the processes that cause the production and reproduction of disadvantage from people and places. Specifically, educationally disadvantaged students are defined as being disadvantaged within their community, family and school, collectively, while the term “at risk” describes students with disadvantage who are more likely to experience educational struggles than other students and are in danger of failing in school and struggling with a transition from school to the workforce (Watson, 2011). The perceptions toward education and schooling by disadvantaged youth are often considered a risk factor as well, as is low teacher expectations, poor standards in planning and teaching by teachers, poor assessment in learning, and a widespread culture of anti-school and anti-education beliefs shared by peers (Watson, 2011). Research has shown that students are largely provided with intrinsic motivational orientations at a young age in school before extrinsic motivation becomes the primary orientation throughout middle and high school (Hansen & Stephens, 2000). Learning for the sake of learning becomes an afterthought as students progress through school, as challenging tasks are avoided or ignored and curiosity is essentially suffocated (Hansen & Stephens, 2000). The standardization of education eliminated the

humanity in teaching and learning, replacing it instead with rigorous benchmarks that are treated more as a to do list and less as a composition of character.

The need for human connection in the learning experience is not only desired, it's necessary. "Students want their teachers to know and care for them as unique persons," Daniels & Perry (2003) state, adding that students want their teachers to know their strengths, weaknesses, preferences and interests, and to be able to understand how they play a role in their students' learning (p. 104). Content mastery, or test-focused and grade-oriented teaching, has had an adverse effect on the relationship-building process and learning process that is needed in schools, and has, in the eyes of some researchers, outright restricted pedagogy (Dole et. al., 2016). High-stakes, test-based teaching has had negative effects on students and teachers alike, as students become bored with their learning and teachers become stressed with trying to get their students to learn (Dole et. al., 2016). "By their very nature, grades tend to make students product-oriented," and there is nothing inherent in a grade that represents the actual process of learning (Hansen & Stephens, 2000, p. 45). Academically-challenged students are easily discouraged from taking on challenging tasks in a test and grade-stressed classroom, for fear that the result will be a low grade. They feel overwhelmed with group assignments and are likely to give up early if their feelings aren't alleviated. Failure discourages these students, especially when the failure is occurring with a repeated task. And there are other factors aside from grades that are important for predicting success in school, jobs and life in general, such as self-efficacy, motivation, creativity, collaboration, innovation, learning strategies, goal setting and orientation (Salinas & Garr, 2009).

Teaching needs to rediscover its moral base, which will bolster the courage and integrity needed by teachers to develop young minds, as the lack of consideration for moral categories impedes the possibility of human growth (Hansen & Stephens, 2000). As Watson (2011) explains, “An ethic of care requires us to find ways of relation to transcend our differences” (p. 1497). In our society, we have tended to justify inequality as inevitable, as we are caught up in the threads of conventional practice, indifference and greed (Astuto & Clark, 1995). But by finding the moral base in education -- a base emboldened and promoted specifically through learner-centered education -- we can begin to split away from the longstanding issues that have plagued the American education system. Clear values and principles are critical in supporting disadvantaged students, as a lack of coherent vision, purpose or values within a school causes confusion, allowing for a disconnect between the student and the school. Low expectations, poor student performance and traditional classroom practices cause students to exist seemingly as “nobodies” that cannot fit into, and do not feel valued by, their school. Disadvantaged youth seek experiences that allow them to develop their own cultural spaces and allow them to define their voices, and project-based, learner-centered education allows for that (Watson, 2011).

Back in 1995, Astuto & Clark (1995) succinctly summarized the current state of the education system when they say that, “The awful facts are that we are sacrificing a generation of poor children and youth, mostly children of color, to expediency, greed, and instrumentalism” (p. 249). Today, over twenty years later, this statement still rings true. Project-based, learner-centered education is well-researched and implementable, and

we know how to merge social, health and educational services together to provide students with the necessary opportunities to achieve success in our society. The call for project-based, learner-centered education is clear. So what is project-based, learner-centered education and what are the necessary elements needed to know in order to effectively implement and practice it?

### **Understanding Project-Based, Learner-Centered Education**

Learner-centered education is a perspective on education that pairs the individual learners with an emphasis on learning via the best available practices regarding learning and how learning work (Reilly, 2001). In essence, it takes a dual-focus approach toward driving the educational decision-making process. Learner-centered education believes that learning works best when it is relevant and meaningful to the learner. This involves getting the learner to become an active and engaged member in their learning experience. Additionally, learning works best in an environment where strong relationships exist. This leads to the learner feeling appreciated, acknowledged, respected and validated.

Project-based learning places an emphasis on learning via projects, where learners set out to answer a question or series of questions regarding real-world topics and issues through independent research and experiential learning. The goal of project-based learning, ultimately, is to develop within the learner a deeper knowledge and understanding of the world they live in. The process by which learners come to learn about their topic or issue is significant, and while the final product has value in the sense of a summative assessment, it is the entire learning process that is of utmost importance.

Teachers embracing the project-based, learner-centered educational model view learners as having distinct perspectives and experiences impacted by their history, environment, interests, goals, beliefs and ways of thinking. They have unique differences that must be taken into account, such as states of emotionality, learning rates, learning styles, developmental stages, abilities, talents and feelings of efficacy, as well as others. Learner-centered education believes learning is a fundamentally natural process with naturally-curious learners striving to understand and master the world around them, and therefore should be promoted as such. “The very purpose of a learner centered school’s existence rejects the tenets of a utilitarian view of education and claims effective education as an entitlement for all children and youth” (Astuto & Clark, 1995, p. 244). In fact, learner-centered schools in particular have proven to be more effective than traditional schools in promoting achievement and graduation rates, as well as motivation, student self-regulation, self-efficacy and self-esteem, creativity, and tolerance, diversity and multiculturalism (Salinas & Garr, 2009).

The goals of project-based, learner-centered education is to develop independent learners who are critical thinkers with a desire to challenge themselves, lead by example and exhibit the courage to be different. Students being involved in governance, so that one faces the need to be accountable to others, leads students to pursue and identify the intrinsic value of learning and education. As Hansen & Stephens (2000) state, “Education is a moral act, and will fail if morality is treated as optional” (p. 47). Schools developing into human-centric, learner-centered spaces create smaller, caring communities of learning wherein intrinsic motivation is fostered and self-directed and active learning is

apparent (Aslan & Reigeluth, 2015). Currently, charter schools lead the way in the project-based, learner-centered movement in education, but there are still concerns regarding whether the same successes seen in these smaller schools can be replicated in larger public schools (Aslan & Reigeluth, 2015).

Project-based, learner-centered education provides alternative pedagogies to overcome the issues faced by current educational systems by promoting inquiry-based learning methods. Inquiry-based learning involved developing questions, researching the questions developed, analyzing and interpreting the data provided, and devising solutions to the initial problem or questions (Dole et. al., 2016). Student choice is a key component of this, where students are able to solve real-world problems that affect them, increasing motivation and learning by doing so. As Worthington (2018) explains, “Giving students the choice and freedom to demonstrate their learning means they can take greater ownership of their own learning and mastery of the knowledge they are gaining” (p. 149). In addition to this, such autonomy provides opportunities for students to demonstrate improvement in their critical thinking, speaking and writing skills (Worthington, 2018). In project-based, learner-centered education, teachers empower students to take ownership over their learning through the development of environments that promote students constructing knowledge for themselves. Students become less dependent upon the teacher for instruction and strive to become reflective, lifelong learners who are dynamic in their educational and personal lives. In project-based, learner-centered environments, the teacher acts as a facilitator, which is different than the traditional role of the teacher acting as an instructor. Learning become a moral partnership between the



teacher and their students as the teacher facilitates learning rather than leading in an instruction-based, teacher-centered manner. Both sides find agreement and put for their best effort to hone the intellectual and social potential of the student.

This process incorporates a balance of power between the teacher and students, with the teacher providing content as a function to improve learning skills. The teacher take on a resource-management role, using assessment and evaluation as a means to promote learning and having students learn to accept their role in their education along the way (Hanewicz et. al., 2017). In situations where students may be resistant toward authority, project-based, learner-centered schools provide the flexibility needed to alleviate the power struggles typically seen in traditional school environments. The role of the teacher shifts from that of an authoritarian and micromanager to one of a facilitator, coordinator and active participant in their students' learning.

In project-based, learner-centered classrooms, teachers must also play a role in understanding and addressing the cognitive and metacognitive development of their students, as well as the developmental and social aspects of student learning. This requires the teacher to realize and value the cultural and social backgrounds and experiences of their students. According to Reilly (2001), project-based, learner-centered pedagogy, "should equip teachers to become not only managers of classrooms, but more importantly, managers of their own inquiry" (p. 223). Effective teaching in the project-based, learner-centered model relies upon the teacher's active ability to make reasonable judgments regarding their students and the learning that is taking place in the classroom. Therefore, knowledge regarding child development are important factors for

teachers to have. In addition, pedagogical content knowledge, or the blending of content knowledge and pedagogy to understand how certain topics, problems or issues are adapted to the diverse interests and abilities of learners, is significant for the purpose of effective educational instruction. And formulating their own assessments has been seen as a benefit to teachers, who are more likely to understand their students and take a more thoughtful approach toward teaching them using the project-based, learner-centered model.

In recent decades, pedagogy emphasizing growth-oriented teaching approaches have valued it more so as a method to teaching rather than a mindset (Hansen & Stephens, 2000). Yet, when it comes to mindsets, Dole et. al. (2016) suggests that, “When students have growth mindsets as opposed to fixed mindsets, they believe in themselves and their own abilities and they will persist in the face of obstacles” (para. 3). Therefore, both the methods and mindset must be growth-oriented and focused on the student. Self-regulation, executive functioning and growth mindset help individuals acquire habits, skills and mindsets that aid them in their learning and higher-order skills, such as agency and self-direction (Cantor et. al., 2018). And in contemporary American society, these are the skills employers are seeking from their employees. Building these skills with students is imperative for their entry into, and sustainability within, the American workforce.

When it comes to cognitive development in the project-based, learner-centered model, there are four cognitive levels of thinking: retrieval, comprehension, analysis and knowledge utilization (Toledo & Dubas, 2017). What separates them is how much

awareness and conscious effort are brought to complete a task. Retrieval and comprehension basically ask students to make sense of information they are presented with through direct or indirect instruction. Analysis and knowledge utilization, as the upper two levels of thinking, require students to create new knowledge or extend the knowledge they developed during the retrieval and comprehension stages. In project-based, learner-centered education, the cultivation of these cognitive levels develops students' higher-level thinking skills, which are critical.

Higher-level thinking requires application, analysis, evaluation and creation/synthesis (Sekulich, 2018). Application of knowledge is through the carrying out of a procedure in a concrete manner. Analysis of information is the breaking down of the whole into its composing parts and understanding how each part interacts, plays a role and possesses purpose. Evaluation is making and justifying judgments based upon the presented criteria. Creation and synthesis is the process of creating a new form from the individual parts of a previous form. Worthington (2018) states that, "Student-centered learning activities...can improve students' interpersonal and intrapersonal skills, including their problem-solving, verbal and critical thinking skills, and resource management skills" (p. 139). As students engage in learner-centered opportunities, these higher-level thinking skills are developed and targeted, with the idea that as students mature, their potential and abilities will become fully realized. However, not all students are the same, and consideration into each individual's motivational and affective factors are at the forefront of effective learner-centered pedagogy, be it with a project-based focus or not.

The interrelation between motivation and metacognition are important for deep and effective learning to take place (Cantor et. al., 2018). “Teacher virtues alone cannot create an educated person; they must be complemented by the student’s discipline to follow through with what is sometimes a fun and sometimes a painful process of learning and change” (Hansen & Stephens, 2000, p. 46). Students need to take risks when engaging with the unknown, which requires courage on the part of the student as well as the teacher. Students need to adopt new mindsets about their education, as they should, “think about their future, have the power to pursue their interests, and assume responsibility in their learning” (Aslan & Reigeluth, 2015, p. 67). However, as many educators know, building a student’s motivation requires patience, attention and care.

Care is an important component of the facilitator teacher, as it involves the affection, regard and feeling students need to feel they are part of a group, such as a family (Hansen & Stephens, 2000). This care is also promoted outside of the classroom, and is taught in a way that encourages students to care for others in their own lives and beyond. The implementation and regard for justice and fairness is also important, as it promotes and maintains a sense of harmony and promotes productive social relationships within the classroom and in the community. As students learn and develop in school, the focus on developmental and social factors must be present.

Development is nonlinear, and the development of complex social skills does not take place in isolated environments. Instead, it requires layering and integration of prior knowledge and skills in new contexts and with new knowledge. As Cantor et. al. (2018) explains, “Each individual’s development is a dynamic progression over time” (p. 4). By

engaging students in new activities consistently, students can progress toward and master an objective without instructional support (Hanewicz et. al., 2017). This scaffolding helps students develop learning skills that translate outside of the classroom. In essence, it allows students to modify knowledge and skills they've acquired to apply to their own lives, which translates into the world beyond school.

Adversity, which generates stress, can have profound effects upon development, behavior, learning and health. Resilience generates positive outcomes, even in the face of significant adversity (Cantor et. al., 2018). Yet resilience may look different for each individual. High-support conditions that identify and support students' strengths and skills and promote deeper learning while increasing the developmental range, performance and mastery of an individual to their knowledge. "If experiences are interpersonally rich, predictable and patterned, and if stressful experiences are not overwhelming, the brain becomes more connected, integrated, and functionally capable over time, increasing its adaptivity and resilience to future stress" (Cantor et. al., 2018). Simply put, students who are provided with supportive conditions are more capable of achieving their potential and overcoming adversity and stress.

Relationship-building is an integral component of a project-based, learner-centered schools and generates strong connections between students and staff (Watson, 2011). Children are more inclined toward a positive and active pursuit of learning if they are able to feel secure in that their needs for relatedness and competence are understood by their teacher (Daniels & Perry, 2003). According to Cantor et. al. (2018), developing positive relationships is critical in an individual's genetic makeup

over time. Interestingly, these changes can actually transcend through multiple generations, essentially effective more than just the student (Cantor et. al., 2018).

Addressing the individual differences that exist within a classroom and school is a good start to building positive relationships and an engaging, rewarding learning environment. Different ways of learning and flexibility in schoolwork are important to students in a project-based, learner-centered environment. As is such, a greater responsibility is placed on the student themselves to be active, engaged and self-reflective throughout the learning process (Watson, 2011). Students need to experience multiple levels of learning in order to expand and integrate how they process information. Multiple learning styles include: concrete-sequential (sequentially linear, structured, ordered, hands-on, immediately reinforced and teacher-centered), abstract random (active experiences, small groups, multi-sourced, unstructured and student-centered), abstract sequential (written lists, order, logic, conceptual approaches and teacher-centered but through sequence), and concrete-random (discussions, movement, action, hands-on, observations, experimentation and student-centered) (Sekulich, 2018). Students in a project-based, learner-centered environment should also set independent, personal learning goals and be an active and reflective participant in doing so. Teachers who provide choices to students tend to no longer be seen as an enemy, but rather, they provide instruction that decreases problem behaviors and increases the motivation and engagement of the teachers themselves (Watson, 2011).

### **Establishing the Project-Based, Learner-Centered Classroom**

A project-based, learner-centered classroom provides curricular activities for students that reflect practices that are developmentally appropriate for students. As students become more mature, they better understand and accept reasons for their teacher being inattentive in the classroom. Specifically, Daniels & Perry (2003) state that, “with increasing age and maturity, children come to rely more on their peers and less on their teachers to satisfy their needs for relatedness and assistance” (p. 104) However, teachers must consistently assess students’ academic, personal and social progress, with the goals of establishing a classroom environment that promotes meaningful learning.

Sommer (2018) suggests the following steps for implementing project-based, learner-centered education in the classroom: (1) involve learners from the beginning, (2) value the learners’ voice upfront and empower students early on, (3) include learners on leadership teams and acknowledge their voice when developing a case for change, (4) make strategic design the centerpiece of the community, (5) be transparent to ensure that staff, parents and the community understand and embrace change, (6) make lifelong learning part of the curriculum, and (7) maintain relentlessness in an effort to ensure academic achievement and personal success for all learners. As discussed previously, the main goal of education is to get the learners to reach their full potential, academically and personally. By involving them in the process of developing their learning, they become more engaged and see learning as a valuable experience and process. In a project-based, learner-centered environment, the teacher must consider alterations to their existing mindsets and pedagogies and involve students as often as possible.

According to Dole et. al. (2016), teacher development programs often have failed to improve teaching practice on their own. It is difficult for teachers to translate what they learn in their preparation programs to the classrooms with which they work due to the teachers' preconceptions about what teaching and learning are and look like. Content in teacher education programs are often abstract and theoretical, which leads to disconnects when they need to apply these ideas to the real-world classroom (Dole et. al., 2016). Teachers need to be active learners in their own education if they are to pass on the learner-centered approach, specifically, and benefit from the process themselves. And for those who are already actively teaching, integrating project-based, learner-centered pedagogy into their current practice can be difficult. However, it is important that a project-based, learner-centered teacher remains open-minded, as the educational model challenges the current approaches toward teaching in a way that radically changes how a teacher uses their time and how they approach teaching altogether.

How a teacher's practices are perceived by students will determine whether positive outcomes can and will occur. Teachers must spend time talking with their students about the students' experiences as learners. As teachers take a role as a facilitator, they may notice an improvement in their rapport with students as opposed to previously when their role was more instruction-based and teacher-centered. This occurs because of a focus on nurturing trust in the classroom, the providing of active student participation, honoring the individual, building connections to students, and eliciting curiosity from students (Dole et. al., 2016).



Teachers may face trepidation when handing power over in the classroom to students and may feel anxiety when structured lesson plans are not in place. However, teachers who begin implementing the project-based, learner-centered model may be surprised at their students' ability to direct their own learning. They need to be ready to accept new roles for themselves and their students and be tolerant to ambiguity and flexibility. There also needs to be a confidence in integrating technology into the classroom, and teachers should be ready to open the classroom up to open-walled learning opportunities that can, and do, happen outside of the walls of the classroom.

Too many changes and modifications to pedagogy may be problematic, and it is suggested that teachers gradually change a few components of their approach at a time (Hanewicz et. al., 2017). It isn't enough to simply switch from a traditional educational model to a project-based, learner-centered one. There are fundamental changes in pedagogy that need to be introduced, experienced and built upon before project-based, learner-centered education can work for the teacher as well as the students. Learning that takes place using project-based, learner-centered education can work for the teacher as well as the students. Learning that take place using project-based, learner-centered pedagogy must be engaging, interesting and challenging; in a society of immediately available information, students need to build thinking and skills alongside the technology and knowledge that is available. The current educational model in the United States has struggled to keep up with this ever-changing world, yet project-based, learner centered education seems to open the world up to students, providing them with opportunities to experience new technology and opportunities to learn as they arise. This further promotes

differentiated teaching and support by the teacher that leads to students developing deeper learning connections and more relevant skills in the classroom.

Conceptual knowledge is the depth, breadth and level of knowledge with which someone holds of a particular subject or concept, and is widely considered to be an important criterion for assessing teacher quality (Reilly, 2001). “In order to increase their conceptual knowledge, students must examine their existing knowledge and beliefs” (Reilly, 2001, p. 221). For teachers, they must hold a strong conceptual knowledge of the subject for which they are teaching if they are to enhance the social, cultural, ethical and physical worlds of their students. Teachers who are ill-equipped or ill-prepared will most certainly find their curriculum and teaching lacking the deep connections needed in project-based, learner-centered education.

The development of learning outcomes is crucial in project-based, learner-centered curriculum. The five principles of effective learning outcomes include: (1) addressing current global problems, (2) activating existing knowledge, (3) demonstrating new knowledge, (4) applying new knowledge, and (5) integrating new knowledge into a worldview (Hanewicz, et. al., 2017). As teachers plan, they must consider how the content and learning affects the student in their world and in their current developmental stage. Momentum can be difficult to maintain throughout several weeks of a project-based learning unit, especially when the unit requires a conclusion (Dole et. Al., 2016). Therefore, teachers must know where their students are at developmentally before they begin to reform their curriculum.

During the curriculum-building process, project-based, learner-centered curriculum building and lesson planning should consider the inclusion of decentralized planning. Decentralized planning and decision processes are features of a democratic structure, as they allow for a modification of the level and type of education and discourse. Centralized planning and decision making, contrastly, help specifically learner-centered schools focus on teaching, learning and teacher and student development (Astuto & Clark, 1995). “By working with a more focused curriculum, learners understood exactly what they were expected to know and be able to do” (Sommer, 2018, para. 11). Students who take part in the development of the curriculum have a greater understanding of what they were going to learn and why. Additionally, formal and informal assessments, as well as summative assessments, help learners and teachers track learners’ progress toward the mastering of each topic and target. These may also be developed alongside students, given that the teacher is able to keep the assessments focused on the learning objectives and goals of the class.

Flexible curriculum and instructional processes lead to fun and creative learning environments. Four primary instructional choices may be made available in a project-based, learner-centered classroom: learning packets, technology projects, seminars and computer-based instructional tutorials (Watson, 2011). Discussion questions that promote higher-level thinking must be utilized throughout presentations, lessons and lectures. Providing descriptive feedback is also important, as it sets the expectations early on and explains to the students what criteria will be evaluated for an assessment (Sekulich, 2018). The feedback should address content and format, and poses

questions that encourage reflection on the part of the student. Games, role-playing and simulations help to develop effective teaching and learning opportunities (Worthington, 2018). They allow for history to come alive. Simulations are activities overseen by the teacher that reflect real life dynamism of events so that students are able to work and act as active agents in the outcome of the learning. They may serve as substitutions for field trips and other learning experiences that may be difficult for schools and/or classes that are underfunded. Debriefs and discussions are important to successful role-playing and simulation activities. This may include explicit instructions that help students see connections between the context and content of what is being studied. This is also important when students may struggle with their role within the role-play or scenario and need to be given an opportunity to voice their concerns.

In terms of assessment, peer assessment can be used as an active and supportive reflection upon the efforts and learning progress of a group. However, peer assessment must be implemented when the classroom culture is healthy and the beneficial and positive purpose of feedback and constructive criticism are clear. As Hansen & Stephens (2000) state, “The success of any effective team depends on the development of a group climate in which open criticism and occasional confrontation are used productively to resolve conflicts” (p. 44). Many students may miss the point of challenging one another if advocacy overtakes exploration in group work settings.

Another consideration when implementing project-based, learner-centered practices is the concept of social loafing. Social loafing is a social dynamic wherein students attempt to lower teacher expectations through a “tug of war” approach, since the

teacher is often the one with control over the teaching and learning taking place within the classroom. Students with years of experience with social loafing are adept in regressing their efforts in the classroom as well as in small groups. They may feel they will be taken advantage of in groups, so they will match the level of expectations their group has of them, comparing the effort and engagement levels of their group members. Because of this, collaborative experiences may deteriorate if they're allowed to become low-effort exercises that are merely in place to pass the time (Hansen & Stephens, 2000). Isolation and misunderstanding also come into effect during group work. They continue to be problematic for students and teachers alike in academic settings and should be considered as teachers progress toward implementing innovative instructional approaches that focus on teaching diverse learners (Watson, 2011).

Lastly, the importance of time is always a factor in the classroom, particularly in times when activities may seem like they're more about having fun than addressing state standards and class outcome goals. Regarding the impact of time on project-based, learner-centered education, in these environments, "[students] do not accumulate deficits in their learning that make it harder to learn related material in the future... They develop both a love of learning and the self-regulation skills to be effective lifelong learners" (Aslan & Reigeluth, 2015, p. 68). Time is indeed a roadblock in project-based, learner-centered education and in a truly learner-empowered culture. Bell schedules, yearly promotions due to age, and progress and report cards are all problematic in the project-based, learner-centered process, yet is a reality of the educational system as it stands (Sommer, 2018). In a project-based, learner-centered classroom, while time is still

a factor, the stress on time is alleviated, providing a more natural and differentiated approach toward teaching.

### **Why Project-Based, Learner-Centered Education Matters**

Research suggests that a project-based, learner-centered approach toward education is effective and provides benefits that go well-beyond the knowledge acquisition and skills development of more traditional educational methods. For example, in the development of higher-level thinking skills, project-based, learner-centered education allows students to engage in high-impact activities that allow for frequent opportunities to practice and fail before assessment (Limbaugh & Waugh, 2014). This is imperative for positively developing students, as it promotes growth mindset, instills positive academic attributes such as grit and perseverance, and offers opportunities for relearning and exposing areas in which students need to improve that is not possible in traditional educational settings (Limbaugh & Waugh, 2014). Additionally, students are offered with opportunities to reflect on their learning, which promotes metacognition. But project-based, learner-centered education isn't just positive for the cognitive development of young men and women, alike.

Teachers and staff in a project-based, learner-centered environment are able to cater toward the development of their students through personal, caring relationships and trust-building opportunities that focus on understanding the student at a deep and personal level. Teachers are able to share power and responsibility within the classroom with their students, as students become significant participants in the crafting of their learning. And as stated earlier in this chapter, students who come from traditionally

disadvantaged backgrounds yearn for this kind of connection and do better in school when it is provided. Simply put, project-based, learner-centered education goes well beyond the requirements of traditional education standards. It transforms learning into a celebration of learning that promotes lifelong learning, allows for personal growth development and gives students a say in their learning, in their school environment and in their life.

### **Summary**

In this chapter, research pertaining to project-based, learner-centered education was analyzed and explained as to better understand the topic and to determine how best to approach developing the methods for this study. First, the need for a project-based, learner-centered education model was addressed, specifically as to what issues in the United States education system are in need of action and improvement using such an educational model. Then, research detailing the features and outcomes of project-based, learner-centered education was analyzed to better understand the topic. Research regarding the implementation of project-based, learner-centered education followed, breaking down the various aspects by which a school and classroom can use project-based, learner-centered education and what to expect. Lastly, an argument for why project-based, learner-centered education matters was presented, highlighting the positive outcomes as they relate to cognitive development and relationship building. In Chapter Three, I have set the scene for this study, detailing the methods by which the study will take place, as well as providing information pertaining to the study's

participants and setting and explaining the process by which this study collected and analyzed data through a qualitative research paradigm.



## CHAPTER THREE

### Introduction

In order to answer the question, “*How does a project-based, learner-centered pedagogical approach affect the learning, classroom experience and overall academic engagement of traditionally-marginalized and disadvantaged high school students?*” the philosophy, methods and potential outcomes of the study must be explained and dissected. Within this chapter, the methods for data collection, setting and individuals participating in the study will be explained in detail. Additionally, the means by which this study has met the ethical standards of Hamline’s Human Subject Research committee will be provided. Lastly, how data was obtained and analyzed on my part, as the researcher, will be provided in detail.

### Methods

This study incorporated the qualitative research paradigm in order for the study to best provide valid and reliable outcomes. A qualitative research paradigm was decided upon during the review of relevant literature on project-based, learner-centered education. Much of the research found had taken either a qualitative approach or a mixed methods approach. However, much of the mixed methods research found centered around measurements of emotion and other broad spectrums that seemed difficult to measure. With a qualitative research paradigm, the outcomes are better measured based upon the breadth of the responses, reactions and outcomes to the given study. In addition, the qualitative research paradigm allows this study to implement a project-based,

learner-centered curriculum plan with the intention of analyzing its effectiveness through a practitioner's lens.

As the research question states, this study will be measuring three key factors in education: learning, experience and engagement. In order to assess these three factors, students will be evaluated periodically during this research study, beginning with a baseline assessment and moving forward until the end, where students will be interviewed and asked to reflect on their experience within this study.

The participants of this study are currently-enrolled high school students at a small urban charter school located in a major metropolitan area in the midwest United States. The school itself averages an enrollment of 315 students, 58% of which are male and 42% of which are female. 73% of enrolled students identify as Black, 7% as Hispanic, 6% as White, 1% as Asian and 13% as two or more races. The school does not offer support or services for English Language Learners but does provide special education services to roughly 30% of their currently-enrolled students. 84% of all students are considered economically disadvantaged, as 81% qualify for free lunch, placing the school in the top 10% of schools in the state for students qualifying for the free lunch program. The school's graduation rate of 31% is significantly lower than the rest of the schools in the state, and proficiency in math (6%) and reading/language arts (12%) are also significantly lower.

Regarding testing, students are given bi-annual NWEA tests in math and reading to track academic growth and progress from the beginning of the school year to the end. Many students show improvement on their NWEA tests throughout the school year,

which indicates positive growth academically, but most students struggle to show significant improvement from one test to the other. Outside of school, many students are affected by personal, familial, social, community and employment concerns which impede their education. Many students are considered homeless or highly mobile or at-risk for homelessness. Many students balance work and school every day and are unable to attend a full day of school. In addition, some students have children at home and attempt to balance the responsibilities of parenthood and school. Many students work on-site with a school social worker and housing representative to find, obtain and maintain housing, community supports and other resources. These overarching needs and issues leave many students struggling to catch up with their education and stay on track. Attendance rates at the school are significantly affected by the aforementioned factors, as the average daily attendance for the school rests just under 60%, with many students opting to leave school early or to arrive late.

Specifically regarding the sample related to this study, it is comprised of a classroom of roughly 20-30 students, although the average daily attendance for the class hovers around 5-8 students. While the class demographics largely mirror that of the school, the class itself has fewer special education students. Most students are struggling readers and are below grade level in terms of their reading ability. Students also struggle with deficits in their knowledge and academic skill set and require support from the teacher in filling in gaps in their skills and knowledge. Students vary in age and grade level, with most students falling between the ages of 17-19 years of age and are typically at a 10th/11th grade level in terms of high school credits earned. Newly-enrolled students

are expected to be added to the class at various times throughout the study, making streamlining a student into the study and class material right away a priority for this study's success.

Because the participants in this study are high school students, some of which are under 18 years of age, the Human Subject Research review board at Hamline University has been consulted and provided approval for this study. The subjects being of a vulnerable population leads to considerations of possible ethical dilemmas. Therefore, multiple steps have been taken to ensure that there is full transparency on my part as the researcher, that participants are in control of their decisions and actions during the study, and that the researchers are not misusing the participant data in a way that could jeopardize their ethical rights.

This study took place over the course of ten school weeks, or one school quarter, during the months of November through February. Because this study is integrated into a standard class period, participants were expected to meet four days each week for one hour during the middle of the day during school. This ten-week period was broken up by two planned breaks from school and several unexpected school days that were cancelled due to weather. These breaks and cancelled school days resulted in the need for an extension to the study by two weeks to provide the needed time for the study to reach its conclusion.

Because of the scope of this research, a new curriculum was developed that blended the planned curriculum with one that focused on project-based, learner-centered learning. Curriculum for this study was based upon a previously-developed U.S. History

course pertaining to Black American history. However, this study required the implementation of a project-based, learner-centered learning approach, which disrupted the typical teacher-driven rhythm and process by which the units are taught. To resolve these conflicts, the previously-developed curriculum was deconstructed into its basic topics, themes and concepts, and was presented to students during the project planning phase early on in the study as a baseline for what to focus on for their learning. Students were then given options for determining what they would learn, as long as it stayed within the parameters of the initial curriculum and its learning targets, and tackled multiple content areas that would otherwise have been taught using the standard curriculum.

The project-based, learner-centered curriculum developed for this study included several lessons of scaffolding, skill building and mindset development to transition students from one phase to the next. The study was comprised of a buy-in phase, project planning phase, research phase, and a project building, presentation and reflection phase. During the buy-in phase, students were educated and informed about several factors which affect learning, such as fixed vs. growth mindset and learning styles and preferences. This phase was followed by a brainstorming period in which students worked intensively with me to figure out what their research project would be about, what guiding question they would answer, what methods they would use to complete their research, what criteria would be assessed, and what their final product would be. Students then began their research, and at the end of the research phase they completed their final product: a compilation and presentation of what they had learned. Lastly,

students engaged in reflection, wherein they discussed their successes, struggles and thoughts about the study, including their thoughts on project-based, learner-centered learning and how the process was for them as participants and students.

Throughout the study, data was collected pertaining to the participants, the project-based, learner-centered curriculum and my own personal experiences. From the outset, it was my goal to research how this style of teaching and learning would affect the learning, experience and engagement of students in my class, as well as how it affected me as the practitioner. I found my own experiences and processes valuable, and chronicled data on a daily basis, showing the process and progression of the study as it moved forward. And during the reflection phase of the study, student responses were assessed to determine what went well, what didn't, and what students think about project-based, learner-centered education.

### **Summary**

This chapter provided an overview of the participants, setting and methods associated with this study. In line with much of the research on project-based, learner-centered education, this chapter describes a traditionally-marginalized population of students who have experienced struggle in their formal educational experiences. The population does not attend school regularly and displays deficits in knowledge and skills, requiring frequent teacher intervention and reteaching. The study took place at an inner-city charter school in the midwest United States in a class designed for teaching US History, specifically Black American history. The study began at the start of an academic

quarter, and the curriculum was modified to adopt the project-based, learner-centered model.

Participants in this study began by engaging in a buy-in phase, wherein the concept of fixed vs. growth mindset, preferred learning styles and learning preferences were taught. Students then began brainstorming what they wanted to learn, how they wanted to learn, and the criteria by which they would be assessed, with my constant feedback and guidance. An intensive research phase soon followed, which led into the product building phase, wherein students compiled their knowledge and resources to complete a final summative assessment. Lastly, students engaged in reflection, where they considered their experiences throughout the study and provided final thoughts regarding project-based, learner-centered education and shared forward-thinking ideas regarding “what’s next.” In Chapter 4, the data collected throughout the study will be explained. It is within this chapter that the experiences of the participants, as well as my own experiences, will be described as they pertain to the various phases, stages and moments of this study.

## CHAPTER FOUR

### Introduction

For this study, data has been compiled, analyzed and interpreted within this chapter in an attempt to find a conclusive answer to the question, “*How does a project-based, learner-centered pedagogical approach affect the learning, classroom experience and overall academic engagement of traditionally-marginalized and disadvantaged high school students?*” The results have been organized in this chapter to provide an understanding as to the demographics of the study, including sample size, age range, gender and academically-relevant characteristics, the findings of the study, and the major themes which emerged from analysis of the data. This chapter will provide information collected over the course of the study related to the participants as well as the researcher, and will use direct quotes, observational data and other specific data. It is with this data that several themes emerged from this study, which include the themes as stated in the initial research question (learning, classroom experience and academic engagement) as well as themes that were not initially expected to emerge. This data is important to understand not only the overarching findings of this study, but also to provide context for Chapter 5, which will contain my interpretation of the data and conclusive thoughts regarding how project-based, learner-centered education effects traditionally-marginalized and disadvantaged high school students.



## **A Chronological Report**

The sample size for this study began with seven high school students who were enrolled in the class and completed the initial steps of meeting with me regarding the study, completing the consent form and engaging in the buy-in phase of the study. Shortly after the study began, one participant opted out of the study and another was never seen again. After the buy-in phase was completed and participants began the brainstorming phase, two more participants opted out of the study. These participants had begun the brainstorming phase, but ultimately were unable to complete the phase due to factors unrelated to the study. These participants expressed no interest in continuing with their work at a later date. Therefore, only three participants will be considered part of this study's sample size. This is due to the lack of data collected from the participants who opted out.

Of the three participants who are part of this study's sample size, all three are males, aged 16-17 years of age, who are considered to be in 11th grade. These participants shared information regarding their education history and their ethnic and cultural backgrounds. Participants included one Caucasian (Student A), one African American (Student B) and one Native American (Student C) who all enrolled in the high school within the last two years. Student A's background included struggles with homelessness, living in various states with family growing up, and struggling in school. Student B expressed having been homeschooled by his mother in the past, but stated he had attended public school as well. Student C had taken and passed advanced placement

(AP) courses in the past and stated he's done well in his academics in the past. Student C also stated his ambition to attend a prestigious military college following high school.

My experience with these participants prior to the study is valuable in understanding this sample, as well. Student A had worked with me throughout last school year and this school year and displayed a tendency to be late or absent from class fairly regularly. Student A also demonstrated struggles with reading and writing, staying focused and completing assignments. He stated that history is his favorite class and that he loves learning about how humans have evolved and lived over time. Student B was new to me this year, but had demonstrated strong foundational knowledge of course content in the past and an adequate skill set for academic success, despite his inconsistent attendance record. Student C was also new to me this year, but demonstrated strong academic skills, good grades, and an attendance record far better than his peers.

The study lasted twelve weeks -- three weeks longer than initially expected -- and consisted of a buy-in phase, brainstorming phase, research phase and a final product completion and reflection phase. Several unexpected developments occurred during the study that resulted in modifications to the study's timetable and methods. School-wide events and field trips, some of which were unpredicted, led to a loss of a few class periods for this study, and weather played a role in extending the final product completion and reflection phase by multiple weeks. In total, six class periods of the initial 35 class periods for the study were lost (a 17% loss), and ten of the 45 class periods provided with the extension of the study were lost (a 22% loss overall). Most of the class

periods lost toward the end of the study were because of school cancellations due to snow and weather concerns.

The study included a buy-in phase (one week), brainstorming phase (two weeks), research phase (four weeks) and a product building, presentation and reflection phase (four weeks). During the buy-in phase, participants engaged in activities relating to growth vs. fixed mindsets, understanding personal learning styles and determining learning preferences. Additionally, participants engaged in an activity where they determined what they valued in their education through a process of personal reflection and discussion. Attendance during this phase was generally low (with the exception of the participants in the sample size) and students arriving to class late led to difficulties in facilitating classes and getting through the buy-in phase.

Participants reported that the buy-in process was useful, with Student B being, “surprised that it made me reflect” on how they learn best and what their learning preferences were. Student C stated that learning about their learning style, “helped me understand the differences between how I think and how others think.” Participants stated they had heard about mindsets before, but had not spent much time learning about the differences between growth and fixed mindsets. Student A reported that, when it comes to learning, “I wanna learn things that pique my intrests [*sic*] and things that will benifit [*sic*] me throughout the rest of my life.” Similarly, Student C reported that they, “want the skills I learn in highschool to last as long as they can,” and that, “developing lifelong learning skills should be learned in school.” All three participants agreed that they saw value in school and in education, and they expressed some desire to have their education

personalized and focused on developing skills and/or knowledge that would last into their adulthood. During this phase, I reported that, “student interest seems high,” regarding the study and process, but acknowledged that I was experiencing some feelings of disorganization and stress related and unrelated to work responsibilities and this study.

Following the buy-in phase, participants engaged in a two-week long brainstorming phase, wherein they planned how the class would look and operate based upon a project-based, learner-centered model. Participants worked with me on identifying and understanding the topics and themes of the class unit, reviewing and modifying class procedures and norms, discussing observed and anticipated concerns such as attendance, adversity and accountability, and finally beginning and completing the brainstorming process for their individual projects. As the teacher operating in a project-based, learner-centered model, I emphasized student empowerment and focused on narrowing down their ideas and building figurative walls and structures to help students navigate the brainstorming process and to meet goals. Ultimately, my goal was to have students generate natural inquiry questions based upon their own interests and my suggestions based upon the class unit that they could use to drive their research while staying motivated and engaged with their project. With this in mind, I focused on synthesizing the topics, themes and interests that students reported wanting to learn about with the learning targets of the class unit to develop clear topics and themes for students to work with.

Attendance and tardiness continued to be an issue during this phase, and I reported feeling split between keeping the pace of the class with the students who were

attending regularly with catching students up who had missed time. However, “most students still appear[ed] engaged and motivated,” and I noted having more time to work 1:1 with students as a result of the low attendance. Compared with the previous phase, students appeared to be, “more accepting and understanding of the process,” as they worked their way through the brainstorming phase. While students expressed a lack of prior knowledge in certain areas relating to the class unit (specifically, the period of American history between the end of the Civil War and the beginning of the civil rights movement), I was able to step in and provide support, despite reporting feeling “ill-equipped” to do so. But, as Student C stated in an interview, I helped students “a lot” and provided the pieces needed for a “good base outline” to “fill in the blanks” themselves.

Participant feedback at the end of the study suggests that, despite a learning curve, the brainstorming phase was successful for the three core participants. Yet, I noted that, at the time, students appeared to struggle with developing their project, coming up with guiding questions to explore and learn about, and that, “students seem hesitant to self-direct in their learning.” As students encountered struggle, they appeared to disengage from the process, and it was during the latter half of the brainstorming process that I had to intervene with each student to provide 1:1 teaching pertaining to organizing, planning and deciding on what and how to study their topic/theme. It appeared, to me, that students were lacking some skills pertaining to organization and study skills. Ultimately, all three participants were able to complete the brainstorming process, wherein they decided on the topics/themes they’d explore during the research phase, what

guiding question would help direct their studies, how they would approach their research, what their research timeline would be, and how their final product for their project would be assessed (individualized rubric).

Once the brainstorming phase was completed, participants moved into the research phase. This phase, which was initially supposed to last three weeks but lasted four, was a period where students began researching their topics/themes and investigating their guiding questions and engaged in experiential learning and individualized field trips relevant to their research topics/themes. Attendance and tardiness issues continued, and students who arrived late were often unable to get much work done within the class period. It was during this phase that school-wide events and field trips began interfering with class periods and overall student productivity. During check ins, students reported completing work from home and, “seem to feel more in control when able to think about learning outside of school.” As I noted during the second week of the research phase, “time is an impediment to learning authentically,” specifically as time pertains to class time. And in week three, I reflected upon a “long lull in the process” that led to students needing significant coaching to get back into a rhythm with their research and with the class. Student A, in particular, would later explain that they preferred to work on their project when they were in the “right mindspace” and that some days they didn’t “feel” they could complete their work in class.

During the research phase, I noted that, “Compared with earlier this quarter and this year, students appear more engaged and confident.” While each participant began their research by watching a topic/theme-relevant documentary, Student B and Student

C's research evolved according to their natural intrigue and inquiry based upon the initial documentaries they watched. Student A was much more dependent on familiar learning preferences (documentaries, reading) and struggled to engage in research and learning otherwise. However, Student A was the only student to engage in experiential learning via field trip, as they attended a jazz club to better understand their topic, which pertained to the evolution of jazz and music leading into, and during, the civil rights movement. However, my observations would change as the research phase approached its conclusion.

Initially, the research phase was intended to be three weeks, as mentioned previously. However, an additional week was added to the research phase, extending the study by one week at the time. In the initial final week of the research phase, I noted that Student A needed help with their research, and that, "I don't see much from him in terms of notes, learning progression, etc." Despite the jazz club opportunity being a positive experience, Student A struggled with reflecting on the experience and determining what they had learned from the experience. Student B appeared to be working slowly and, "seems somewhat overwhelmed with his progress given the scope of his project." It was during this period of the research phase that Student B, "forgot what he was doing" regarding his research and needed help, "to get back into research." Student C seemed rather focused on their specific topics, so much so that I reported concern that they were, "not seeing the full picture," of the project. The research phase was extended an additional week when each participant reported not being done with their research by the end of the research phase. It was also extended because participants reported, "changing

their projects slightly to accommodate for the info they're finding/learning and time constraints."

In fact, it was this final week of the research phase that seemed to change the course of this project for some students. While the guiding questions seemed to have helped students stay focused during the research phase, it was their own natural inquiry and discussions with me about what they were learning that seemed most "meaningful and engaging." By the end of the research phase, four weeks in, Student A had still not written notes, despite consistent prompting and support to do so," and had taken, "significantly longer to complete tasks than peers." Student B and Student C were both close to, or finished with, their research by this time, but there was still concern that the students were so focused on learning about their specific interests that they hadn't engaged in broader learning that would meet the learning targets established early on in the process. By the end of this phase, I was concerned that only one student (Student C) was ready to begin the product building phase and that the other two, especially Student A, would not be able to complete their project as intended.

Entering the product building phase, Student A decided to change their guiding question, stating that it was too limited in its scope and that he didn't know how to answer it given the research he had completed to that point. Student A, "struggled to come up with three topics he learned about and provided little knowledge about them... He has few notes, despite frequent prompting, and doesn't seem to be able to answer his guiding question with the work he's done. Student B "seem[ed] unsure" and needed help with preparing to complete his final product, which was to be a podcast episode capturing



what he had learned throughout his research. However, Student B began the product building phase ready to complete the project. Student C was largely absent during this week, and it wasn't until the following week - the initial final week of the study - that I was able to meet with him to ensure that his research was, in fact, complete and that he was on the right track toward completing his final product.

During the initial final week of the study, and the week before the study was to conclude, Student A completed their research, Student B did not come to class, and Student C began asking for more resources and content to complete their project, despite pressure to focus on completing their product with the research they had already completed. Perhaps, I pondered at the time, "the unit is too vast and broad for students to fully grasp in an individual project." Despite careful, purposeful planning and consistent support, students did not seem to be able to stick to the initial plan. In the following week, and in what should have been the final week of the study after the extension, four of the five school days were cancelled due to weather. It was during this time that I recorded my thoughts: "This [study] has been unexpectedly lengthy..." And indeed, Student C shared similar sentiments during and interview at the end of the study: "The only thing that set us back were all the snow days."

Ultimately, the study was extended out an additional week, with the final due date for the project and presentation being nearly twelve weeks after it began. Student A was able to complete their research and project, and presented their project on the due date. Students B and C, despite their efforts, did not complete their projects by the due date. They expressed a desire to collaborate together to finish the final product, combining

their research and their final product ideas. However, they were unable to complete their project using this approach, citing “different schedules” as being a critical issue to the completion of the project.

In the end, of the seven students who completed the initial steps of the study and turned in their consent forms, only three students continued with the process. And of those three students, only Student A was able to complete the requirements within the extended study period. Student A’s project was ultimately deemed successful, based upon the predetermined rubric we had agreed to, and the student scored the highest marks possible on most of his project’s learning targets and goals. The student stated feeling “proud” of his final product, and that he worked a lot from home to complete it. Student A reported using the the days off from school to really start to put together his project, emphasizing his desire to have a project that was organized and that featured a skilled use of writing and communication of his ideas and learning. “Once I got into the flow of things it smoothed itself out and worked out in the end.” He cited that, “When I was researching stuff... It didn’t really click until I started writing it down and putting it all into different sections [of the presentation]... Turning the stuff I learned into a presentation is when it clicked.”

### **Analyzing the Themes of the Study**

Within the primary question this study set out to answer are three key points of emphasis which were tracked and analyzed throughout this study: learning, classroom

experience and academic engagement. Participants were asked questions directly related to these themes at the conclusion of the study (during the reflection phase). The following sections will provide details and data pertaining to these three points, as well as other themes which emerged as the study progressed.

**Learning.** The first point of emphasis, and first major theme of this study, is learning. In describing their learning during this study, Student A reported that learning was “different” and “a bit difficult at first,” stating that he felt “kinda lost” until the teacher stepped in and helped “expand” on what resources were available and how to access and utilize them. He stated that he feels he could have learned more, but that, “I exceeded my expectations for how well I was going to do at the beginning,” and that, “I know a lot more than when I started.” Student B simply stated that he felt he was successful at his learning, while Student C expressed he didn’t learn as well as he had wanted, and that learning during this process was “not as effective” as it would be if he had been given another opportunity to engage in project-based, learner-centered learning. “It would be a lot easier because I would know what was going on.” In terms of what he learned, he stated that he learned, “what I wanted to learn,” and that, “there was nothing that I was researching that I didn’t want to learn.” Specifically, Student C stated that, “I got to research people that I’ve always wanted to research in school, but our schools never taught them to us.” He concluded by stating, “That was really awesome.”

As stated previously, only one participant (Student A) completed the product completion phase of the study, deciding to showcase their learning through a traditional stand-and-talk slideshow presentation. He experienced difficulties at each phase of this

study, yet persevered and produced a high-quality product which was used as a summative assessment of his content learning. While my own assessment of his final product suggests that he succeeded in answering his guiding question (“What kind of an influence did music have on the civil rights movement?”) and displaying a broad range of supporting evidence to back his claims, his knowledge regarding specific topics and themes of the class unit did not seem particularly deep. This is, perhaps, due to significant struggles he experienced during the research phase, as noted previously in this chapter. Regardless, the final product showcased an adequate breadth of knowledge and understanding of Student A’s specific topics and themes. However, Student A stated that his biggest takeaway from his project, and what he learned the most, was about himself and, “how I work and learn.” “The biggest thing I learned from this was how I work outside of school and inside of school.”

And, indeed, participants were eventually asked to work both in and out of school, largely due to the attendance and tardiness issues, as well as the cancelled classes and school days. As early as week three, participants reported thinking about their projects outside of class, and came into class with new ideas formulated outside of class time. While assessing students knowledge and skill development throughout the study, I expressed that, “Class periods are too short to engage in effective learning.” Each class period lasted roughly one hour, yet students struggled with completing tasks and meeting goals, and by week four I noted that, “Students not attending regularly [are] fall[ing] behind and the process/class becomes more rushed and not as deep/effective.” This is further complicated by the lack of their academic skills and knowledge regarding

effective research and project practices. Every participant in this study needed extended 1:1 time with me to complete their brainstorming, research and product completion, which was not unexpected, yet is certainly worth noting.

Participants did not mention the learning that took place during the buy-in phase during the interview that took place at the end of the study. However, students expressed interest and motivation in learning about fixed vs. growth mindsets, metacognition, and learning styles and preferences at the time of, and shortly after, the buy-in phase. And in interviews with the participants, they all expressed some kind of personal, introspective learning that took place during the study. Student B stated he realized early on that, “The only way I was going to be able to get far with it was if I dug deep into it,” citing that there were a lot of different things to learn and he was interested in finding the vital elements of his subjects. Likewise, Student C stated that, “To succeed, you had to really be determined,” and prove that you can do it on your own. Regarding project-based, learner-centered learning, Student C said he thinks, “it’s really effective and trains us for the real world,” adding that in the real world, once students complete high school, they must figure things out on their own that aren’t provided to them, and that “this kind of prepared us better than just being in school did.”

**Classroom Experience.** The second point of emphasis and theme of this study is the classroom experience that these participants had from beginning to end. Each participant expressed having an overall positive classroom experience during this study, despite feeling otherwise when the study began. Initially, Student B expressed being, “not too fond of it,” while Student A shared that the process seemed, “Different. Really

Different.” Student A stated that, “It didn’t feel like a classroom experience,” as he had experienced classrooms in the past, and compared the experience to, “a homework assignment that I was doing at school.” Student B stated it was a good experience and expressed satisfaction with being able to talk with peers in the classroom regarding their subjects when their subjects were similar. Student B also noted that the classroom environment was quiet and acknowledged that it is positive when a classroom allows for “thinking space.” Student C stated he liked the classroom experience during this study more than traditional settings where a teacher lectures and students take notes. “It’s a lot easier to learn when it’s something you want to learn.”

Regarding my role as a project-based, learner-centered teacher in the classroom, participants all shared positive feedback regarding my role in the classroom. Student B summarized how he felt about what I was doing early on with the class by saying that I reminded him of teachers he had seen in movies like *Freedom Writers*. “We can coming into a new class - like a movie-type thing... You were giving us the rundown on, like, what was going on.” Student A stated that he was skeptical at first and was worried that it would be all up to the students to get everything done, which concerned him since he feels he has a “sloppy” work ethic at school. However, he stated that I was, “there, was encouraging and was helpful,” and that I gave them, “a lot of space and options for revising and creating... but [I was] there to help with whatever we decided.” He also added that, “I would much rather be in a class like this than in traditional schools.”

Student C explained my role in the classroom as being, “a lot more effective than the average teacher,” adding that he felt he had, “a lot more freedom” compared to

classes where a teacher is, “telling us what to research.” He stated he has been bored in classes in the past, despite “awesome teachers,” and that teachers in previous classes stuck with a traditional pedagogical approach that went through content too quickly and was difficult to study and learn. He stated that in this classroom, he got to learn about history that he really wanted to learn about, and that, “that’s what made this class fun to come to.” “Every day we came in, you made sure we were on track... You gave us everything we needed to succeed.” Student A also added that he felt empowered early in the process, but that the experience as a whole felt, “a lot more loose,” than he was used to a classroom being because, “you weren’t holding my hand through the entire thing.”

**Academic Engagement.** The third point of emphasis and theme of this study is the academic engagement that each participant displayed throughout this study. This was perhaps the most difficult to evaluate and maintain as this study progressed, given the various concerns regarding attendance, tardiness and missed classes. Student C remarked that he felt the process started off slow, “but once I knew what the end goals was,” it got better, which he said is a feeling he’s had in other classes, as well. Student A explained that, “Normally, in the traditional classroom environment, when they’re doing their spiel about the lesson and stuff, I start off engaged but my mind drifts off elsewhere.” He compared this to how he drifts off while reading, in that he may be skimming the pages but is not processing what is being read. But Student A expressed that once things “clicked” for him, he felt he was positively engaged in his project. Student B stated that, compared with other classroom experiences, he felt more engaged during this process because there was, “actually a goal... You’re actually looking for something.” He

compared his academic engagement in this study to how he engages in a science class, wherein students are building knowledge to answer a larger question, and that there were, “more stages to this,” than with other classes. Likewise, Student C stated that once he got more understanding about what was happening and what he was learning, this was an academically-engaging experience.

Participants acknowledged that they liked the autonomy and self-determination provided in the project-based, learner-centered model, and that perhaps this kept them engaged throughout the entirety of the study. Student B shared his thoughts regarding his public school experience, where they typically tell students what to do, and that early on he was, “adapting to that expectation.” However, he stated feeling like he “owned” his learning during this study. Student A enjoyed coming up with his own rubric for his project, which he stated he never got to do in other classes. He liked that he could work, “my way on my own time,” and stated that he felt it was, “easier on me,” to learn and take in information in his own particular way. However, Student A also acknowledged that, because he was used to following more guidelines in prior classes, he “slacked” because he didn’t have, “hand holding or constant deadlines.”

Regarding the student autonomy granted in the study, Student C stated that he changed his project, “the whole way through,” acknowledging that as he began learning about one topic, he then learned about other topics he wanted to explore and began researching them too, following what was a natural path of inquiry. However, Student C stated that my role in the classroom helped him stay on track throughout the process. When asked in the final interview what he liked about project-based, learner-centered



learning, he stated that the “freedom and openness” were the “best part, for sure.” Indeed, this was a point made by all participants in their final interviews, as well. But the freedom granted to students during this process was not without consequences.

### **Students’ Thoughts on Project-Based, Learner-Centered Education**

At the end of the study, each participant was asked a series of questions about project-based, learner-centered learning and their reactions to the process which they had just completed. When asked if they had ever heard of or engaged in anything like project-based, learner-centered learning before, they all agreed this was their first time. Student B stated that it felt “new,” and suggested that if it had been brought up before, “it wasn’t big,” as in it wasn’t noticeable or significant. Student C stated that the only thing close to project-based, learner-centered learning he had engaged in in the past was when a teacher assigned a project with the teacher deciding what topic students would research, and when students had completed their work, they would make a poster or a slideshow. He acknowledged that, despite being similar, the experiences he had in the past that were akin to project-based, learner-centered learning was not something he cared for because it was something he didn’t want to learn about.

When asked about their thoughts on project-based, learner-centered learning, Student A stated that he, “personally like[s] it,” and likes the process more than, “standard textbook learning.” He liked that it was “loose,” and started feeling that it wasn’t as “strict” as other project-oriented experiences he’s had in the past. Student B stated that, “It might be something good for some people,” such as students who are frequently distracted by their phones or disengaged in class, and made a point to say that,

“People interested in philosophy would like this.” He also liked making connections with a variety of different ideas, topics or themes. “I like how you start with nothing and then everything just ties in.”

As far as what participants disliked about project-based, learner-centered learning, Student A said, “It’s hard to say,” stating that he liked a lot of the process, but that it may be difficult to motivate a large groups of students to engage with project-based, learner-centered learning because, “everyone’s different.” Student B acknowledged that “roadblocks” were difficult for him, and that he got “mentally stuck” when trying to, “set things up” and complete research. When asked how he overcame these roadblocks, he stated that he worked to clear his mind and destress by doing something else and coming back to the project at another time. Student C did not dislike anything about project-based, learner-centered learning, but said that he wished he knew what he needed to do a bit better in the beginning. “It’s like taking the ACT and then realizing what’s on it and then being able to prepare for it again.”

Participants were lastly asked to be forward-thinking regarding project-based, learner-centered education. Specifically, they were asked if they continued working and expanding on their projects, what they would focus it on, and what ways they think project-based, learner-centered learning could be used in schools in the future. All but Student C stated they could continue learning about the topics and themes of the project they worked on during the study, with Student A suggesting he would be interested in learning more about literary themes related to “man versus god.” However, Student C stated he would like to learn more about his personal heritage and history, and create a

project around his learning. “You never learn about the bad things Native Americans had to go through... You don’t even hear about the details.”

As for how the participants felt project-based, learner-centered learning could be used in schools in the future, they all seemed to agree that it should be considered in schools moving forward, but should not be the singular method for learning. Student A explained that not every class should be based around project-based, learner-centered learning because, “people learn at a different pace - people work at a different pace.” He believes that project-based, learner-centered learning should be utilized for students who “learn differently,” but that it, “shouldn’t replace standard learning,” methods. Student B stated that project-based, learner-centered learning is “a big thing,” that requires, “focusing on every individual student.” He believes that public schools, “put everybody in groups” to make them easier to teach, but that project-based, learner-centered learning could expand the options available to cater towards students as individuals. Additionally, Student B suggested that schools could implement project-based, learner-centered learning with smaller groups of students being taught and led by a mentor. And Student C simply stated that schools interested in implementing project-based, learner-centered learning could, “build the puzzle,” provide students with what they need to fill the puzzle in, and then allow students to complete filling it in. This concept of a project-based, learner-centered learning somehow being a puzzle is influenced by my own explanation and demonstration of what students were getting into early on in the study.

### **My Thoughts on Project-Based, Learner-Centered Education**

My own personal reactions to this process, or specifically, the process of project-based, learner-centered learning, can be seen throughout the early parts of this chapter, and is based on data collected from my own personal notes I took throughout this study. Yet, there is a bit more to add to give the full context of what project-based, learner-centered education is like for the teacher implementing it. Early on, I recognized the blessing that was my smaller class size, as I was able to spend more time working 1:1 with students who needed help. I noted toward the end of the brainstorming phase that, “Too many students would make this process different and more difficult.” “As the teacher, it has been tricky to be as resourceful and knowledgeable as I’ve had to be,” I wrote, adding, “I don’t feel as well-equipped to provide learning outside of the classroom as I would like.” Indeed, I was concerned regarding my prior knowledge about experiential learning opportunities, research options and overall catalogue of what the world has to offer for these students. By this time, I had also worried that there may be “too many options” for students to effectively, “set goals and decide what and how to learn.”

By the research phase of this study, students had taken control of their learning and were engaging in research. However, students continued to ask for help and request new or additional resources to research when they had finished what they were learning about. This challenged my knowledge on the subject matter they were researching, yet the parameters I had established early on requiring students to choose topics within the broad spectrum of the class unit allowed me to pull from familiar knowledge banks. In fact, by the end of the research phase, I wrote, “Background knowledge of content has

been crucial.” But background knowledge was far from the only crucial element required of me in this study.

When I decided to extend the study, and was met with multiple school days cancelled due to weather, I began reflecting on the project-based, learner-centered process in a manner of frustration seeking clarity. I felt frustrated that I was unable to provide students with, what I had believed would be, better resources and information to work with. I pondered whether beginning the process of building their projects early on would have helped students with their organization, accountability and being able to take what they were learning and plug it in as they were learning it. I also noted that, “Firm deadlines don’t hold up in [a] loose-structured setting,” implying that the individualized goals I had set with students were limited in their attainability and purpose if factors such as student accountability, attendance and unforeseeable weather conditions negatively affect the predicted plans put in place. I pondered whether more “learning checkpoints” should have been implemented in the study, as they would provide “concrete expectations” and allow for better monitoring of student learning. I also wondered if not only project-based, learner-centered learning was too “loose,” but also if the environment by which I applied the educational model was, too.

### **Summary**

This chapter provided the detailed data and final results of the study, which investigated how project-based, learner-centered pedagogy affected the learning, classroom experience and academic engagement of traditionally-marginalized and disadvantaged students. The study consisted of three participants, each unique and

somewhat representative of a different type of student. Throughout the study, qualitative data was collected, detailing each phase of the process and the facts and opinions of both the participants as well as the researcher. In the end, only one of the three participants was able to complete all phases of the study. Issues extending beyond the classroom certainly affected the study's outcomes, and toward the end of the study I began questioning the decision to implement the project-based, learner-centered education model in such a difficult and complicated setting. However, participant feedback regarding project-based, learner-centered learning suggested that, despite serious concerns on the part of the researcher, the participants viewed it a rewarding experience that they would like to see in the future.

## CHAPTER FIVE

### Introduction

From the outset, this study aimed to investigate the question, “*How does a project-based, learner-centered pedagogical approach affect the learning, classroom experience and overall academic engagement of traditionally-marginalized and disadvantaged high school students?*” The study used qualitative data collected from participants, as well as the researcher, and facilitated the implementation, execution and reflection of project-based, learner-centered educational model. In this chapter, the results from the study will be analyzed to explain what was learned, how the results compared with research into project-based, learner-centered education, what new understandings have been made regarding project-based, learner-centered education, the possible implications of the study’s findings, and the study’s limitations. At the end, my recommendations and considerations for future research into project-based, learner-centered education will be provided, as well as an explanation of how I intend to use these results moving forward.

### **Learning, Classroom Experience and Academic Engagement**

After twelve weeks of research studying how project-based, learner-centered education affects the learning, classroom experience and academic engagement of traditionally-marginalized and disadvantaged high school students, the study concluded with a mixed bag of results, proving neither that project-based, learner-centered education is an effective substitute to traditional educational methods, nor that it is an

inadequate option to more traditional methods. What was learned after meeting with participants regarding project-based, learner-centered learning is that, despite its favorability for providing students with more autonomy and flexibility in their learning, it seems limited in its applicability. The effect of the project-based, learner-centered model on content learning is still unclear, as the data was insufficient for making a determination one way or the other. However, it can be determined that the effect of the project-based, learner-centered model on the classroom experience and students' academic engagement appear to be positive. And participant feedback regarding project-based, learner-centered education suggests a willingness and desire to see it used in schools moving forward.

Perhaps the great value of this particular study, as it pertains to learning, is in understanding how each individual addressed difficulty and learned how to overcome adversity with the expectations, goals and challenges they faced. Data collected from this evaluating higher-level thinking and cognitive development was insufficient, as there were not enough opportunities to measure and assess this important area of learning. Only one participant completed the summative assessment, and participants were sometimes unable to meet specific deadlines for formative assessment of their progress and learning during the study, causing setbacks and forcing students to, essentially, play catch up. However, participants displayed personal growth and learning in terms of self-reflection and introspective learning. This level of learning does not suggest that a positive correlation exists between project-based, learner-centered learning and content knowledge development, but it does suggest that project-based, learner-centered learning



engages students in metacognitive thinking regarding their academics, which is beneficial for their cognitive development.

As for classroom experience and academic engagement, participants reported positively on both regards. As Watson (2011) suggested it would be, the student-teacher relationship during this process was positive and students reported being engaged in their academics because of the learner-centered approach. In addition, students displayed motivation for engaging with the process early on and were active in brainstorming and building their projects. However, as the study progressed, students began expressing disengagement, particularly when faced with difficulty or uncertainty. While I was available to remedy the situation, it was further complicated by missed class periods due to attendance issues, as well as other issues, namely school closures due to weather and school-wide events. The overall autonomy granted to these students was favored by participants as preferable over more traditional approaches, but ultimately it led to students struggling to keep pace with the expectations they, themselves, set. In the end, this led to two of the three participants failing to complete their projects and put pressure on me, as the teacher, to provide extensions and modifications for students to get their work done leading up to important deadlines.

While the jury is out on whether project-based, learner-centered education improves learning, it can be concluded that the classroom experience is more positive and allows for more opportunities to build relationships with students, particularly through individualized check-ins and meetings. It would be difficult for the teacher to execute a project-based, learner-centered pedagogy if the class size reached too high a level or, as

Riley (2001) suggests, if the teacher is not well-equipped with background knowledge of the subject which they are teaching. As for academic engagement, it would seem that project-based, learner-centered learning requires a dual approach on the part of the teacher, ensuring that students are meeting expectations on a day-to-day basis but are also granted the autonomy which makes this education model so positive for them. Participant feedback pertaining to academic engagement was positive, as they preferred to learn what topics and themes were most interesting to them. Yet, their research and knowledge of their topics and themes was not as deep as I was hoping for. This suggests that, while students should be given power in the classroom to decide certain things for themselves, the teacher should still be a meaningful voice in their decision-making. This aligns with the research of Hanewicz et. al. (2017), who suggested that the teacher should take on a resource-management type of role while having students learn, understand and accept their role as an active and important participant in their learning.

### **New Understandings and Possible Implications**

One thing that project-based, learner-centered education seems to get right is the differentiation of instruction, catering toward students' individual needs and abilities, and providing students with a powerful voice in directing their learning. The teacher's role becomes that of a shepherd, guiding, but not leading, their flock; nudging students toward success and progress without pushing them away entirely. Ultimately, the goal is to have each student arrive at a predetermined destination. But how they get there is, in many ways, up to them, as long as they are nudged in the right direction and given boundaries by the teacher. The learner-centered elements of this study showed that students favor a

teacher who cares and caters to their needs over a teacher focused on whole class instruction. This supports research by Daniels & Perry (2003) regarding students' desires to have teachers who know them well and understand their unique needs. The project-based elements of this study showed that there is still a ways to go with this education model. Participants acknowledged concerns with abandoning other education models and methods to implement project-based models, and I, myself, concur. Project-based learning requires students to complete stages that amount, in the end, to a final product showcasing their accumulation of knowledge and skills. Yet, in this study, two of the three participants were not able to complete their final product, despite showing a plethora of research and knowledge about their topics and themes. This begs to question whether the "project" aspect of project-based learning is necessary to the model's success.

Other new understandings from this study include the student's desire to see differentiation in the classroom and a lack of interest in what schools are already teaching. All participants expressed an interest in seeing the differentiated aspects of this study replicated in other classes and schools, stating that their learning, classroom experience and academic engagement have largely depended on not only *how* they were learning but also *what* they were learning. This supports the conclusions from Watson (2011) that traditionally marginalized students favor experiences in school where they can define their voices and be recognized. Through decentralized unit planning and providing a flexible curriculum, students were able to self-direct while learning about the specific subject of the class and unit. Moving forward, it seems worthwhile to implement

these methods of curriculum building and pedagogy in future classes. Yet where these methods may succeed, in regards to setting, is uncertain.

As stated at the end of Chapter 4, I considered whether the decision to have the study take place in this setting was, in fact, a good one. It appears that the attendance issues, disruptive school-wide events and other forces beyond my control negatively affected several aspects of this study which, had the setting been different, may not have been the case. However, it is important to recall the whole point of this study: to see the effect of project-based, learner-centered pedagogy on the population of students that this school specializes in. Perhaps the environment and issues that the participants and I faced are a reflection of the environment by which these students live. Perhaps this is why so many educational reforms seem to miss the mark with this population. Perhaps this is why further research into alternative education and education reform should consider this population to be of critical importance and consideration.

### **Limitations of the Study**

The sample size ( $n = 3$ ) of this study is a clear limitation for analyzing the validity of the study's final conclusions. Inconclusive evidence of student learning also limits the merits of the study's conclusions, as the only data pertaining to learning that was obtained for two of the three participants did not involve a final cumulative assessment. This assessment, which was tied to specific rubric standards and guidelines, would have provided significantly more data to evaluate and speculate from. However, despite the study's extended timeframe, the overall data for these two participants was left incomplete. Ultimately I was left with insufficient data to conclusively determine whether

the students' feelings toward their learning throughout the study were supported by the concrete evidence of their learning via a final product.

### **Future Recommendations and Considerations**

Future research into project-based, learner-centered education should consider how the two elements (learner-centered and project-based) fit together, as well as how they are different. The conclusions of this study suggest that there is a great desire by students for the type of differentiation and care for individual that seems to come with learner-centered approach toward education. Further research into the ways that a learner-centered approach can be blended into current education models may be worthwhile, as it would not require the drastic paradigm change needed for project-based learning to replace current and traditional education models. Additional research into the application of project-based learning in various settings with various populations would benefit current research, as participants themselves acknowledged differing opinions as to where and how project-based learning could work beyond this study. It may also be worthwhile for future research into these topics to extend their research into further understanding how students' environments, specifically outside of school, affect their academic engagement.

Moving forward, I will be considering how to incorporate learner-centered pedagogy into my classes and in unit and curriculum building. It was disappointing to learn that these students really hadn't been exposed to project-based, learner-centered learning before, yet were so positive regarding the approach toward learning. As research and this study suggest, it appears worthwhile to allow students the autonomy to make

important decisions in their education and learning. Such autonomy provides opportunities for academic engagement that may be stunted by a more teacher-centered approach. As for project-based learning, understanding the hurdles and process of this particular education model will make implementing it into future classrooms easier and more refined. However, more research and experimentation will be needed on my end before I could confidently decide to dedicate a class toward a fully project-based curriculum.

### **Final Conclusion**

In conclusion, this study proved to be somewhat fruitful for understanding how project-based, learner-centered pedagogy affects the learning, classroom experience and academic engagement of traditionally-marginalized and disadvantaged high schoolers. While there were limitations to the study that inhibited coming to conclusions regarding the effectiveness of this education model on learning, the classroom experience seems to be much more positive under a project-based, learner-centered model. And in assessing the academic engagement of the participants in this study, it is important to note that while participants felt they were more engaged during this process than they have been in more traditional settings, factors extending beyond the classroom, and certainly beyond the school itself, most certainly hindered the students' academic engagement. In the end, there is indeed promise to the project-based, learner-centered education model, a major paradigm shift toward this model still requires more research and understanding, specifically as it pertains to traditionally-marginalized and disadvantaged students.

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